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San Diego Unified Port District.

Final Environmental Impact Report

Master Plan
San Diego Unified Port District

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1980

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FINAL
ENVIRONMENTAL IMPACT REPORT
(UPD #78102-EIR-1; SCH #78030604)

CZIC COLLECTION

Environmental Impact Report on Master Plan

San Diego Unified Port District

Project by
PLANNING DEPARTMENT

Report by
ENVIRONMENTAL MANAGEMENT DEPARTMENT

SAN DIEGO UNIFIED PORT DISTRICT
P.O. Box 488
San Diego, California 92112

COASTAL ZONE
INFORMATION CENTER

February 1980

San Diego Unified Port District
TD194.66.C22S26 1980
#21076607

CERTIFICATION STATUS

On February 2, 1980, the District Clerk's Office received appeals by (1) R. T. Carney, of the Marine Corps Recruit Depot (MCRD) of San Diego (Doc. #12634), and (2) Robert P. Hoffman, of the University of San Diego (USD) Legal Clinic (Doc. #12635), for the Bay Front Committee of the Barrio Logan.

The Port's Master Plan, p. 73, Figure 9, will be modified to more clearly indicate those areas leased from the Marine Corps which are owned by the Federal Government, to clarify ownership questions. The Final EIR, on p. 145/146, Figure 17, indicates some of the subject MCRD area between the lease line designation and the jurisdictional limit line. Neither the Planning nor the EIR maps are legally governing. The Board of Port Commissioners, on March 18, 1980, directed amending the MCRD Appeals Staff Report to the Final EIR by reference, and denied the appeal.

A joint Committee of the Port and the Bay Front Committee (with other Barrio Logan community representatives) has been formed and is meeting to resolve differing land/water use points of view. Some of the information and opinions relevant to this planning issue for the waterfront south of the 10th Avenue Marine Terminal can be found on pages: 8, 10, 38-40, 74-76, 286-289, 304, 307, 330-331, 333-335, 340-343, 345 and possibly elsewhere. The reader is advised that the Board excluded the parcel of tide and submerged lands bounded by the mean high tide line on the northeast, Crosby Street and its extension into the Bay on the southeast, the pierhead line on the southwest, and a line parallel to and northwesterly of Beardsley Street on the northwest from the certification action and Plan adoption, and designated it "Area Under Study." The Board, on March 18, 1980, denied the appeal of the Bay Front Committee.

The Board of Port Commissioners, on March 18, 1980, certified the Final EIR (Doc. #12590) by Resolution 80-73. The MCRD Staff Report (Doc. #12710), is incorporated by reference; a copy can be supplied on written request to the District Clerk.

The reader is advised that the Certification Resolution included a paragraph: "Any subsequent specific project involving the former Rowing Club structure, which was placed on the National Register of Historic Places on August 30, 1979, according to the California State Historic Preservation Officer, shall be subject to all applicable environmental and other particular regulations which may pertain to its status, irrespective of adjacent land or water use designations of the Port District Master Plan, as amended."

SUBJECT

Project Title	Environmental Impact Report on MASTER PLAN, San Diego Unified Port District
Project Location	The Port of San Diego's jurisdictional land and water area is located along the Pacific Coast in southwestern San Diego County, California, with a planning area of 5,483 acres of tidelands and submerged lands. These surround and include portions of San Diego Bay, and are adjacent to and/or include some portions of five cities: San Diego; Coronado; National City; Chula Vista; and Imperial Beach. The total project area includes 2,491 acres of tidelands as well as 2,992 acres of submerged lands within San Diego Bay.
Project Description Summary	The proposed Port Master Plan provides land and water use policies, as well as management guidance, for the enhancement of existing developments and the construction of new improvements in nine Planning Districts within the Port's jurisdiction. The Port's proposed Master Plan has been conceived to give flexible direction within its overall goals and provisions. It incorporates existing land and water activities as a basis for both Port and leasehold programs.
Applicant	Planning Department, San Diego Unified Port District. Environmental Impact Report coordinated and prepared by the Environmental Management Department.

NOTICE FROM THE CALIFORNIA STATE LANDS COMMISSION

This report and the information contained herein does not constitute, nor shall it be construed as a waiver of any right, title or interest, including sovereign interest, in any lands owned by or under the jurisdiction of the State of California, or any of its agencies, or any grantee in trust of sovereign lands including but not limited to political corporations or subdivisions of the State.

"Tidelands", properly speaking, are lands between the lines of mean high tide and mean low tide, whereas "submerged lands" are those seaward of mean low tide and not uncovered in the ordinary ebb and flow of the tide. For literary convenience, the term "tidelands" will refer to both types of property in the report.

Many terms in the report including tidelands, submerged lands, and granted lands are used in a non-technical nature and should not be construed as determination of the legal character of the lands involved.

The maps included in the report are for illustrative purposes only and are not intended to depict accurately ownership boundaries.

REVISIONS AND ERRATA

The reader is advised that in the process of responding to comments, a number of statements or other information in the EIR needed to be revised. It is requested that the page on which the revision appears be consulted so that the correct information is used by the reader.

Page Number	Page Number of Revision
62	332
121-123	300
129	320
142, 166, 172, 178	312
178	297
228, B-12	332
240, 251	313
249-250	335

TABLE OF CONTENTS

	Page
SUBJECT	i
FOREWORD	xv
SUMMARY	1
Major Conclusions	1
Areas of Concern	7
I. INTRODUCTION	11
Master Plan	11
Master Environmental Assessment	12
Specificity	13
Incorporation by Reference	13
II. PROJECT DESCRIPTION	15
Location and Ownership	15
LOCATION	15
OWNERSHIP	15
Port Master Plan	16
Planning District Project Proposals	16
III. ENVIRONMENTAL SETTING	27
Land and Water Use	27
SHELTER ISLAND	27
HARBOR ISLAND/LINDBERGH FIELD	35
CENTRE CITY/EMBARCADERO	36
TENTH AVENUE MARINE TERMINAL	38
NATIONAL CITY BAYFRONT	41
CORONADO BAYFRONT	42
CHULA VISTA BAYFRONT	43
SILVER STRAND SOUTH	48
SOUTH BAY SALTLANDS	50
Open Space	53
UNDEVELOPED AREAS	53
IMPROVED OPEN SPACE	53
RECREATION/OPEN SPACE LAND AREAS	53
RECREATION/OPEN SPACE WATER AREAS	54
OPEN SPACE ELEMENT	54
Air Transportation	56
SAN DIEGO PLAN FOR AIR TRANSPORTATION	56
SAN DIEGO INTERNATIONAL AIRPORT (LINDBERGH FIELD)	59

	Page
Circulation	62
SAN DIEGO BAY REGIONAL CIRCULATION	62
SHELTER ISLAND*	66
HARBOR ISLAND/LINDBERGH FIELD*	68
CENTRE CITY/EMBARCADERO*	71
TENTH AVENUE MARINE TERMINAL*	74
NATIONAL CITY BAYFRONT*	76
CORONADO BAYFRONT*	76
CHULA VISTA BAYFRONT*	77
SILVER STRAND SOUTH*	79
SOUTH BAY SALTLANDS*	80
Navigation	81
SHIP CHANNELS	81
BOAT CHANNELS	81
BOAT BERTHING	82
ANCHORAGE AREAS	83
BOAT SLIPS/MARINAS	84
Public Services and Facilities	85
SEWERAGE SYSTEMS	85
San Diego Metropolitan Sewerage System	85
Areawide Water Quality Management Plan	87
WATER SUPPLY	88
STORM DRAINS	90
Flood Control	90
ELECTRICITY, GAS, AND TELEPHONE	90
FIRE PROTECTION	91
POLICE PROTECTION	91
REFUSE COLLECTION/DISPOSAL	92
Socio-Economic Characteristics/Growth	93
SOCIAL CHARACTERISTICS	93
ECONOMIC CHARACTERISTICS	97
GROWTH INDUCEMENT	98
Visual Quality	101
VISUAL APPEARANCE	101
AVAILABLE VIEWS	102
Noise Quality	106
AIRCRAFT OPERATIONAL NOISE	109
San Diego International Airport (Lindbergh Field)	109
Noise Control Plan	110
North Island Naval Air Station	121
MOTOR VEHICLE TRAFFIC	122

*Subsections for each of the Planning Districts discuss:
- Tidelands Access
- Street System
- Traffic
- Parking
- Other Circulation Aspects

	Page
Climate/Air Quality	126
CLIMATE AND METEOROLOGICAL CONDITIONS	126
Precipitation	126
Air Temperature	126
Wind Conditions	126
AIR QUALITY	129
Temperature Inversions	130
Air Quality Monitoring	130
San Diego Bay Air Quality	131
Energy	137
ENERGY CONSUMPTION	137
TRANSPORTATION USES	138
SUPPLY AND DEMAND ASSUMPTIONS	138
Biology	140
BIOLOGICAL SETTING SUMMARY	140
Physiography	140
Hydrology/Water Quality	141
Habitat/Vegetation Types/Including Rare and Endangered	141
Animal Life/Including Rare and Endangered	142
BIOLOGICAL RESOURCES MAPPING/REFERENCES	142
Terrestrial Habitats/Vegetation	142
Marine Habitats/Vegetation	162
Animal Life	165
Rare and Endangered Plants	167
TERRESTRIAL BIOLOGICAL RESOURCES	167
Habitats/Vegetation Types	167
Animal Life	168
Unique Habitat Associations	168
Ecological Relationships	170
MARINE BIOLOGICAL RESOURCES	170
Seagrasses, Algae and Marsh Habitats	170
Marine Invertebrates	171
Fishes	171
Unique Habitat Associations	172
Ecological Relationships	173
Water and Sediment Quality	174
MONITORING STATIONS	175
Water Quality Sampling Stations	175
Sediment Sampling Stations	175
Heavy Metal Sampling Stations	175
WATER QUALITY	176
SEDIMENT QUALITY	176
CONTAMINATION SOURCES	178
GROUND WATER	179

	Page
Landform/Geology/Archaeology	180
LANDFORM	180
Topography	180
Soils	183
GEOLOGY	183
Prehistory	183
Stratigraphy	184
Paleontological Resources	193
Mineral Resources	193
SEISMICITY	194
Fault Systems	194
Ground Response	203
Tsunamis and Seiches	203
HYDROLOGY	204
Groundwater Resources	204
Surface Water	204
Watershed Drainage	204
Flood Plain Areas	207
Ocean and Bay Circulation	208
Bay Currents	208
Tidal Flushing	213
Sediment Transport	213
Shoreline Erosion	213
HISTORICAL AND ARCHAEOLOGICAL RESOURCES	214
Historical Sites	214
Archaeological Sites	214
IV. ENVIRONMENTAL IMPACTS AND MITIGATING MEASURES	221
Land and Water Use	221
North Bay Planning Districts	221
Central Bay Planning Districts	222
South Bay Planning Districts	223
Open Space	224
Air Transportation	225
Circulation	227
North Bay Planning Districts	227
Central Bay Planning Districts	227
South Bay Planning Districts	228
Navigation	231
Public Services and Facilities	232
Socio-Economic Characteristics/Growth	233
Social Characteristics	233
Economic Characteristics	233
Growth Inducement	234

		Page
	Visual Quality	235
	Noise Quality	236
	Aircraft Operations	236
	Motor Vehicle Traffic	236
	Climate/Air Quality	238
	Energy	239
	Biology	240
	Water and Sediment Quality	242
	Landform/Geology/Archaeology	244
	Landform	244
	Geology	244
	Seismicity	244
	Hydrology	244
	Historical and Archaeological Resources	245
V.	UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS	247
VI.	ALTERNATIVES TO THE PROPOSED PROJECT	249
VII.	RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY OF THE ENVIRONMENT	251
VIII.	IRREVERSIBLE ENVIRONMENTAL CHANGES IF THE PROJECT IS IMPLEMENTED	253
IX.	GROWTH-INDUCING IMPACTS	255
X.	AGENCIES/ORGANIZATIONS AND INDIVIDUALS CONSULTED	257
XI.	REFERENCES	263
XII.	PUBLIC REVIEW	
	Initial Distribution	281
	Comments Received and Response*	285

*This Section added to Draft EIR; printed on blue

XIII. APPENDICES

A - San Diego Bay
Anchorages and Regulations

B - Circulation Analysis Summary

C - Air Quality Information

D - Biological Reconnaissance Summary

E - Species Lists
Biological Habitat Information

F - Historical Site Descriptions

G - Archaeological Site Records and Summary

H - Notice of Preparation and Comments

I - Coastal Comments on Port's
Preliminary Master Plan

J - Coastal Comments on
Draft EIR Content

K - Noise Control Plan

LIST OF FIGURES

Figure		Page
1	Vicinity Map	17
2	Master Plan Area, Tidelands Ownership	19
3	Planning District Map Key	21
4	Planning Jurisdictions	23
5	Major Fill Areas	29
6	Major Dredged Areas	31
7	Shoreline Features	33
8	Vehicle Traffic Circulation	63
9	Visual Analysis	103
10	Major Vista Points	107
11a	Aircraft CNEL Noise Contours -San Diego International Airport, Calendar 1978	111
11b	Aircraft CNEL Noise Contours -San Diego International Airport, 75 CNEL (6/30/79)	113
12	Aircraft CNEL Noise Contours -North Island Naval Air Station	123
13	Climate and Meteorology	127
14	Air Quality Distribution -Ozone, Hydrocarbon, Nitrogen Emissions	133
15	Air Quality Distribution -Particulate Matter, Carbon Monoxide Emission	135
	Biological Resources - Water/Sediment Quality:	
	16 -Shelter Island (Planning District 1)	143/144
	17 - Harbor Island/Lindbergh Field (PD 2)	145/146
	18 - Centre City Embarcadero (PD 3)	147/148
	19 - Tenth Avenue Marine Terminal (PD 4)	149/150
	20 - National City Bayfront (PD 5)	151/152
	21 - Coronado Bayfront (PD 6)	153/154

		Page
	22 - Chula Vista Bayfront (PD 7)	155/156
	23 - Silver Strand South (PD 8)	157/158
	24 - South Bay Saltlands (PD 9)	159/160
25	Topography and Bathymetry -San Diego Bay 1979	181
26	Topography and Bathymetry -San Diego Bay 1857	185
27	Soil Types	187
28	Bedrock Geology	189
29	Geologic Cross Sections	191
30	Mineral and Water Resources	195
31	Earthquake Faults and Epicenters -California	197
32	Earthquake Faults and Epicenters -San Diego Region	199
33	Earthquake Faults and Epicenters -San Diego Bay	201
34	Watershed Drainage/River Basins	205
35	Flood Plains	209
36	Tidal Currents	211
37	Historical Sites -San Diego Bay Area	215
38	Recorded Archaeological Sites -San Diego Bay Area	217

Appendix Figures

		Page
A-1	San Diego Bay/Anchorages	A-2
B-1	Traffic Circulation -Shelter Island (PD 1)	B-4
B-2	Speed and Delay Studies -Rosecrans Street	B-4
B-3	Speed and Delay Studies -Shelter Island	B-5
B-4	Traffic Circulation -Harbor Island/Lindbergh Field (PD 2)	B-5
B-5	Speed and Delay Studies -Harbor Drive	B-6
B-6	Traffic Circulation -Center City Embarcadero (PD 3)	B-6
B-7	Speed and Delay Studies -Pacific Highway	B-7
B-8	Speed and Delay Studies -Market Street	B-7
B-9	Traffic Circulation -Tenth Avenue Marine Terminal (PD 4)	B-8
B-10	Traffic Circulation -National City Bayfront (PD 5)	B-8
B-11	Traffic Circulation -Coronado Bayfront (PD 6)	B-9
B-12	Speed and Delay Studies -Coronado Island	B-9
B-13	Speed and Delay Studies -Silver Strand Boulevard	B-10
B-14	Metropolitan Transit (MTDB) -Light Rail Transit Route	B-10
B-15	Traffic Circulation Concerns -Silver Strand South (PD 8)	B-11
B-16	Traffic Circulation Concerns -South Bay Saltlands (PD 9)	B-11
B-17	Light Rail Transit Route	B-12
C-1	Ozone Trend -Violation Days	C-1

LIST OF TABLES

Table		Page
1	Average Daily Traffic Counts -Shelter Island, Planning District 1 (PD1)	67
2	Average Daily Traffic Counts -Harbor Island/Lindbergh Field (PD2)	70
3	Average Daily Traffic Counts -Centre City/Embarcadero (PD3)	72
4	Average Daily Traffic Counts -Tenth Avenue Marine Terminal (PD4)	75
5	Average Daily Traffic Counts -Coronado Bayfront (PD6)	78
6	Rare and Endangered Terrestrial Vascular Plants -San Diego Bay Area	169

Appendix Tables

C-1	Photochemical Smog Violations	C-1
C-2	Ozone Data, Cumulative -Violation Days	C-2
C-3	Nitrogen Dioxide, Sulfur Dioxide -County Averages 1978, 1977, 1976	C-3
C-4	Nitrogen Dioxide -Violations 1978, 1977	C-3
C-5	Sulfur Dioxide -Violations 1978, 1977	C-4
C-6	Hydrocarbons -Violations 1978, 1977	C-4
C-7	Carbon Monoxide -Violations 1978, 1977	C-5
C-8	Total Suspended Particulates	C-5
C-9	California Ambient Air Quality Standards	C-6
C-10	San Diego Air Quality Maintenance Plan (AQMP) -Assumptions and Projections (Port Master Plan)	C-7
D-1	Selected Water Quality Parameters -Biological Reconnaissance Study Sites	D-5

LIST OF TABLES
(Continued)

Table		Page
D-2	Benthic Macrofauna	D-6
D-3	Species, Abundances, and Size Ranges -Twenty-Fourth Street Channel; Chula Vista Boat Basin; Coronado Bayfront; Coronado Cays; South Bay sites	D-7
D-4	Species Composition, Abundance of Avifauna -Observations at six sites	D-8
D-5	Species, Abundances, and Size Ranges -Three sites by beach seines	D-9
D-6	Ichthyoplankton and Zooplankton; -Species and Abundances, South Bay	D-10
E-1	List of Plants and Marine Animals -San Diego Bay	E-1
E-2	List of Birds -San Diego Bay	E-4
G-1	Archaeological Site Records Summary -Site Information San Diego Bay, shoreline and vicinity	G-7

FOREWORD

The Port's proposed Master Plan was developed by the Planning Department of the San Diego Unified Port District. This Environmental Impact Report (EIR) provides the evaluation of the environmental consequences of adoption of the proposed goals, objectives, and policies of the Plan. In some cases, pertinent material has been extracted directly from the proposed Master Plan. In other cases the Master Plan is incorporated by reference. However, the proposed Master Plan itself is the controlling document should any discrepancies or inconsistencies have developed in providing this background base for the EIR.

In the following EIR, the illustrative examples of the proposed Master Plan (or planning area boundaries developed for planning purposes) are used as an aid for analysis and are not to be construed as rigidly fixed. For instance, planning for Port tidelands on the Coronado Bayfront is currently (September 1979) under reconsideration jointly by the Port and Coronado. It should be noted that the sub-area use which was analyzed in this EIR is anticipated to be more environmentally severe than the options under discussion by the joint ad hoc committee. It is essential to recognize that the environmental evaluation is focused on the proposed Plan as a dynamic concept, with illustrative examples, rather than on the details of specific projects or their enumeration.

The environmental assessment is based on the existing conditions, the proposed or anticipated changes in land/water use, and their environmental consequences. For some identified projects the degree of specificity in the analysis is greater than for those areas where specific projects have not been (or may not be) proposed. The analysis of existing conditions and potential overall effects due to land/water use constitutes a Master Environmental Assessment for subsequent implementation proposals.

This EIR has been prepared in accordance with the Guidelines of the California Environmental Quality Act of 1970 (CEQA), as amended, the Resource Agency Guidelines, and the implementation regulations adopted by the San Diego Unified Port District in Resolution 78-102.

By providing a comprehensive environmental assessment of the existing conditions in the planning areas and an environmental impact assessment for full implementation of the proposed Master Plan, this EIR serves as the District's master environmental reference. An EIR is not an engineering document; it does not relieve the Port District or its tenants of the responsibility to ensure that engineering/technical or site-specific documents otherwise required for specific project implementation be prepared. Nor is an EIR a precise plan.

A large amount of material, text and graphics, and consultation has been provided by the District's Planning Department and is gratefully acknowledged. We acknowledge the cooperation and assistance particularly from the Director of Planning, Frederick H. Trull; his assistant, John Wehbring; Bill Briggs; Bill Saver; and by Kerry Scheevel, who contributed most of the illustrations in this report.

SUMMARY

Major Conclusions

The Port's Master Plan covers the ownership of the San Diego Unified Port District, which covers 2,491 acres of land area and 2,992 acres of submerged lands. These tidelands were conveyed by the State Legislature in 1962 and 1965 to the Port as trustee and administrator with regulatory duties and proprietary responsibilities. The Master Plan proposes land and water use designations and individual development concepts over its total jurisdiction of 5,483 acres within nine Planning Districts. The Port's entire ownership is within the Coastal Zone boundaries pursuant to the California Coastal Act of 1976. These lands are also within the corporate limits of four cities: San Diego, National City, Chula Vista and Coronado. The US Navy, Coast Guard and California State Lands Commission have adjacent jurisdiction.

The Master Plan includes six general land and water uses including commercial, industrial, public recreation, public facilities, conservation, and military. Existing development is greatest for Planning Districts in North and Central San Diego Bay. South San Diego Bay includes undeveloped and partially developed areas. The Master Plan would: intensify existing commercial/recreational developments and develop new improvements in North Bay Planning Districts; further intensify marine industrial uses and marine terminal facilities in Central Bay Planning Districts; and further enhance commercial/recreational facilities already begun in South San Diego Bay Planning Districts.

Master Plan implementation would have different environmental consequences depending on individual development proposals in various areas. The following list of consequences summarizes anticipated effects within each category. For detailed information regarding each category, see text Section IV, Environmental Impacts and Mitigating Measures.

LAND AND WATER USE

New development and reconstruction/replacement of existing facilities within Shelter Island, Harbor Island/Lindbergh Field, and Centre City/Embarcadero Planning Districts, would conform with Plan Land/Water Use designations. No environmentally significant land/water use impacts are anticipated. Shelter Island and Centre City/Embarcadero Planning Districts have previously received environmental review, resulting in certified Environmental Impact Reports.

The Tenth Avenue Marine Terminal, National City Bayfront and Coronado Bayfront Planning Districts, would include uses which are in conformance with existing and surrounding uses. Implementation of specific Master Plan project proposals would not result in environmentally significant land or water use impacts. Proposed land uses for the Tenth Avenue Marine Terminal and the Coronado Bayfront Planning Districts are discussed in the next section under "Areas of Concern".

The Chula Vista Bayfront, Silver Strand South, and South Bay Saltlands Planning Districts would include the expansion of existing industrial, commercial and recreational uses, such as the addition of marina and other recreational boat-related facilities at the Chula Vista Boat Basin, and the retention of salt ponds in South Bay in their current state. These proposals are not anticipated to result in significant adverse land/water use impacts.

OPEN SPACE

The Master Plan would retain existing open space in most areas. Extensive improvements including shoreline parks, pedestrian/bike pathways, beach sitting areas, and public fishing piers are proposed for public recreational uses which would enhance and create additional improved public access to San Diego Bay. Master Plan implementation would add an increased utilization of the present acreage of improved landscape and permanent open space. No environmentally significant adverse impacts on open space are anticipated.

AIR TRANSPORTATION

Implementation of the Port's Master Plan is not anticipated to have any adverse environmental consequences on air transportation facilities or air transportation systems throughout the San Diego Region. The Plan has no specific proposals which would increase existing runway capacity or expand terminal facilities except for the upgrading or remodeling of primarily the East Terminal at San Diego International Airport (Lindbergh Field). The San Diego Plan for Air Transportation (SANPAT) has designated Lindbergh Field to be the regional commercial airport for the San Diego area through 1995.

CIRCULATION

Master Plan implementation would result in additional vehicle traffic primarily during evenings, weekends and holidays. In areas where existing industrial facilities would be further intensified and expanded, such as the Tenth Avenue Marine Terminal and National City Marine Terminal, vehicle traffic would increase during commuter hours. In some areas congestion would be relieved. Traffic loads would also be shifted for better distribution onto adjacent streets and highways. For example, the Shelter Island landscaping and beautification proposals would facilitate circulation and decrease congestion along Shelter Island Drive.

In a similar fashion, the Lindbergh Field peripheral road proposal, if implemented, would greatly relieve existing traffic and congestion on the Harbor Drive interchange leading to Harbor Island from the Airport. The Harbor Drive realignment in the Centre City/Embarcadero Planning District would divert traffic from Harbor Drive back onto Pacific Highway, and thus greatly reduce congestion on adjacent lateral streets.

NAVIGATION

The Master Plan proposes additional recreational and commercial boat berthing facilities, dry boat storage, improvements to anchorage areas, shoreline improvements and public fishing piers. The installation of these facilities could accommodate about 3,500 additional recreational and commercial vessels, excluding military and commercial shipping, in San Diego Bay. The average daily use of San Diego Bay by recreational vessels is substantially less than the total berthed in marinas or at anchorage, Neither these facilities, nor the added vessels, would significantly interfere with navigation within San Diego Bay.

PUBLIC SERVICES AND FACILITIES

The Master Plan proposes no major changes in land or water use activities that would significantly impact the availability, quality, or ultimate capacity of existing public services and facilities including bus services, sewerage systems, water supply, storm drains, electricity, gas and telephone, fire protection, police protection, or refuse collection. Existing utilities services would not be significantly impacted by increased demands from Master Plan proposals. Police and fire protection requirements of tidelands development are the responsibility of the Port's Harbor Police Department, with assistance provided as needed by City police and fire departments.

VISUAL QUALITY

Master Plan proposals would include structures that in some places may interfere with Bay views from adjacent areas. Because surrounding topography is, except in Point Loma and Mission Hills, essentially as level as the Plan area itself, existing adjacent residential, commercial, or industrial structures partially or entirely block many Bay views. Multi-story structures would not have a significantly greater potential viewshed impact than would single-story structures in most places. Major vista points in the San Diego Bay area would not be significantly impacted by Master Plan implementation.

NOISE QUALITY

Master Plan implementation would result in minor temporary increases in ambient noise levels during construction activities as individual projects are undertaken.

The Master Plan includes no proposals which would change land use designations or specific projects which would affect, or be significantly affected by, noise generated by aircraft operations associated with Lindbergh Field. The Civil Aeronautics Board (CAB) and the Federal Aviation Administration (FAA) have cognizance over service and route authorization for entrance of new airlines to Lindbergh Field, and the addition of new routes or service by existing airlines.

Master Plan implementation would generate increases in motor vehicle traffic throughout the Plan area and attendant increases in vehicle traffic noise.

SOCIO-ECONOMIC CHARACTERISTICS/GROWTH

The Master Plan proposes land uses which are compatible with adjacent areas within the surrounding cities of San Diego, National City, Chula Vista, and Coronado. Coronado Bayfront tidelands plans are currently (9/79) under joint consideration. Master Plan proposals are not anticipated to significantly alter the characteristics of the communities or populations of surrounding areas. These areas include primarily residential/commercial communities with local employment provided mainly by marine-related industry and visitor-related service facilities, many of which are, or would be, located on Port tidelands.

Master Plan implementation would generate additional monies within local economies. Future Port tenants would pay possessory property taxes and provide other sources of revenue. Projected growth in visitor-related businesses, intensified use of the marine industrial area, and commercial and recreational facilities, would result in economic growth of the cities surrounding the Master Plan area.

Port tenant leasing revenues would increase. These revenues would continue to be, as they are currently, used to finance public works projects throughout the Port's Master Plan area. Such projects, including landscaped parks, public boat launching ramps, fishing piers, recreational beach areas, shoreline erosion control improvements, public parking lots, and street improvements, would continue to be provided to the public at no cost.

The San Diego Unified Port District has not utilized property taxation as a source of revenue since 1966. This is a particularly important feature of existing and future Port financial operations, especially in light of recent cutbacks under Proposition 13, which have substantially affected public works capabilities of California cities and counties. The Port's goal under the Port District Act of 1962 is to provide for development and utilization of San Diego Bay for commerce, navigation, fisheries, and recreation.

No significant permanent population growth increases are anticipated for the surrounding area. Any growth inducement that might be attributed to ultimate Plan implementation would occur as a result of the requirements for various services, operations and facilities which may, in turn, increase the demand for support services within surrounding cities.

CLIMATE/AIR QUALITY

Master Plan implementation is not anticipated to introduce significant levels of new air pollutant emissions into the San Diego Air Basin. Due largely to the existing flat topography, open ocean exposure to prevailing westerly winds, and the absence of major air pollutant sources to the west, the Master Plan area would not experience additional air quality impacts following Plan implementation.

New commercial establishments, recreational facilities, expansion of existing marine industrial facilities, and vehicle traffic increases in the Master Plan area could cause an increase or transfer of air emissions from one part of the Plan area to another. This increase has been assessed and incorporated in the preparation of the federally required Air Quality Maintenance Plan (AQMP) by the San Diego Air Pollution Control District (APCD). Increased emissions are accounted for through the regionally and city adopted population projections and the "activity level forecast" developed by the Comprehensive Planning Organization (CPO) in 1978. Major "new source" incremental additions of emissions to the San Diego Air Basin would be subject to subsequent environmental review, and would be, as they are presently, subject to regulation by the San Diego APCD.

ENERGY

Master Plan implementation would increase energy consumption over that which is currently experienced in the Plan area. Electrical power and natural gas consumption for industrial, commercial and recreational uses would increase by an indeterminate amount depending upon individual project requirements. Demand increases for electrical power and natural gas would not significantly impact management of energy resources in terms of existing trends of supply and demand.

The Master Plan area does not include residential uses. The surrounding areas which do include residential uses are not expected to experience substantially increased population or energy growth rates.

Solar/thermal energy, rather than natural gas, would be encouraged where feasible, for heating swimming pools and supplementary water heating. State energy regulations which offer the option of utilizing building designs that consume less energy than standard designs, would continue to be, as they are currently, enforced through the building permit process applicable to Port and tenant construction projects, and by adjacent cities.

BIOLOGY

Master Plan implementation would not have significant biological impact on terrestrial biological habitats in areas which include introduced and/or disturbed vegetation. Isolated native plant communities, together with animals normally associated with these areas, exist in some areas adjacent to Central and South Bay Planning Districts, where projects are proposed. In these areas, the terrestrial plants and animals primarily represent those typically found in association with disturbed habitat and urban settings.

No significant impacts to native plant or animal communities, or to rare and endangered species are anticipated.

Marine habitats, including eelgrass, mudflats, and intertidal sandy beaches, would not be significantly impacted by Master Plan implementation. Marine habitat intrusion would result from construction of public fishing piers, shoreline revetment, recreational marinas, and miscellaneous commercial fishing fleet berthing facilities. Erosion control revetment improvements would replace existing intertidal sandy beach and rubble-strewn shoreline with rock revetment which would constitute habitat replacement, rather than total habitat loss.

The opportunity for more effective source control of potential marine habitat pollutants would be enhanced. This continues to be successfully conducted by the San Diego Regional Water Quality Control Board (SDRWQCB) and has accomplished the recovery of the former (prior to 1963) distressed marine environment of San Diego Bay.

The proposed Chula Vista Boat Basin, J Street Second Peninsula Extension would involve artificial fill nearly a mile in length which would eliminate shallow subtidal habitat in relatively close proximity in the Sweetwater River/Paradise Marsh Creek complex. This area is known to support a great abundance and large variety of marine fish and invertebrates, which are very closely linked with the survival of two rare and endangered bird species, and other resident and migratory wildlife. This proposal would be subject to subsequent environmental review and would likely require the preparation of an additional or supplementary EIR. Other project proposals for areas either within or in close proximity to sensitive biological resources would receive subsequent environmental review and EIR's may be required, as appropriate.

WATER AND SEDIMENT QUALITY

Master Plan implementation would include dredge and fill operations in some locations. For example, deepening water at berths 7 and 8 at the Tenth Avenue Marine Terminal, and fill operations for the Chula Vista Boat Basin Second Peninsula Extension would result in a short-term localized turbidity increase.

Recreational and commercial vessels berthed at proposed marinas introduce long-term potential for localized water and sediment quality degradation from heavy metals contained in bottom anti-fouling paints and from unauthorized waste discharges. Short-term impacts associated with pier construction and erosion control projects would also occur during construction. There are currently no known major uncontrolled sources of water pollutants within or adjacent to the Master Plan area and no individual elements of the Master Plan proposal include future potential sources, other than minor amounts typically associated with urban development. No significant water quality impacts are anticipated to result from Plan implementation, other than short-term impacts associated with dredge and fill operations and pier construction.

All redevelopment and new construction activity would be under the continued control of the San Diego Regional Water Quality Control Board (SDWQCB).

The SDWQCB controls waste water discharge and operation cleanup procedures at all tenant facilities and Port operations, under the National Pollutant Discharge Elimination System (NPDES) program, pursuant to the Federal Water Pollution Control Act of 1972 as amended (FWPCA). The US Coast Guard controls accidental spills of oil, paint, grease, fuel, and other materials into San Diego Bay. The Coast Guard also regulates Marine Sanitation Devices (MSD), used by recreational vessels. These existing regulatory controls would continue to apply to future individual projects during Master Plan implementation. Storm drains from adjacent cities contribute runoff drainage water, some of which contains contaminants from upland areas. Source control of these facilities would continue to be exercised by the SDRWQCB.

LANDFORM/GEOLOGY/ARCHAEOLOGY

Existing topography of the Master Plan area includes essentially level terrain. No unique landform features are present. Master Plan implementation would not include substantial amounts of grading, and no significant environmental impacts to landforms are anticipated.

No valuable geological resources, such as building materials, mineral resources, or paleontological resources are known to exist within the Master Plan area. Agricultural soils exist in the Chula Vista Bayfront Planning District but not on Port tidelands.

Master Plan implementation is not anticipated to increase existing minimal soil erosion rates. Erosion control measures are presently being implemented (1979) in those shoreline areas where erosion is occuring.

Seismic hazards, including ground shaking, ground failure in the forms of liquefaction and seismically generated tsunamis or seiches are possible within

the Plan area. Potential for damage and subsequent environmental impact necessitated by repair or cleanup operations following a seismic event such as an earthquake, also exists. Impact assessment cannot be conducted in the absence of detailed theoretical model studies to predict seismic events and structural damage due to ground failure, ground shaking or seismic seawaves.

Physical properties of the soil and underlying rock strata within the Master Plan area have been found to be generally adequate for structural foundation and no significant adverse environmental impacts are anticipated. All construction projects would have to comply with applicable federal, state, and local codes and satisfy soil and seismic requirements.

Master Plan implementation is not anticipated to result in significant adverse hydrological impact. Construction within special preliminarily designated flood prone areas would be subject to the National Flood Insurance Program established by the Flood Insurance Act of 1978 to make available, under Federal auspices, specified amounts of flood insurance otherwise unavailable from private insurance companies.

New public fishing piers, shoreline revetment and recreational and commercial marinas are not anticipated to result in significant environmental impacts on ocean and bay circulation, bay currents, tidal flushing, sediment transport or shoreline erosion. The Chula Vista Boat Basin J Street Peninsula Extension may result in significant water circulation impacts and would be subject to subsequent environmental review.

No known significant archaeological or historical resources exist within the Master Plan area which would be adversely impacted by Master Plan implementation. Although historical and archaeological site record searches indicate that no known submerged sites exist within the Master Plan area, subsequent environmental review may be required in areas which have not been disturbed by major dredge/fill activity, and where future projects would be located.

Areas of Concern

The following discusses areas of concern or controversy which relate to issues raised by federal, state, and local public agencies, special interest groups, and individuals. Some issues were raised during the Notice of Preparation Process, required by the State EIR Guidelines. Other issues have been ongoing. Others resulted from individual project reviews or coordination with various cities, agencies, group, or individuals during Port Precise Plan or City Community Plan preparation.

LINDBERGH FIELD: AIRPORT NOISE AND SAFETY

The Port of San Diego has proprietory responsibility over the operation of San Diego International Airport (Lindbergh Field, primarily operation of terminals, and supervision of operations of the airport's existing commercial carriers and general aviation lease facilities. The Civil Aeronautics Board (CAB) and the Federal Aviation Administration (FAA) have authority over aircraft operations including additions of new airlines or exit of authorized carriers in San Diego and the assignment of new routes by existing carriers.

The operation of aircraft from Lindbergh Field generates noise and is alleged to involve safety issues with respect to areas surrounding Port tidelands. Litigation concerning aircraft noise associated wtih Lindbergh Field aircraft operations by individuals and groups, some of which are dedicated to airport relocation, has been ongoing for several years.

Lindbergh Field is currently the officially designated regional commercial airport through 1995 under the San Diego Plan for Air Transportation (SANPAT). Master Plan implementation would not affect the demand response level of aircraft operation, with the associated noise, nor would plan implementation introduce land uses which would be adversely impacted by aircraft noise from Lindbergh Field.

BARRIO LOGAN BAY ACCESS

A number of Barrio Logan residents have requested access to San Diego Bay for recreational purposes adjacent to the Port's Tenth Avenue Marine Terminal. Bay access over these Port tidelands has been made unavailable since at least 1949, by the construction of naval, shipyard, and industrial developments along the bay, and by mixed residential and industrial upland community improvements, including freeway construction.

The Board of Port Commissioners, by policy, directed that bay access would be provided by a special landscaped area, including some parking, benches, and viewing amenities, in conjunction with a proposed Mauricio boatyard (1979). However, significant "park" development is not envisaged because of the industrial character of the area and the conflict between recreation and heavy marine industrial port uses which could be hazardous, and are not compatible with the residents' intended recreational uses.

In 1979, legislation was introduced (AB47, Chacon) to remove certain tidelands from Port jurisdiction and convert them for park purposes. This would remove a needed shipyard site, existing tugboat service facilities, and two fueling docks, tank farms, main oil pipelines, and other facilities. It would also isolate the Tenth Avenue Marine Terminal from upland road and rail access. The California Coastal Act of 1976 provides that Port related projects are prime consideration for ports.

Master Plan implementation would include completion of the Embarcadero Marina Park, including a fishing pier, passive and active recreational fields, and a landscaped waterfront public park. This would provide a new, major park facility about one mile northwest of the Barrio Logan Community Plan residential area.

CORONADO BAYFRONT DEVELOPMENT

Port jurisdiction over the Coronado Bayfront, north of the San Diego/Coronado Bay Bridge, has a long history of attempts by the Port of San Diego to resolve possible land uses in this area with the City of Coronado. The City of Coronado has expressed concern over both the intensity and scale of development submitted in the Coronado Bayfront Development Plan as produced by the Port of San Diego in 1978. The Port has presented three alternative land use plans, SDUPD (1978c), to the Coronado City Council to elicit comments on the development scenarios for

this northern area which has been open for many years following the demolition of World War II Naval housing facilities. The Coronado City Council subsequently appointed a Land Use Committee (May 4, 1978) to review the Port's alternatives and make recommendations back to the City Council. The Coronado Land Use Committee also served in an advisory capacity to the Coronado City Council regarding Coronado's Local Coastal Program (LCP) planning, and the revision of Coronado's Glorietta Bay Master Plan. The Coronado Land Use Committee was disbanded August 9, 1979. The key issues of contention by the City of Coronado include the concern that additional vehicle traffic circulation, as a result of proposed Port developments on Coronado Bayfront tidelands, would have a significant impact on the City of Coronado. A joint agency Ad Hoc Committee was formed (March 30, 1979), including some members of the Coronado City Council and Port of San Diego Port Commissioners to continue to work toward resolution of these and other key land use issues along the Coronado Bayfront.

DREDGING AND FILLING

Master Plan proposals, including the Chula Vista Boat Basin Second Peninsula/ J Street Extension, and the D Street Fill/Sweetwater Wharf construction contain elements of concern primarily expressed by US Fish and Wildlife Service, National Marine Fishery Service, and the California State Department of Fish and Game. These agencies have indicated that South San Diego Bay is the last remaining area for Bay estuary habitat in San Diego Bay, and have had their views included in the California Coastal Act of 1976.

The resources agencies indicate that South Bay contains valuable wetlands, important to both fish and wildlife. The extensive mudflat and shallow water habitats are nursery grounds for sport fishes, as well as ecologically important fishes, which provide forage food for both commercial and sport fisheries of considerable economic importance. The mudflats are heavily used by shorebirds as feeding areas, and migratory waterfowl use the open water areas for both resting and foraging.

The resources agencies are concerned that implementation of the Master Plan, including the specific projects mentioned, would significantly modify the existing Bay estuary habitat and reduce the important nursery functions of San Diego Bay. The California State Coastal Commission staff has expressed an opinion that these projects may be inconsistent with some Coastal Act policies. For the Sweetwater Marsh complex and the surrounding area, (most of which is off Port jurisdiction) many uncertainties concerning implementation with respect to US Army Corps of Engineers and City of Chula Vista project plans exist. This further complicates the impact assessment of the projects proposed for this area. The California State Coastal staff has requested that alternatives to the intensive commercial/ recreational developments described for this area, as well as the extensive bay filling proposed, be sought elsewhere within San Diego Bay, but has not identified potentially feasible sites.

PUBLIC TRANSPORTATION AND PARKING

Persistent mention is being made for public transit, and concerns are being expressed regarding increased vehicle traffic and pedestrian traffic associated with intensification of commercial and recreational development. The Master Plan proposes

additional hotels and recreational boating slips, and questions are being raised regarding transportation impacts and alternatives to deal with parking and access requirements. Suggestions for mitigation are for the Port to develop a shuttle bus system to serve existing and proposed commercial/recreational areas and to provide these facilities with transportation centers such as the airport and major development proposals throughout the Port's jurisdiction. Clearly, ground transportation modes, service, and implementation must be carried out by the authorized transit operators serving the Port's jurisdiction.

CARRYING CAPACITY

The California State Coastal staff has expressed concern about the "carrying capacity" of additional commercial/recreational and marina development for San Diego Bay. Master Plan proposals for additional hotels and recreational boat slips are related to the infrastructure serving the Port District and the water areas, given the competing uses of commercial shipping, military vessels, and commercial fishing water traffic in San Diego Bay. Issues such as parking facilities and potential traffic congestion adjacent to proposed new marinas and commercial fishing fleet berthing facilities were requested to be, and have been addressed.

PRIORITY OF USE

The California Coastal Act of 1976 requires that all port-related developments shall be located, designed, and constructed so as to give highest priority to the use of existing land space within harbors for port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities. The Coastal Act further requires that ports shall not eliminate or reduce existing commercial fishing harbor space, unless the demand for commercial fishing facilities no longer exists or adequate alternative space has been provided.

Higher priority in the Plan is to be given to uses which are primarily Port-related in nature or directly supportive of primary Port or marine-related activities. Coastal staff suggested that recreational opportunities and improvements, such as small craft marinas, public parks, fishing piers, and recreational/commercial developments which exist within the Master Plan area and are proposed for further enhancement, should be given priority, since all provide for significant public enjoyment of San Diego Bay. The California State Coastal Commission staff has also encouraged the Port to expand other types of recreational opportunities, such as recreational vehicle park facilities, dry boat storage, and new public accessways wherever possible.

I. INTRODUCTION

This Environmental Impact Report (EIR) has been prepared in accordance with the requirements of the California Public Resources Code, Section 21151, of the California Environmental Quality Act (CEQA). It evaluates the environmental consequences of adoption of the proposed planning goals, objectives, and policies, of the Port's Master Plan revision.

This EIR has been coordinated with the Port of San Diego's proposed Master Plan (revised) to provide an integrated approach to environmental impact analysis in the form of a readily accessible document. It puts forth specific aspects of anticipated project proposals with a corresponding environmental impact analysis which may be utilized by agencies and individuals alike in a number of ways.

Master Plan

The California Resources Agency EIR Guidelines provide guidance for ways in which an EIR may be prepared and used in consort with a corresponding Master or a General Plan. This EIR draws most heavily upon the portions of the Port's proposed Master Plan which refer to specific aspects of proposed project implementation and references those in the Project Description section of the EIR. To this extent the EIR is an integral part of the Port's proposed Master Plan (project) report.

This EIR, therefore, contains baseline information for future reference of subsequent project-specific EIR's. This procedure is provided for in the EIR Guidelines, Section 15068.5, Use of a General Plan EIR With Subsequent Projects, which reads:

> "The EIR on a general plan may be used as the foundation document for EIR's subsequently prepared for specific projects within the geographic area covered by the general plan. The subsequent EIR's may reference and summarize material in the EIR on the general plan for the description of the general environmental setting and as much of the description of the environmental impacts as applies to the specific project. Detailed information in the EIR on the specific project may be limited to a description of the project, the specific environmental setting and those impacts which are not adequately described for the specific project in the EIR on the general plan. When a subsequent EIR refers to an EIR on the general plan for part of its description of the environment and the environmental impacts, copies of the EIR on the general plan shall be made available to the public at a number of locations in the community and to any clearinghouses which will assist in public review of the EIR. The purpose of this section is not to restrict analysis of environmental issues but is to avoid the necessity for repeating detail from a general plan EIR."

The Port routinely deposits EIR's with all member city library systems, the government reference library, the reference section at San Diego State University, coordinating for all academic institutions, state and local metropolitan clearinghouses, and a number of other locations, see Section XII, Public Review.

Master Environmental Assessment

This EIR is also a Master Environmental Assessment. The EIR Guidelines provide for this use in Section 15069.6, Master Environmental Assessment, which reads:

> "(a) General. A public agency may prepare a master environmental assessment, inventory, or data base for all, or a portion of, the territory subject to its control in order to provide information which may be used or referenced in EIR's or Negative Declarations. Neither the content, the format, nor the procedures to be used to develop a master environmental assessment are prescribed by these Guidelines. The descriptions contained in this section are advisory. A master environmental assessment is suggested solely as an approach to identify and organize environmental information for a region or area of the State."

This section further states:

> "(b) Contents. A master environmental assessment may contain an inventory of the physical and biological characteristics of the area for which it is prepared and may contain such additional data and information as the public agency determines is useful or necessary to describe environmental characteristics of the area. It may include identification of existing levels of quality and supply of air and water, capacities and levels of use of existing services and facilities, and generalized incremental effects of differenct categories of development projects by type, scale, and location."

The usefulness of a Master Environmental Assessment, is more specifically described in Section 15069.6(d) of the EIR Guidelines, which reads in part:

> "(1) A master environmental assessment can identify the environmental characteristics and constraints of an area. This information can be used to influence the design and locations of individual projects.
>
> (2) ... may provide information agencies can use in initial studies to decide whether certain environmental effects are likely to occur and whether certain effects will be significant.
>
> (3) ...can provide a central source of current information for use in preparing individual EIR's and Negative Declarations.
>
> (4) Relevant portions ... can be referenced and summarized in EIR's and Negative Declarations.
>
> (5) ... can assist in identifying long-range, areawide, and cumulative impacts of individual projects proposed in the area covered by the assessment.
>
> (6) ... can assist a city or county in formulating a general plan or any element of such a plan by identifying environmental characteristics and constraints that need to be addressed in the general plan.

(7) ... can serve as a reference document to assist public agencies which review other environmental documents dealing with activities in the area covered by the assessment. The public agency preparing the assessment should forward a completed copy to each agency which will review projects in the area."

Specificity

This document has been prepared according to the degree of specificity and level of detail appropriate to the preparation of a Master or a General Plan EIR as provided for in the EIR Guidelines, Section 15147, Degree of Specificity, which reads:

"The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR. (a) An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.

(b) An EIR on projects such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow."

In response to the goal for early integration of environmental considerations into the planning process, this EIR has been prepared closely in conjunction with the development of the Port's proposed Master Plan.

Incorporation by Reference

To avoid unnecessary repetition while still serving as a comprehensive source document this EIR has utilized as reference material many previous environmental and technical documents written by various agencies, firms, and/or individuals, covering the same general project area, some with more specific project assessment and analysis, some with more general overall background data. The procedure of utilizing information from previous documents is provided for in the EIR Guidelines, Section 15149, Incorporation by Reference, which reads:

" (a) An EIR may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public. Where all or part of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of the EIR."

II. PROJECT DESCRIPTION

Location and Ownership

LOCATION

The Port of San Diego's Master Plan area is located generally coincident with San Diego Bay and shoreline. San Diego Bay is situated on the Pacific Coast in California, in southwestern San Diego County, adjacent to the Point Loma Peninsula and the San Diego downtown area, about 120 miles south of Los Angeles, and about 10 miles north of the US-Mexican Border, see Figure 1.

OWNERSHIP

The Master Plan area, see Figure 2, includes the entirety of the Port's ownership, which can be generally described as a band between the landward mean high tide line (as located by the 1918 USGS Land Survey), and the bayward US pierhead line (in some cases the combined US pierhead-bulkhead line). The Port's ownership includes land portions of tidelands (some of which have been filled and are no longer subject to tidal inundation); and submerged lands (lands constantly beneath the waters of some portions of San Diego Bay). These lands are also within the corporate limits of four cities: San Diego, National City, Chula Vista, and Coronado. For individual acreages within each city area refer to the Master Plan itself.

The Port's ownership does not include all tidelands and submerged lands in and around San Diego Bay. The Port's ownership includes only those tidelands (2,491 acres) and those submerged lands (2,992 acres) conveyed by the State Legislature in 1962 and 1965 to the Port as Trustee and Administrator with regulatory duties and proprietory responsibilities. The total Port ownership of 5,483 acres includes 37.1% of the total 14,951 acres of tidelands/submerged lands within and around San Diego Bay, see Figure 2. A total of 2,868 acres (19.2%) has been deeded to the Federal Government, for use by the Coast Guard, Marine Corps and the Navy. An additional 34 acres (0.2%) have been granted to the Cities of San Diego and Coronado, and to the County of San Diego. A total of 6,502 acres (43.5%) remains ungranted, is under State of California jurisdiction, and is administered by the State Lands Commission and the State Department of Parks and Recreation.

The Port's entire ownership is completely within the Coastal Zone boundaries pursuant to the California Coastal Act of 1976.

Port Master Plan

The Port's Master Plan is a comprehensive guide to unified, integrated, and comprehensive development of Port tidelands and submerged lands. The Master Plan includes policies for the achievement of the stated goals, a map of general land/water use designations, and interpretations of appropriate uses for designated land/water areas. The Master Plan provides for Port public works projects as well as tenant proposals. Land and water uses are planned to include transitional areas to insure use compatibility throughout the San Diego Bay area wherever possible regardless of jurisdictional boundaries.

The Port's proposed Master Plan includes six different general land and water uses:

- -Commercial
- -Industrial
- -Public Recreation
- -Public Facilities
- -Conservation
- -Military.

The general use designations incorporate 39 more specific use descriptions (23 land uses and 16 water uses), all of which are tabulated with their individual acreage and percent use area allocations in the Port's proposed Master Plan, where detailed descriptions of each land and water use category can also be found.

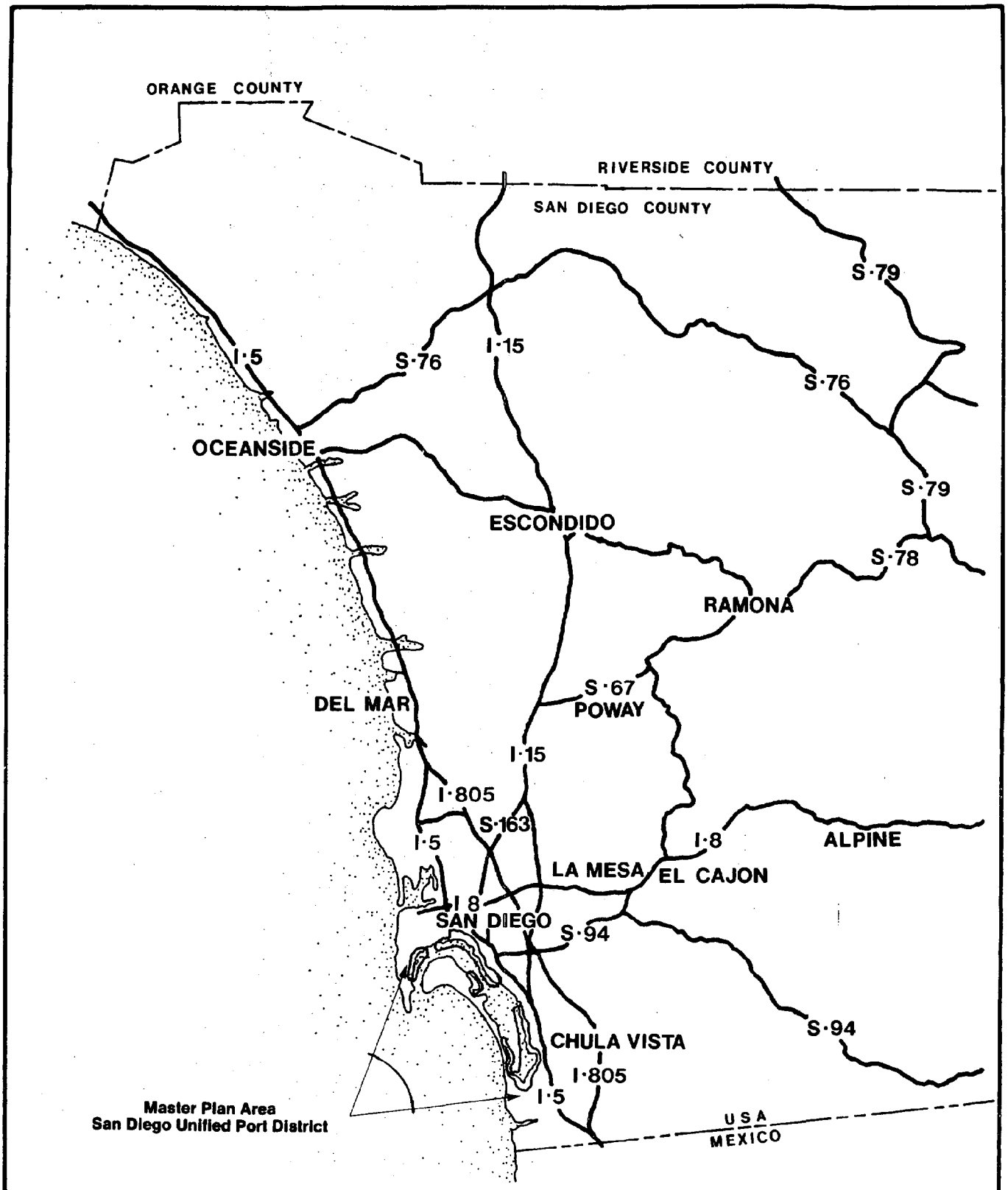
In order to further clarify and interpret Master Plan policies and general land/water use designations, the Port's Master Plan area is divided into nine Planning Districts which separate San Diego Bay tidelands and submerged lands into identifiable areas for precise planning and environmental management purposes, see Figure 3. Each Planning District is further divided into several subareas, based largely upon distinguishing individual land and water use characteristics, see proposed Master Plan.

The nine Planning Districts outline some adjacent uplands as well as tidelands and submerged lands within other jurisdictions, which include: the US Coast Guard; the Marine Corps; the Navy; the State Lands Commission; the State Department of Parks and Recreation; the County of San Diego; and the Cities of San Diego, Coronado, National City, Chula Vista, and Imperial Beach. Jurisdictions other than the Port of San Diego are identified throughout this report when surrounding areas are discussed. The Port's Master Plan, however, includes only those tidelands and submerged lands specifically within the Port's jurisdiction. The planning jurisdictions of other agencies adjacent to the Port's jurisdiction are illustrated in Figure 4.

Planning District Project Proposals

The proposed Master Plan, hereafter 'Master Plan', provides additional detail for the planning subareas of the nine Planning Districts with more precise land and water use designations and acreage and should be consulted for details.

This EIR refers frequently to the Master Plan's illustrations and tables which describe in detail the land/water use allocations, concepts, Planning Districts and subareas, and specific project lists for the nine Planning Districts. The



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Regional Vicinity Map

Figure 1

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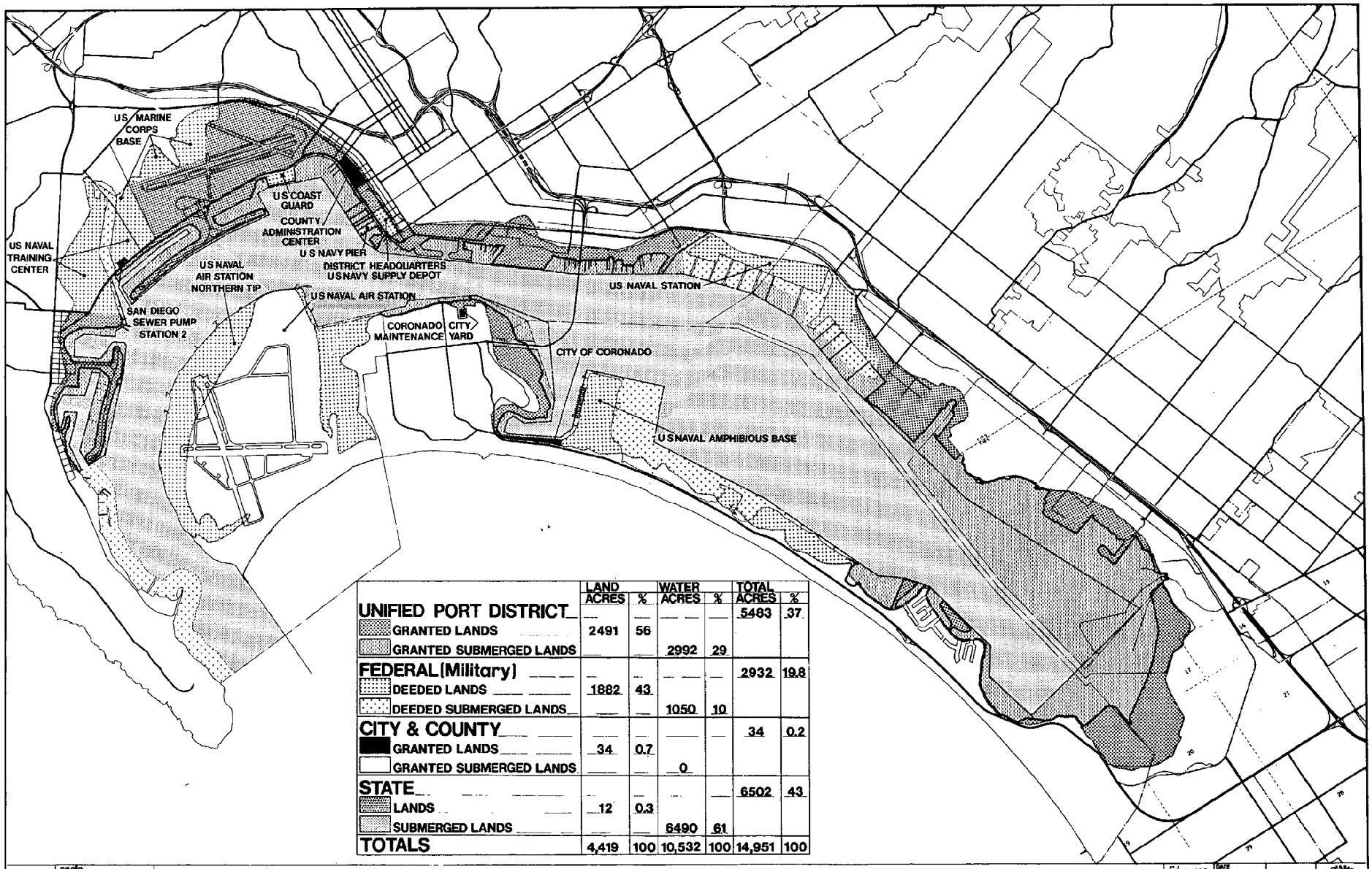
PORT OF SAN DIEGO UNIFIED PORT DISTRICT



	LAND ACRES	%	WATER ACRES	%	TOTAL ACRES	%
UNIFIED PORT DISTRICT					5483	37
GRANTED LANDS	2491	56				
GRANTED SUBMERGED LANDS			2992	29		
FEDERAL (Military)					2932	19.8
DEEDED LANDS	1882	43				
DEEDED SUBMERGED LANDS			1050	10		
CITY & COUNTY					34	0.2
GRANTED LANDS	34	0.7				
GRANTED SUBMERGED LANDS			0			
STATE					6502	43
LANDS	12	0.3				
SUBMERGED LANDS			6490	61		
TOTALS	4,419	100	10,532	100	14,951	100

scale

planning department

Master Plan Area San Diego Bay Tidelands Ownership

Figure 2

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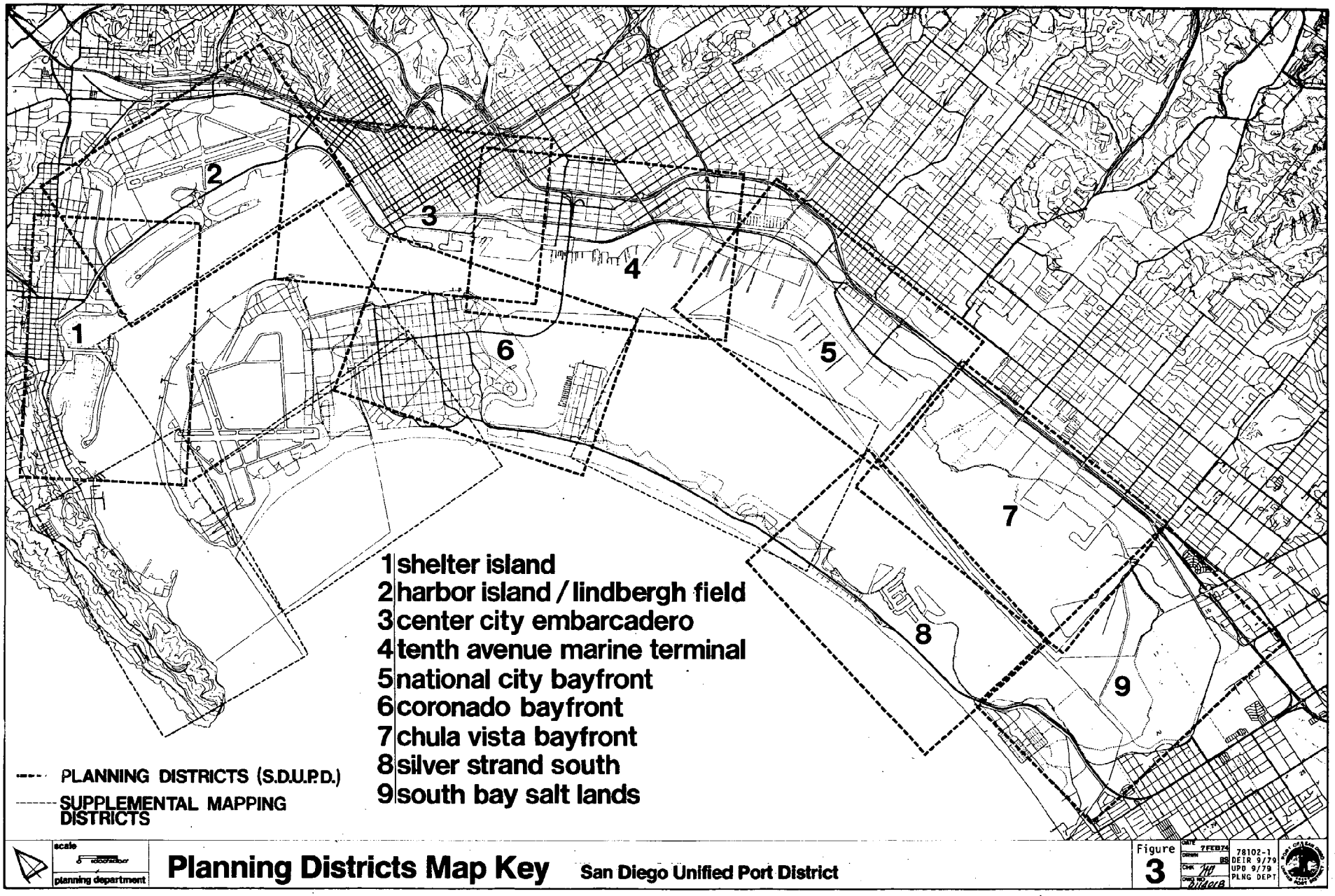
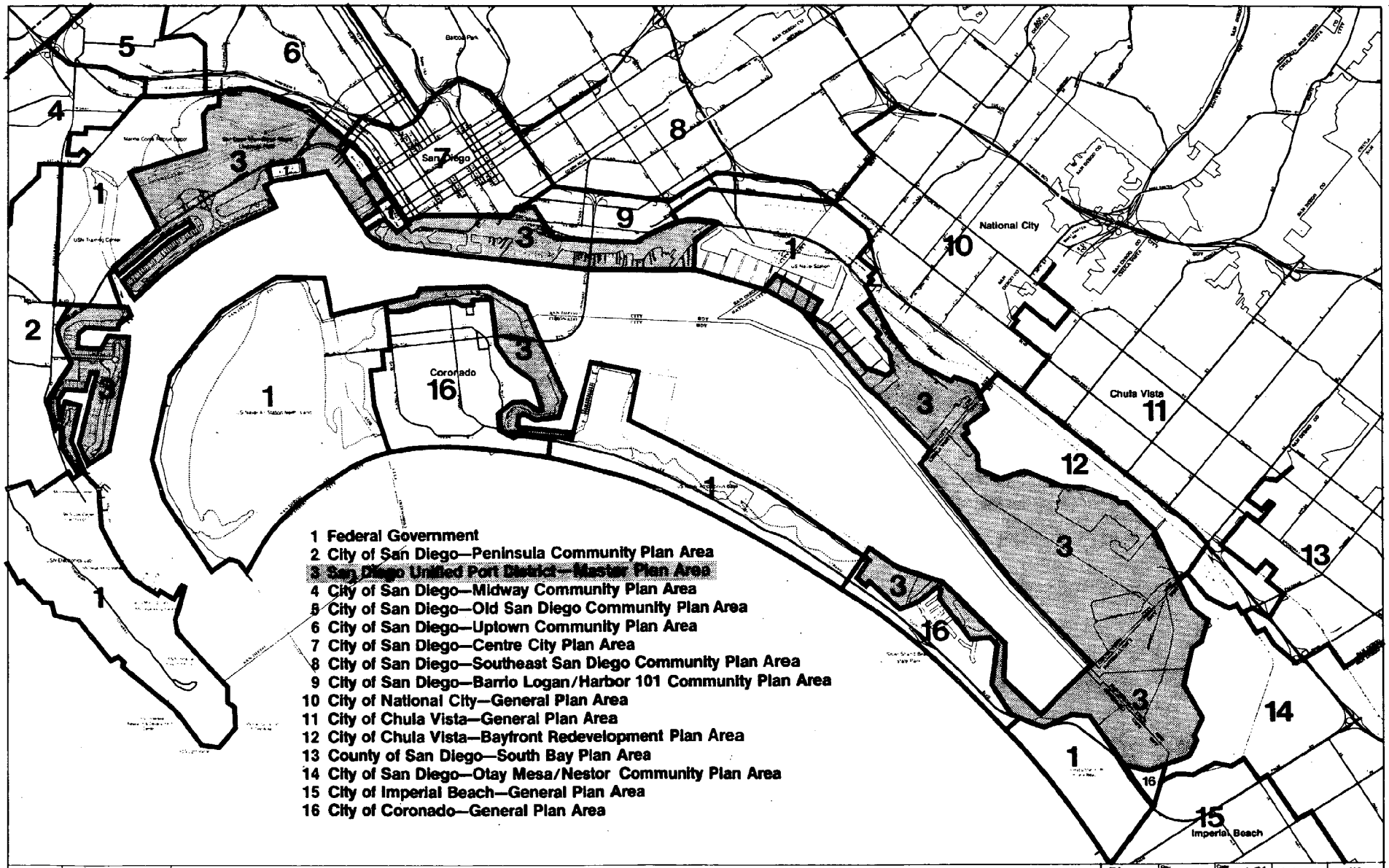
DEIR 9/79
UPD 9/79
PLNG DEPT



Planning Districts Map Key San Diego Unified Port District

Figure 3



Planning Jurisdictions around San Diego Bay

Figure 4

land/water use designations (with illustrative tabulated project lists and interpretation as to implementation) constitute the project addressed by this EIR. The specific details, therefore, of the EIR's project description are contained in the proposed Master Plan.

The Port has an existing Master Plan, adopted in January 1964 and subsequently amended after considerable public input on December 19, 1972, by Resolution 72-308 (SDUPD, 1972d). Updates of the Plan also occurred in 1975 and 1976. It is hereafter referred to as the '1972 Master Plan' to distinguish it from the proposed Master Plan, hereafter 'Master Plan'.

III. ENVIRONMENTAL SETTING

Land and Water Use

The overall land/water use setting of the Port's Master Plan area includes existing uses in six general categories. A more detailed description is provided for each of the Port's nine Planning Districts to illustrate the relative geographic location of existing land/water uses, arranged as follows:

- -Shelter Island
- -Harbor Island/Lindbergh Field
- -Centre City/Embarcadero
- -Tenth Avenue Marine Terminal
- -National City Bayfront
- -Coronado Bayfront
- -Chula Vista Bayfront
- -Silver Strand South
- -South Bay Saltlands

Because of similarities in existing land and water uses and ecological characteristics, the Port's Master Plan area can be grouped for environmental purposes into three geographical areas within San Diego Bay, namely North, Central, and South San Diego Bay. North Bay includes the Shelter Island, Harbor Island/Lindbergh Field, and Centre City/Embarcadero Planning Districts. Central San Diego Bay includes the Tenth Avenue Marine Terminal, National City Bayfront, and Coronado Bayfront Planning Districts. South San Diego Bay includes the Chula Vista Bayfront, Silver Strand South, and South Bay Saltlands Planning Districts.

Existing development is greatest for the Planning Districts in North and Central San Diego Bay, particularly commercial and recreational uses in North Bay Planning Districts, and commercial, industrial, and some recreational uses in Central San Diego Bay Planning Districts. South San Diego Bay Planning Districts primarily include undeveloped and partially developed areas. This EIR places more detailed emphasis on description and analysis of undeveloped and partially developed Planning Districts, particularly those in the South San Diego Bay area.

SHELTER ISLAND

Planning District 1 (see Master Plan) includes 145.3 acres of land and 206 acres of water (submerged lands). The land area consists almost entirely of artificial fill, see Figure 5. The main body of the Shelter Island peninsula was filled between 1936 and 1942. The causeway fill connecting the peninsula to the mainland area was placed in 1946. Submerged lands in the Municipal Yacht Harbor and Commercial Basin were dredged in 1946 and 1949, see Figure 6. The main channel bayward and adjacent to Shelter Island was dredged by the US Army Corps of Engineers (USACE) in 1941, subsequently deepened during 1961 through 1966, and slightly modified in 1977 to provide adequate deep draft clearance for military vessels and commercial shipping. The shoreline in the Shelter Island Planning District includes protected (riprapped), as well as unprotected areas, see Figure 7.

Existing land and water uses are described in detail in the Shelter Island Precise Plan Final EIR (SDUPD, 1976e, pp. 1-8, 20, 21) and in the Master Plan. Existing land and water uses include commercial recreation, commercial fishing and sportfishing fleet berthing, support facilities for the commercial fishing and sportfishing fleets, and commercial marina and/or repair facilities. As described in the Shelter Island Precise Plan EIR, (SDUPD, 1976e, p. 20):

"The following major categories are designated: Commercial, Military, Public Recreation, and Public Facilities. Various subordinate uses are identified ... such as Fisheries berthing, Recreation/Open Space, Harbor Services, etc...."

Two projects under consideration by the Port and carried to various stages of design detail, as described in the Shelter Island Precise Plan EIR (SDUPD, 1976e, p. 20), include:

"A major beautification project proposes the implementation of a coordinated landscaping program of Shelter Island Drive, both in the Entrance Corridor and the Bay Corridor.";

and,

"The coordinated improvement of conditions in the Commercial Basin has been proposed by providing a proper mooring facility in the basin's anchorage area, construction of onshore support facilities, including a landing, and integrating public improvements in the sportfishing area."

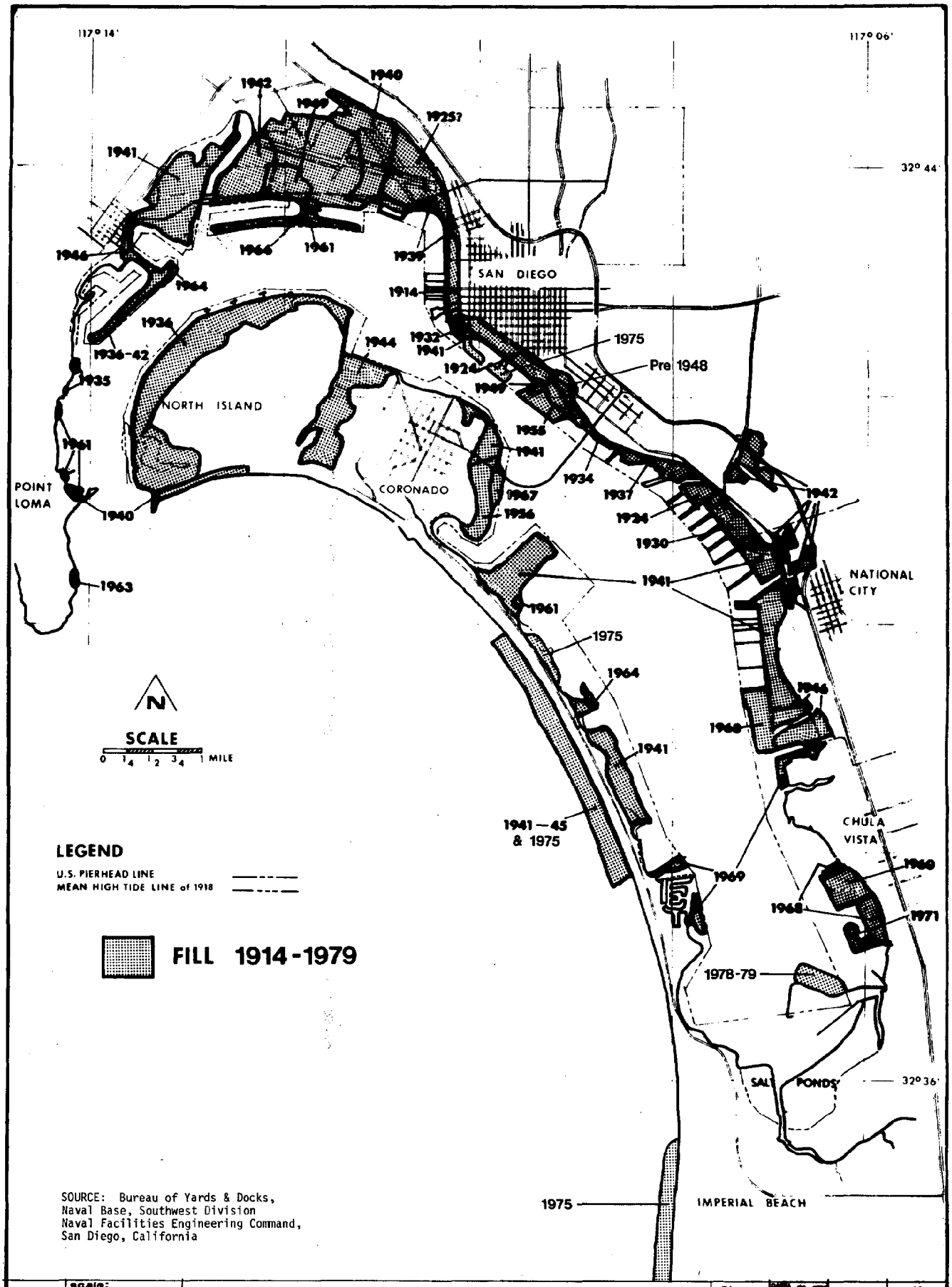
The Entrance Corridor, which extends along Shelter Island Drive from the mean high tideline to the traffic circle, is the area wherein the major emphasis of renovation for the entire Shelter Island Planning District will be focused by projects under Port consideration.

Public recreational land and water use amenities include approximately 1,000 feet of relatively undisturbed sandy beach, a public boat launching ramp, and a public fishing pier. The Port's La Playa Beach Restoration project would restore, replenish, as well as improve a small local beach for continued recreational use near the foot of Kellogg Street, see La Playa Beach Restoration EIR (SDUPD, 1979).

The Port's 1972 Master Plan (SDUPD, 1972d) designates the majority of the land as "Commercial Recreation" and as "Parks, Recreation Areas". Smaller portions are designated under "Military Leased Tidelands" and "Commercial Fisheries". The water areas are designated "Commercial Marina and/or Boat Repair", "Commercial Sportfishing Berthing", and "Commercial Fishing Fleet Berthing."

Surrounding land and water uses (and jurisdictions) include the Fleet Sonar School (Navy) to the north, military, commercial, and recreational water traffic in San Diego Bay (State of California) to the east, the Scripps Institution of Oceanography (SIO) Nimitz Marine Facility (Navy) to the south, and single and multi-family residential uses, and commercial uses (City of San Diego) to the west.

The City of San Diego has planning jurisdiction over the land uses to the west. The City's General Plan provides for commercial and residential uses in these areas by way of the adopted Peninsula Plan (City of San Diego, 1975b). This plan emphasizes commercial and high density residential land use in the areas close to the Shelter Island Planning District. Further to the west, the Peninsula Plan calls for less commercial development and lower density residential uses. The Peninsula Plan area is essentially completely developed.



SOURCE: Bureau of Yards & Docks, Naval Base, Southwest Division Naval Facilities Engineering Command, San Diego, California

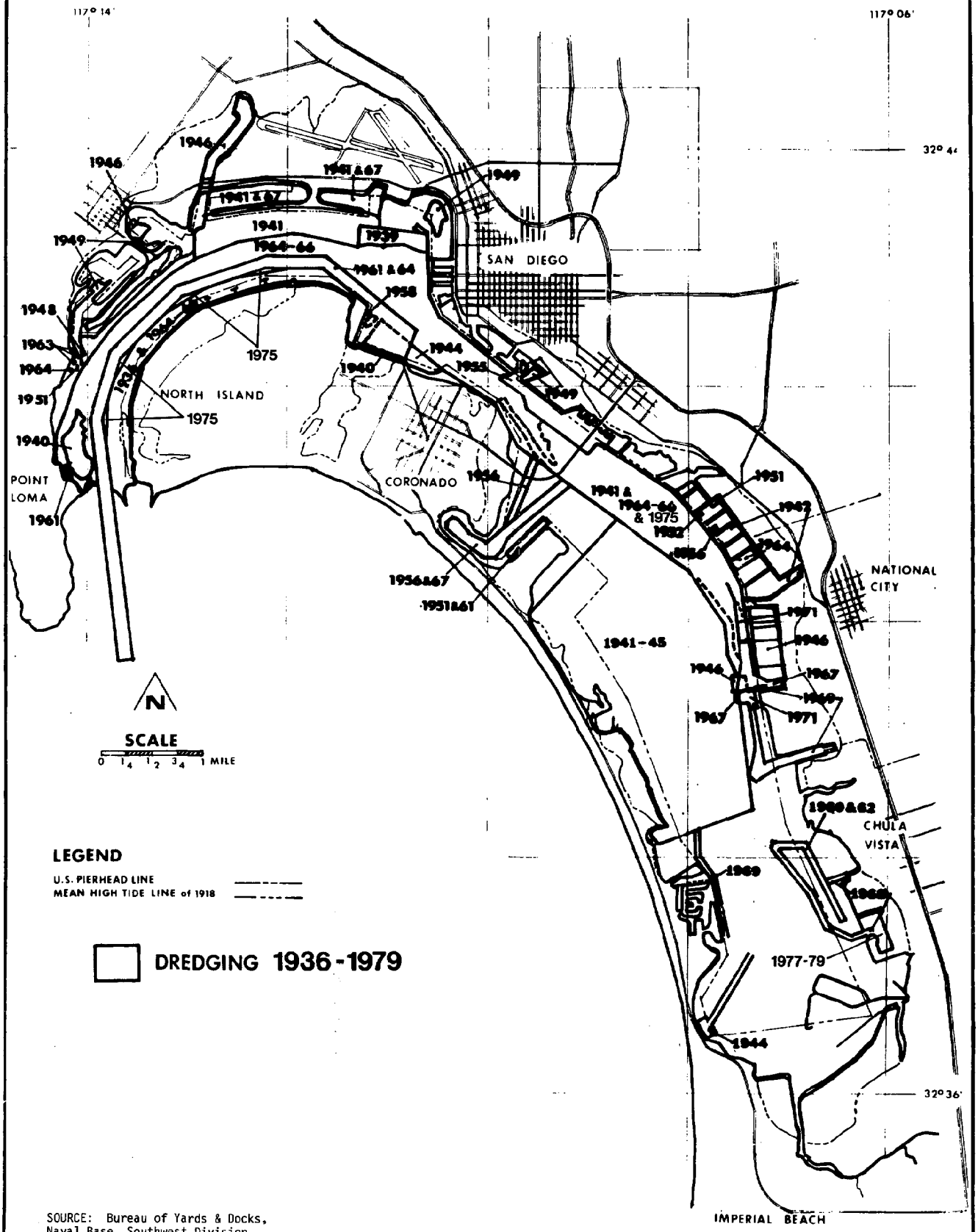
scale:

planning dept.

Major Fill Areas In San Diego Bay

Figure 5

78102-1
DEIR 9/79
UPD 9/79
NAT PHYS FACTORS

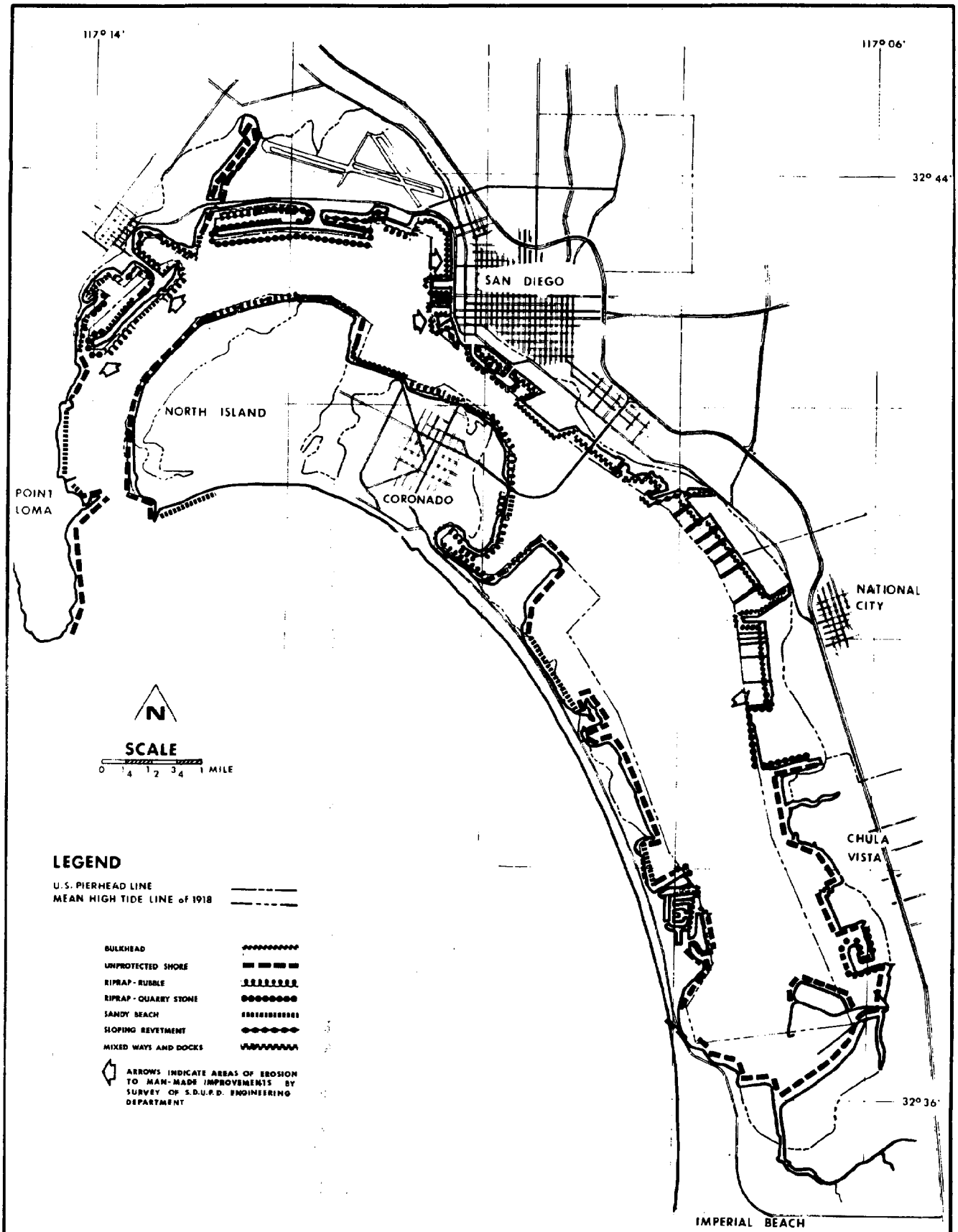


SOURCE: Bureau of Yards & Docks,
Naval Base, Southwest Division
Naval Facilities Engineering Command,
San Diego, California

Major Dredged Areas In San Diego Bay

Figure 6

78102-1
DEIR 9/79
UPD 9/79
NAT PHYS
FACTORS



Shoreline Features In San Diego Bay

Figure 7

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HARBOR ISLAND/LINDBERGH FIELD

Planning District 2 (see Master Plan) includes 763.6 acres of land and 180 acres of water (submerged lands). The land area consists entirely of artificial fill, see Figure 5, and includes two distinct areas, namely the Harbor Island peninsula and San Diego International Airport (Lindbergh Field). The airport land area is the result of at least four fill operations which occurred in 1925, 1940, 1942, and 1949. Harbor Island is the result of two fill operations done in 1961 and 1966. Submerged lands within the Harbor Island East and West basins were dredged in 1941 and again in 1967, and the adjacent Navy Estuary area west of Harbor Island was dredged in 1946, see Figure 6. The main channel bayward and adjacent to Harbor Island was dredged by USACE in 1941, subsequently deepened during 1961 through 1966, and slightly modified in 1977 to provide adequate deep draft clearance for military vessels and commercial shipping. An extensive sandy beach public recreational area exists along Spanish Landing Park within the West Basin.

Existing land and water uses are partly summarized in the Master Plan:

> "Planning District 2 embraces two different activities --- the transportation hub of the San Diego International Airport (Lindbergh Field) with its ancillary commercial and industrial activities, and Harbor Island, with its tourist, commercial orientation."

Lindbergh Field facilities have been airport oriented since the area was first filled in 1925. The construction of the East Terminal in 1967 has been complemented by the completion of the new West Terminal in July, 1979. Descriptions of the East and particularly the West Terminal have been provided in the West Terminal Project, Lindbergh Field EIR (SDUPD, 1975b).

Harbor Island facilities include hotel and marina complexes and Spanish Landing Park along the West Basin and restaurant facilities at the eastern end of Harbor Island. The Harbor Island shoreline consists primarily of riprap on the bayward edges and in some areas within both the basins, see Figure 7. The shoreline in the East Basin is scheduled for riprap erosion protection from the outer peninsula edge to the inner basin in 1979. The East Basin area is, except for the restaurants and marine research facilities, as yet undeveloped. However, this portion was for planning purposes located within Planning District 3, and the Embarcadero Development Plan EIR (SDUPD, 1976a) analyzed and included it in the "Entry Zone" plan for the Embarcadero.

The 1972 Master Plan designates the Harbor Island land area as "Commercial Recreational" and "Parks, Recreation Area" with "Industrial, Air-Oriented" and "Research Park" designations along the landward portion adjacent to the East Basin. Water areas in the West Basin and southernmost East Basin are designated "Commercial Marina and/or Boat Repair". The remainder of the East Basin is designated "Channel" and "Industrial, General Berthing". Outer portions of the adjacent bay waters are designated "Open Bay Waters". The entire Lindbergh Field area is designated "Industrial, Air-Oriented".

Surrounding land and water uses to the north include the Naval Training Center (Navy), the Marine Corps Recruit Depot (Marine Corps), the Coast Guard Air Station (Coast Guard), and various military/industrial related support facilities and businesses (City of San Diego); to the east, air related commercial and industrial

businesses (City of San Diego); to the south, military, commercial, and recreational water traffic in San Diego Bay (California); and to the west, the Naval Training Center and Fleet Sonar School (Navy).

Adjacent land uses outside of Port jurisdiction within the City of San Diego are included in the Midway Community Plan area. The nearby area to the north, includes multi-family and light manufacturing uses while areas further to the west include residential uses at various densities.

CENTRE CITY/EMBARCADERO

Planning District 3 (see Master Plan) includes 231.8 acres of land and 200.9 acres of water (submerged lands). The majority of this Planning District, which stretches from the "Crescent Zone" adjacent to Lindbergh Field south to the Tenth Avenue Marine Terminal, was built with fill from adjacent dredging (USACE) in San Diego Bay over a period of many years, see Figure 5. The original fills along the Embarcadero proper were placed in 1914, the fill which is now the Navy Athletic Field was placed in 1924, the fill which comprises the G Street Mole was placed in 1942, and the fill which makes up the "Crescent Zone" waterfront wharf was placed in 1939. Additional fills were placed in the area of the G Street Mole in 1941, and in the area adjacent to the Tenth Avenue Marine Terminal in 1949. Adjacent submerged lands have been dredged by USACE over a period of several years to accommodate military and commercial vessels, see Figure 6. The shoreline along the Embarcadero from the "Crescent Zone" to the G Street Mole is bulkheaded. The Fish Market, Sea Port Village, and Embarcadero Marina Park area is riprapped.

Existing land and water uses include commercial, recreational and commercial fisheries facilities, particularly along the Embarcadero, which constitutes a single unified waterfront with pedestrian orientation. Military facilities, including the Navy pier and the Naval District Headquarters and Supply Depot, are centrally located within this Planning District. The County of San Diego's Administration Center is also adjacent to the waterfront.

Further detailed descriptions of land and water uses can be found in the Embarcadero Development Plan EIR (SDUPD, 1976a). A landscaped waterfront park, the Embarcadero Marina Park, and a large waterfront theme shopping area, Sea Port Village, are adjacent to a Fish Market complex. This area is described in greater detail in the Sea Port Village EIR (SDUPD, 1977c).

The 1972 Master Plan designates the land areas as "Industrial Air Oriented", in the "Crescent Zone" adjacent to Lindbergh Field; and "Commercial Recreation" in the area including B Street Pier, Harbor Drive, the Fish Market, Sea Port Village, and the Navy Athletic Field. "Commercial Fisheries" are designated for the area surrounding G Street Mole and adjacent pier, and "Parks, Recreation Areas" are designated for the Broadway Pier and Embarcadero Marina Park. "Industrial, Marine Oriented" designations have been placed upon the area south of Navy Field and along a portion of the 5th Avenue Marina. Water use designations include "Deep Draft Berthing" adjacent to B Street Pier, Broadway Pier, and Navy Pier; "Fishing Fleet Berthing" adjacent to G Street Mole; "Commercial Marina and Boat Repair" within the 5th Avenue Marina Basin; "Channel" adjacent to the southern peninsula of the 5th Avenue Marina; and "Open Bay Water" in the "Crescent Zone" and "Civic Zone".

Surrounding land and water uses are described in detail in the Embarcadero Development Plan EIR (SDUPD, 1976a, p. 3), which describes the City of San Diego's adjacent Centre City Planning area in part as follows:

> "Within this area ((Centre City Planning area)) is the central business district and the governmental offices of the City. Basically, land uses in the Centre City area are office and commercial with some light manufacturing and high density residential."

The Port's Embarcadero Development Plan also involves the redevelopment of the G Street Mole area (and the adjacent former US Navy Fleet Landing) for commercial recreation uses and Fish Harbor support facilities.

The interrelationship between the Port's Embarcadero Development Plan area and the existing and proposed uses in the City of San Diego's Centre City Redevelopment Planning area is particularly important to the overall function of both areas. Land use concepts developed in close coordination with the City, which emphasize the supporting relationships, have been described in detail in the Centre City Redevelopment Projects EIR (City of San Diego Redevelopment Agency, 1978). Essentially, the Centre City Redevelopment Projects complement Port projects as embodied in the San Diego Embarcadero Development Plan (SDUPD, 1976c) of the Port's 1972 Master Plan, from Harbor Island through the Embarcadero south into and including the Navy Field area.

Projects within the Centre City Redevelopment Plan area include three major projects: Horton Plaza, Columbia, and Marina Redevelopment. These highly urbanized areas include 335.5 contiguous acres within the City of San Diego. Portions of the Marina and Columbia areas are within the Port's Embarcadero Development Plan area. Centre City Redevelopment projects are also contiguous with the existing Central Business District, Community Concourse, and the proposed Gas Lamp Restoration District.

The three Centre City Redevelopment projects described in the Centre City Redevelopment Projects EIR (City of San Diego Redevelopment Agency, 1978, pp III-9 to III-17) in part as follows:

> Horton Plaza Redevelopment Project
> "...The Project area is comprised of 15 blocks bounded by Broadway on the north, Fourth Avenue on the east, "G" Street on the south, and Union Street on the west...Two major structures have been constructed, the Federal Office Building and the Central Federal Office Building. The remainder of the Project area will be comprised of the Horton Plaza Retail Center, the Horton House, commercial retail areas and two highrise office buildings."
>
> "Current plans call for the provision of approximately 3,800 parking spaces for the Retail Center."
>
> Marina Redevelopment Project
> "The Marina Redevelopment Project includes the area south of "F" Street to Union Street, south of "G" Street to Fourth and bounded by Fourth except for the half-block where the Royal Pie Bakery is located between Market and Island. On the south and west, the Project area is bounded by San Diego Bay..."

Port District property is also included in this project area.

"The Marina Project Area will be predominantly multi-family housing with complementary commercial uses that would provide services and convenience goods for those living within the Project area. Housing in the Marina Project area will be part of the Marina/Columbia Residential Development, which also includes some land in the Columbia Project area bounded by Broadway, State Street, "F" Street and Kettner Boulevard..." "Housing in the Marina/Columbia Residential Development will consist of 2,500 to 3,000 multi-story townhouses and garden apartments." "...rather than constructing all of the housing at once, the Marina/Columbia Residential Development will be constructed in four phases."

The multi-family housing (Phase IV) to be located adjacent to the Port's Navy Field area is described in the Centre City Redevelopment Projects EIR (City of San Diego Redevelopment Agency, 1978, p. III-13), as follows:

"Phase IV will be the largest area designated for multi-family housing. Phase IV is bounded on the north by Market Street, the east by Fourth Avenue, except the half block bounded by Market, Fourth, Island and Third, on the south by the railroad right-of-way and ending where the railroad right-of-way intersects Market Street, all within the Marina Project area. It is expected that a minimum of approximately 1,000 dwelling units would be developed within Phase IV with higher densities up to those permitted in the Redevelopment Plan possible if market conditions warrant."

The Columbia Redevelopment Project area, which includes the City's proposed Convention Center, is located adjacent to the Port's Embarcadero Development Plan area, which includes the B Street, Broadway, and Navy Piers. It is described in the Centre City Redevelopment Projects EIR (City of San Diego Redevelopment Agency, 1978, p. III-14), as follows:

Columbia Redevelopment Area

"The Columbia Redevelopment Project area is bounded on the north by Ash Street, on the east by Union Street, on the south by "F" Street, and on the west by San Diego Bay..." "The proposed uses which are currently projected for the Columbia Redevelopment Project area include multi-family housing, commercial and lowrise offices."

Port District property is also included in this project area.

TENTH AVENUE MARINE TERMINAL

Planning District 4 (see Master Plan) includes 257 acres of land and 114 acres of water (submerged land). The majority of this Planning District, which includes the area from the Tenth Avenue Marine Terminal on the north to the 28th Street Pier adjacent to the US Naval Station on the south, was built with fill from adjacent bay dredging by the USACE over a period of many years, see Figure 5. The original fills which established the San Diego industrial waterfront south of the San Diego/Coronado Bay Bridge (built in 1969) and the NASSCO Shipyard, were placed in 1934 and 1937. The landward portion of the Tenth Avenue Marine Terminal was partly filled prior to 1949. In 1949, a small fill was placed bayward of the bulkhead line. The fill for the Terminal itself was placed in 1955. Submerged lands adjacent to the Tenth Avenue Marine Terminal were dredged by USACE in 1949 and 1955 to provide for deep draft vessels. Adjacent main channel dredging was conducted by USACE in 1941, during 1964 through 1966, and 1977 for military and commercial vessels, see Figure 6. The shoreline adjacent to the Tenth Avenue Marine Terminal is bulkheaded and along adjacent marine industrial areas the shoreline includes various marine ways, docks, bulkheads, and riprap revetment, see Figure 7.

Existing land and water uses include marine related, water dependent industrial uses which support ship berthing at the Tenth Avenue Marine Terminal, described in detail in the Master Plan. It is a deep water berthing terminal covering 96 acres. It handles inbound cargoes of general merchandise, chemicals, molasses, tuna, cement, and various ores. Major outbound cargos include chemicals and grain, which are loaded utilizing the Terminal's bulk loader. The Tenth Avenue Marine Terminal handles about half of the Port's shipping tonnage. The adjacent Atchison Topeka and Santa Fe (AT&SF) rail storage and marshalling yard has a capacity of 285 rail cars. The yard operates in conjunction with the marine terminal complex and the bulk loader for handling rail cargo for vessel shipment.

Other marine related industrial uses include: boat building and repair facilities; marine engine sales; kelp processing facilities; tug boat services; storage/distribution of bunker fuels to cargo or passenger vessels, tugs, and fishing boats.

Detailed descriptions are available for many existing marine industrial facilities in this area including: the Van Camp Tuna Cannery EIR (SDUPD, 1973b); Campbell Industries EIR (SDUPD, 1974a); Tenth Avenue Marine Terminal Access Road Relocation (SDUPD, 1974e); Kelco Plant Expansion EIR (SDUPD, 1975d); San Diego Marine Side Launch Ramp EIR (SDUPD, 1975f); and four EIR's which address various improvements and modifications of the NASSCO Shipyards (SDUPD, 1973a, c; 1974b, c).

The 1972 Master Plan designates the Tenth Avenue Marine Terminal land area as "Industrial Marine Oriented." Water areas are designated "Industrial, Deep Draft Berthing" adjacent to the Tenth Avenue Marine Terminal; "Industrial, Ship Building, Repair" from north of the San Diego/Coronado Bay Bridge to the NASSCO Shipyards; and "Industrial, Ship Building, Repair" adjacent to the NASSCO facility.

Surrounding uses to the north and east include single and multifamily residential use mixed with various commercial and industrial businesses (City of San Diego); military, commercial, and recreational water traffic in San Diego Bay to the south and west; and Naval Station facilities (Navy) to the south.

The Naval Station (NAVSTA) is the only Naval Station on the West Coast and is the largest concentration of fleet operations in the United States. As described in the Naval Station San Diego Master Plan EIS (US Navy, 1978a, p. EX3):

> "The installation's physical plant consists of 722 acres of land and 316 acres of water; 475 buildings and structures with 4,628,000 square feet of floor space; 12 berthing piers, two channels. and a mole pier, furnishing 50,700 feet of berthing; a drydock; and supporting utilities."
>
> "The west or bay side of the NAVSTA houses operational, industrial, supply, and administrative functions within 321 acres; the east side contains 324 acres devoted to bachelor housing, outdoor recreation, and community facilities. Training, health care, and personnel support functions are located on both sides of the station. A 35-acre parcel lying between the east and west sides, and isolated by railroad tracks, is used for warehousing and open storage functions."

"The NAVSTA furnishes comprehensive shore support services to home-ported fleet units, which number over 90 ships and 26,000 personnel; limited support to 35 shore-based tenant activities and fleet commands; and various support services to the Naval Base complex, including provision of certain welfare, recreation, and community facilities, degaussing and port services."

Adjacent land uses to the east are within the jurisdiction of the City of San Diego. The areas are zoned predominantly for industrial and light manufacturing uses, as well as commercial facilities and some multi-family residential. The City of San Diego has proposed a community plan for this area, commonly known as the Barrio Logan Community. The area and proposals are described in a combined plan and draft EIR, The Barrio Logan/Harbor 101 Community Plan (City of San Diego, 1979b, pp. 5-18) in part as follows:

"The most prominent characterization of Barrio Logan is its Mexican-American community together with the waterfront industrial complex..."

"...This former bayside residential district has changed into a combined residential-industrial community. The largest Naval Base in the Continental United States serves as a back-drop, with heavy and light industry, and mixed commerce encroaching on the remaining residential sector."

"The study area is bounded by Commercial Street to the north, I-5 to the east, National City to the south, and San Diego Bay to the west."

"The plan generally proposes an expansion and protection of the residential uses with the necessary supportive commercial and public facilities. It also recommends the organization, enhancement, and/or relocation of industrial development into identifiable units eliminating or minimizing in so far as possible the present incompatible mixed uses. The development of an industrial park for oceanic industries closely related to the Port's 10th Avenue Terminal would reinforce the water oriented industry already located on tidelands ... The plan also proposes ... a mercado commercial complex..."

Goals and major recommendations include in part: the provision of open space links to the waterfront for public access to San Diego Bay in coordination with the Port District in an area just north and west of the Bay Bridge. Although Port District Board policy provides for public access, park use of Port tidelands in this location would be in non-conformance with the Port's 1972 Master Plan which designates the specific area adjacent to the Tenth Avenue Marine Terminal as "Industrial, Marine Oriented", and contrary to intensification of existing harbor facilities for marine use according to Coastal policies.

A commercial boat building/repair facility (Mauricio Boatyard) has been approved for a 4.9 acre area south of the Tenth Avenue Marine Terminal. A Longshoremen's Union hall is being considered (1979) for a contiguous 0.7 acre site. These uses are in conformance with the Port's 1972 Master Plan and with the California Coastal Act of 1976, which places highest priority for such waterfront areas to be used for port purposes.

NATIONAL CITY BAYFRONT

Planning District 5 (see Master Plan) includes 253 acres of land and 152 acres of water (submerged land). The area is used for industrial and marine terminal purposes except for a small southeastern portion. Port tidelands within this Planning District are on artificial fill, see Figure 5. The northern portions were filled in 1941 for Navy vessel berthing; the area adjacent to the National City Marine Terminal was filled in 1946 also for Navy vessels; and the Terminal itself was placed in 1968. Adjacent submerged lands have been dredged by the USACE over a period of several years, see Figure 6. The portions to the north and west of the Terminal were dredged in 1946 and 1967; adjacent deep water berthing was dredged in 1969 and 1971; and areas further bayward were dredged by the USACE during 1941 through 1945, and 1975-1978 for military and commercial vessels.

The shoreline in the northern portion of this Planning District is bulkheaded (Navy Pier). Riprap quarry stone protection exists around the entire Terminal and the northern edge of the Sweetwater Flood Control Channel, see Figure 7. The building of requisite quay walls and wharves for the National City Marine Terminal is phased. The northerly side and northwesterly corner were completed as Phase I. Extension of the container crane wharf southerly by about 1,000 feet is planned for Phase II to provide for increasing terminal utilization (1979). Completion will be carried out as needed. The land area has been surcharged with adequate material to allow for various wharf designs.

Existing land and water uses include marine terminal operation, which specializes in the handling of containerized cargo, scrap metal, lumber, and bulk petroleum products for SDG&E fuel oil and ship bunkering. Bulk copper concentrate and coke, and containerized cargo are handled by the Port's container crane. Other marine related industrial uses include ship and boat building/repair facilities described in greater detail in the Ship Repair Facility EIR, Guy F. Atkinson Company (SDUPD, 1977a). This Planning District also includes a public recreational area, boat launching ramp, and vacant land at the eastern end of the Sweetwater Flood Control Channel. A more detailed description of the National City Marine Terminal facility is provided in the Master Plan.

The 1972 Master Plan designates the land areas as "Industrial, Marine Oriented" and "Industrial, General" for the National City Marine Terminal and for the land area to the east. The public boat launching ramp is designated "Parks, Recreation Areas". The water uses are designated "Industrial, Channel", and "Industrial, Deep Draft Berthing", adjacent to the National City Marine Terminal.

Surrounding land and water uses to the north include the Naval Station (Navy); light and medium industrial uses to the east (National City); vacant land including the essentially barren D Street fill and adjacent tidal marsh at the Sweetwater River mouth (both within the City of Chula Vista) to the south; and commercial and recreational water traffic, to the west, in San Diego Bay (Chula Vista/ California).

Surrounding land uses to the east within the City of National City's jurisdiction include industrial uses designated by the National City General Plan as "Light Industrial" and "Medium Industrial", (City of National City, 1975). A description of adjacent uses is given in the Business and Industrial Park Redevelopment Project EIR (Multi Systems Associates, 1977) and the Dixieline

Retail Lumber Facility EIR (Nasland Engineering, 1977). A detailed description of the US Army Corps of Engineer's proposals is available in the EIS entitled: Sweetwater River Flood Control Channel, State Highway Route 54, Interstate Highway Route 5, Recreation Facilities and Conservation of Marshlands (USACE, 1977b). A major boat building project proposal (being considered for the southwestern corner of the National City Marine Terminal) is detailed in the Shipbuilding Facility EIR, Rohr Marine, Inc. (SDUPD, 1978a).

CORONADO BAYFRONT

Planning District 6 (see Master Plan) includes 162 acres of land and 103 acres of water (submerged land). The majority of this Planning District, which includes the area from the First Street residential shoreline on the Coronado Peninsula near North Island Naval Air Station to the Glorietta Bay area adjacent to the Naval Amphibious Base, has been constructed on artificial fill, see Figure 5. The original fill north of the San Diego/Coronado Bay Bridge was placed in 1941 to provide Navy housing during World War II. The fills underlying the Coronado Golf Course were placed in 1956 and 1967. Submerged lands adjacent to the First Street shoreline were dredged by the USACE in 1944 and again during the main channel dredging projects in 1964 and 1975-78 to accommodate military and commercial vessels, see Figure 6. The San Diego/Coronado Bay Bridge was built in 1969. Portions of submerged lands within Glorietta Bay including the boat channel out to the San Diego Bay main channel were dredged in 1956 and 1967. An additional boat channel was dredged in 1956 adjacent to the Coronado Golf Course.

The shoreline along First Street includes riprap rubble and unprotected areas, see Figure 7. Sandy beaches exist at the end of Orange Avenue; north and south of the San Diego/Coronado Bay Bridge; and intermittently spaced in other areas. Existing uses along the shoreline are primarily strolling, picnicking, and fishing.

Existing land uses include commercial, marine related, and public utilities along First Street and Orange Avenue; vacant land (former site of a US Navy housing project), north of the San Diego/Coronado Bay Bridge, and recreational uses including the Coronado Golf Course on Port tidelands, and tennis facilities south of the Bridge; and recreational marinas in Glorietta Bay. Water uses include commercial, military, and recreational water traffic in San Diego Bay and Glorietta Bay. More detailed descriptions of existing land and water uses for the City of Coronado's jurisdiction are provided in the City of Coronado General Plan 1990 Master EIR (Ultrasystems, 1977); and the Port's Coronado Bayfront Precise Plan Development Program Background Report (SDUPD, 1978b) and Coronado Bayfront Development Plan Draft EIR (SDUPD, 1978d). These plans are currently (9/79) under joint reconsideration.

The 1972 Master Plan designates land areas in the Orange Avenue area and in parts of the Second Street Shoreline area as "Commercial Recreation"; a portion of the Second Street Shoreline as "Parks, Recreation Areas"; and an area north of the San Diego/Coronado Bay Bridge as "Research Park". Areas south of the Bridge are designated "Park, Recreation Areas" and areas around Glorietta Bay are designated "Commercial Recreation". Water areas are designated "Open Bay Water" for all areas except for a portion of Glorietta Bay designated "Marina and/or Boat Repair".

Surrounding land and water uses within the City of Coronado include single-family and multi-family residential areas as well as commercial uses particularly in the Orange Avenue area. These are described in greater detail in the City of Coronado 1990 General Plan Master EIR (Ultrasystems, 1977). Surrounding land and water uses to the north include Naval Air Station (Navy) aircraft carrier berthing and air station operation activities (Navy); commercial, recreational, and military water traffic in San Diego Bay to the east (California); Naval Amphibious Base facilities (Navy) to the south; and residential and commercial uses to the west (Coronado).

The relationship between land use designations included in the City of Coronado General Plan 1990 (City of Coronado, 1977a) and the 1972 Port Master Plan's designated uses on Port District tidelands was addressed in the Coronado Bayfront Development Plan Draft EIR (SDUPD 1978d) in part as follows:

> "The City of Coronado 1990 General Plan shows land use designations for Port tidelands which are in non-conformance with the District's adopted Master Plan of 1972. The City of Coronado 1990 General Plan has placed land use designations of Parks, Recreation, and Open Space over the entire Tidelands Park, Second Street Shoreline, and Orange Avenue Area."

The Coronado City Council appointed a planning group, the Coronado Land Use Committee (CLUC) which worked from May 4, 1978 to August 9, 1979 (disbanded by Council action) to revise the City's suggested land uses on Port tidelands along the Coronado Bayfront. A joint Port/Coronado Ad Hoc Committee was formed March 30, 1979, including some members of the Coronado City Council and San Diego Port Commissioners to continue to work toward resolution of these and other key land use issues. A public recreational area, Tidelands Park plus a shoreline park, has been completed by the Port District through design phases for the area immediately north of the San Diego/Coronado Bay Bridge, but is currently (9/79) under reconsideration.

CHULA VISTA BAYFRONT

Planning District 7 (see Master Plan) includes 560.4 acres of land and 1,129.1 acres of water (submerged land). This Planning District is largely vacant. An aircraft parts assembly plant (Rohr Industries) and a boatbuilding and repair facility (Southwest Marine) are the major existing developments in the area. Port tidelands within this Planning District are on artificial fill, see Figure 5. The northern portion, which extends westward from D Street, commonly known as the D Street Fill, was placed in 1969. The westernmost bayward containment dike, which enclosed the fill material, overflowed during placement and formed a small earthen fan further bayward into the future expansion area. This fan has subsequently developed into a man-made mudflat. Near the southern portion around the western end of D Street and H Street, fills were placed in 1960 and in 1968. In 1968, the existing peninsula arm which protects the Chula Vista Boat Basin and also includes the public boat launching ramp facilities, was placed. Additional fill was placed further to the south adjacent to the Chula Vista Boat Basin in 1971. This same area has more recently (1978 and 1979) been the drying site of dredge material in connection with the Chula Vista Boat Basin/Wildlife Reserve project in South Bay.

Adjacent submerged land has been dredged primarily for deep and shallow draft berthing and channels, see Figure 6. The portions to the north, adjacent to the D Street Fill, which include deep draft berthing in the Sweetwater Flood

Control Channel, were dredged in 1969. An extension from the deep draft berthing to provide shallow draft access to the southern areas was dredged in 1960 and in 1962. This shallow draft channel was extended from the Sweetwater Flood Control Channel to the G and H Street Fill areas in 1968, and was further extended to the Chula Vista Boat Basin in 1975.

The shoreline throughout this Planning District is primarily unprotected in the northern and central areas, see Figure 7. Some riprap quarrystone protection exists adjacent to the G Street Fill area, within the Chula Vista Boat Basin, and around the bayward edge of the J Street Peninsula. Only very small, intermittent, sandy beaches exist in this Planning District, but extensive tidal marsh and mudflat areas are present, which provide support for a variety of recreational uses such as clamming, fishing, etc.

Rohr Industries and Southwest Marine are both located on fill between G and H Streets. A public boat launching ramp and picnicking facilities are on the Chula Vista Boat Basin Peninsula. Land uses in the surrounding undeveloped areas include bicycling, hiking, educational research and scientific activities, off road vehicle use, and illegal hunting and construction material disposal. The latter uses are confined largely to the D Street Fill and Sweetwater River tidal marsh, outside of the Port's jurisdiction. This Planning District has the greatest amount of undeveloped tideland areas which have the greatest potential for land use changes as a result of implementation of the Port's proposed Master Plan.

A more detailed description of existing land and water uses in the northern portion of this Planning District, primarily around the D Street Fill area, is provided in the Chula Vista Bayfront Redevelopment Project EIR (City of Chula Vista Redevelopment Agency, 1976b). A specialized water use south of the Chula Vista Boat Basin is the water intake channel used for power plant cooling by San Diego Gas and Electric Company (SDG&E). A dike separates the cooling water intake channel from the warm water discharge to the south. At the western edge of the SDG&E dike, dredge spoil from the Chula Vista Boat Basin is currently (1979) being used to create a 70-acre wildlife reserve. The existing land and water uses in the southern area, primarily around the Chula Vista Boat Basin, are described in the Chula Vista Boat Basin/Wildlife Reserve EIR (SDUPD, 1976b).

Completion of the Chula Vista Boat Basin and surroundings, begun in 1971, involves shoreline revetment and wave protection structures; marina, with support facilities; public park development; and commercial recreation facilities including, for example, projects such as a recreational vehicle park.

The 1972 Master Plan (SDUPD, 1972d) designates the land areas surrounding the D Street Fill as "Industrial, Marine Oriented". The shoreline from D to G Streets is designated "Preservation & Research, Tidal Mudflats". The extreme northern boundary of the G Street area was designated "Parks, Recreation Areas", "Commercial Recreation", "Public Recreation, Boat Launching", and "Industrial, Marine Oriented". These designations would provide for a future shallow access channel and marina between G and H Streets. Further to the south, the 1972 Master Plan designates a combination of "Industrial, General" uses for the extreme easterly areas. Adjacent areas are designated "Parks, Recreation Areas" and "Commercial, Recreation". The southern boundary of H Street is designated "Commercial Recreation", adjacent to the Chula Vista Boat Basin. The Chula Vista Boat Basin and J Street peninsula are designated "Parks, Recreation Areas", "Public Recreation, Boat Launching", and a small strip of "Commercial Recreation" on a future outer peninsula.

The 1972 Master Plan water uses are consistent with the designated land uses. The Chula Vista Boat Basin area includes "Commercial Marina and/or Boat Repair". The G and H Street Fills include "Commercial Marina and/or Boat Repair" on the southern area, and a combination of "Commercial Sportfishing Berthing", and "Commercial Fishing Fleet Berthing" on the northern area. Water uses adjacent to the tidal marsh areas and mudflats between G and H Street and the D Street Fill are designated "Shallow Water", "Open Bay Water", and "Industrial, Channel". Further west, a water area is designated under preservation and research for "Aquaculture; Pond/Dike". Water areas adjacent to the D Street Fill are designated "Industrial, Deep Draft Berthing" and "Industrial, Channel" within the Sweetwater River Flood Control Channel. A southern area adjacent to the SDG&E dike is designated "Preservation and Research, Habitat Replacement". An area on the J Street peninsula outer extension is designated "Public Recreation, Public Fishing Pier or Access".

Surrounding land uses to the east are within the jurisdiction of the City of Chula Vista. Land uses south and east of the D Street Fill include recreational and educational uses in the existing tidal marshes (Chula Vista). Further south and east, extensive cultivation of horticultural crops, such as tomatoes, represent major agricultural uses (Chula Vista). Major surrounding land uses in the G and H Street areas include manufacturing facilities; commercial activities, such as boatbuiding and motels; and electrical power generating facilities (SDG&E) southeast of the Chula Vista Boat Basin. Land uses to the east provide rail transportation access by the Atchison-Topeka and Santa Fe Railroad (AT&SF).

Utilization of Chula Vista tidelands has been described by the City of Chula Vista Redevelopment Agency (CVRA) in the Chula Vista Bayfront Redevelopment Project EIR (CVRA, 1976b, pp. 92-94), in part as follows:

> "In summary, the tidelands of Chula Vista have a history of poor utilization because of natural and man-made conditions. The significant natural factors include the shallow depth of the South Bay, the proximity of the area from the ocean for both recreational and commercial boating purposes, and the extensive marshlands. The man-made factors center on the railroad rights-of-way, the freeway, the high power lines, and the subsequent orientation and growth of the City away from the water..."
>
> "With the exception of the early (World War I) munitions plant on Gunpowder Point and the existing agricultural/commercial activities, use of the overall area, along with public access to the site, has been limited. Site zoning is varied and relatively non-specific, permitting a wide variety of land use."

In addition, development of land use in the surrounding area has been the subject of much debate and concern as summarized in the City of Chula Vista General Plan Master EIR (City of Chula Vista, 1973) in part as follows:

> "The mixed uses of the project area have led to a completely uncoordinated land use pattern, and it appears that until recently, the attitude has been that the area was essentially a waste area. It appears that the land was held by property owners with the expectation that as industrial use of the Bay Front extended southward from San Diego, the Chula Vista Bay Front would also ultimately become industrialized. Based on those assumptions, landfills were made, and in one locale, industry did locate. The other

areas of landfill are barren, and covered with weeds. Public access is essentially non-existent north of F Street and west of Bay Boulevard. Access to the bay itself by the public is limited to the foot of G Street and the J Street area of landfill, and none of the land area presents a particularly aesthetically pleasing appearance."

Several major proposals have been put forth by various agencies for the land areas surrounding this Planning District. A description of the individual projects and their proposed phasing is available in the Chula Vista Bayfront Redevelopment Project EIR (CVRA, 1976b, p. 3), as follows:

"This project constitutes the first phase of development of the Chula Vista Bayfront Redevelopment Plan. The proposed project has six distinct actions which have been reviewed for potential impact: 1) the proposed extension and alignment of Tidelands Avenue, 2) the preliminary grading plan for the northern section, 3) development and alignment of the utility corridors, 4) the proposed drainage plan for the northern section, 5) the alignments and extensions of F-G Streets and 6) enhancement of impacted and degraded marsh land and upland areas immediately contiguous to roadway improvements."

and as summarized on page 14:

"It is anticipated that the actual construction of portions of the Tidelands Avenue and the E Street extension would be undertaken by the Chula Vista Redevelopment Agency (CVRA) within the next year. The remainder of the improvements would be constructed in phases as the total redevelopment of the area occurs."

The six individual projects are described further in much greater detail in the Chula Vista Bayfront Redevelopment Project EIR (CVRA, 1976b, pp. 15-29). It should be emphasized, however, that in this same document a description of the future land use relationship based upon those improvement activities covered in the EIR included considerably different land uses than now exist for the area surrounding the Chula Vista Bayfront Planning District. As described on pp. 31-34 of the EIR:

"To clarify project parameters, it is important within the heading of 'Project Description' to discuss what is not (in a direct sense) part of this project. There are a variety of land uses proposed for the northern section of the Chula Vista Bayfront area ... The project described herein has utilized those land uses as a maximum base to determine road alignments and size, utility demand, traffic generation, project costs and impacts. This EIR/EIS, however, is not addressing the impact of those land uses except as they indirectly affect the project or encourage growth. These land uses will receive individual impact analyses as specific development plans are completed. Further, the overall development plan and proposed uses were analyzed in a Master EIR (MEIR) prepared by the City of Chula Vista in 1973."

The Chula Vista Bayfront Redevelopment Plan proposes residential, commercial and water oriented facilities for the D Street Fill area; a resort complex for the area known as Gunpowder Point south of the Sweetwater River mouth; a

reception center and golf course further to the east; residential, park, and commercial uses further to the south between E and F Streets; and an additional public park immediately south of F Street.

The close relationship of the Chula Vista Bayfront Development Plan proposals with other agency proposals in the area has also been summarized in the Chula Vista Bayfront Redevelopment Project EIR, (CVRA, 1976b, pp. 33-34) in part as follows:

> "It has been assumed for the purpose of this report that the proposed Corps of Engineers' Sweetwater River Flood Channelization/Highway 54 Project will become a reality. This assumption is made because an integral part of that project is the purchase of the following for the purpose of preservation:
>
> .the Sweetwater Marsh
> .Vener Pond
> .Vener Marsh
> .50 foot buffer surrounding the above areas
>
> However, if the Corps' project does not come to fruition, it has been stated other methods of Federal, State and Local purchase will be pursued."

As stated by the US Army Corps of Engineers in the San Diego Harbor Navigation Channel EIS, entitled Final Environmental Statement San Diego Harbor, San Diego County, California (USACE, 1975, p. 27):

> "The proposed construction of the Sweetwater River flood control channel would provide flood protection for the Sweetwater River valley. It would also eliminate freshwater inflow and attendant sediment contribution to Sweetwater Marsh during periods of high runoff. Increased access would be provided to bayfront lands as a result of construction of the State Route 54 freeway and the completion of Tidelands Avenue across the Sweetwater Marsh. The construction of the Sweetwater River flood control channel would make available large quantities of excavated material, most of which would be used as land fill for the construction of the State Route 54 freeway. It is proposed that the flood control channel and the freeway be constructed simultaneously. A separate Environmental Statement is being prepared for this proposed project."

The EIS subsequently prepared by the US Army Corps of Engineers for construction is entitled, Sweetwater River Flood Control Channel, State Highway Route 54, Interstate Highway Route 5, Recreation Facilities, and Conservation of Marshlands, (USACE, 1977b). It summarized the project in part as follows:

> "The recommended plan comprises 3.4 miles of earth-bottom trapazoidal channel to provide design flood protection. To save construction costs and reduce rights-of-way requirements, the flood control channel will be combined with a State of California freeway project. About 1.9 miles of the channel will be located between the eastbound and westbound lanes of State Route 54. Interstate Route 5 will be modified with the addition of one southbound lane, 1.5 miles in length and a freeway-to-freeway interchange with State Route 54. The project will include recreation facilities and acquisition of 188 acres of the

Sweetwater-Paradise marsh complex for (a) mitigation of effects resulting from channel construction and (b) preservation of lands for endangered species. Acquisition for mitigation will be a combined Federal/local action, while acquisition for preservation will be a Federal action. As a corollary element of the recommended plan, the San Diego Unified Port District will designate 50 acres of mudflats as buffer area ((Note that the Port indicated that it would take this measure under consideration, on the basis that the total project move forward.)), and the California Department of Transportation will acquire 11 acres of degraded saltpan and marsh and reestablish them as high quality habitat."

SILVER STRAND SOUTH

Planning District 8 (see Master Plan) includes 31.3 acres of land and 178 acres of water (submerged land). Port tidelands within this Planning District include only the two islands (peninsulas) connected to the adjacent Coronado Cays via causeways. These two islands, North Island (Crown Isle), and East Island (Grand Caribe Isle), were established on artificial fill in 1969, see Figure 5. The Coronado Cays residential marina development area (within the City of Coronado) also received a portion of artificial fill in 1970 prior to construction of the housing development. It should be noted that none of the Coronado Cays residential marina development is on tidelands.

Adjacent submerged land has been dredged primarily for shallow draft recreational boat berthing and channel and by the USACE for Navy seaplane use during 1941-45, see Figure 6. To the south, Emory Channel was dredged for small boat launching in 1944. In 1969 the main access channel leading to Coronado Cays was dredged adjacent to North Island and East Island. The network of channels which provides boat access to the residences within the Coronado Cays development was begun by Coronado Landmark in 1970 and some work continues to the present (Coronado).

The shoreline throughout the Coronado Cays residential marina development within this Planning District is bulkheaded, see Figure 7. The shorelines of the two islands are largely unprotected with the exception of riprap along the northwestern shoreline of East Island and bulkhead at the northern extreme. Sandy beaches exist along the shorelines of both islands, and the shorelines to the north, including the Crown Cove area. Adjacent extensive mudflat areas provide support for a variety of recreational uses such as clamming, fishing, etc.

Existing land uses on North Island and East Island include bicycling, hiking, and jogging. East Island also includes a real estate operation center for the Coronado Cays Company along Grand Caribe Causeway. Land on the adjacent Coronado Cays subdivision (City of Coronado) has been largely developed into an exclusive, high value, residential community which is separated from central Coronado by the Naval Amphibious Base (Navy) to the north and from Imperial Beach by the South Bay salt ponds to the south.

The 1972 Master Plan designates the land area on East Island and North Island as "Commercial Recreation". The southwestern corner of East Island is designated "Parks, Recreation Area". Adjacent to this area is a designation of "Public Fishing Pier or Access".

Water uses are consistent with the land uses. Water area north of North Island is designated "Research Park", and "Commercial Marina and/or Boat Repair" south

of North Island. The outer water areas adjacent to East Island are designated "Channel", and "Commercial Marina and/or Boat Repair" on the inner water areas. Water areas further to the south are designated "Channel" and "Shallow Water".

Surrounding land and water uses include single family, high value, residential and marina uses in the Coronado Cays development to the west (City of Coronado); and recreational boating and limited educational and scientific uses adjacent to the north, east, and south (California, Coronado, County of San Diego). Further to the southwest along the Silver Strand State Beach is the Naval Radio Station installation (Navy); to the north is the Naval Amphibious Base (Navy); and to the west adjacent to State Highway 75 is the Silver Strand State Beach and parking area (State of California). The surrounding land uses are described in greater detail in the City of Coronado 1990 General Plan Master EIR (Ultra Systems, 1977).

Projects being considered for the surrounding area include those proposed by the City of Coronado, the Navy, and the Army Corps of Engineers. The City of Coronado is considering the construction of an 18 hole golf course and country club recreational facility called Coronado Links Golf Course, south of the Coronado Cays development, north of the Naval Radio Station area on about 100 acres, (City of Coronado, 1979). Further north the Navy is considering a recreational marina facility south of the Naval Amphibious Base. This facility is described in: The Master Plan Water Oriented Recreation Facility, Naval Amphibious Base, Coronado, California (US Navy, 1978c, pp. 2-4), in part as follows:

> "Eventual facility development will include construction of a new marina complex encompassing more than 300 new boat slips, repair shops, office and storage space, dry berth space, concession storage space, and a major boathouse facility."
>
> "Additional requirements include a clubhouse, administrative and classroom facilities, bathhouses, and a variety of retail shops. Outdoor recreational facilities include a softball field, two volleyball courts, two basketball courts, six tennis courts, open and landscaped spaces for picnic or play areas, a sunning beach, and a natural wildlife area. Other facilities to be incorporated in the plan are a boat storage and repair lay-up yard, and parking spaces for approximately 600 vehicles with the capacity of accommodating 85 vehicles with trailers. In addition, facilities for a deepsea fishing boat are to be provided."
>
> "The site ... is located on the bay side of the Silver Strand approximately 2 miles south of Coronado along State Highway 75, and contains approximately 30 acres of made land and harbor inlet."

Starting with interest by the Federal Government in the 1930's, the Army Corps of Engineers has continued a minimal planning effort for a second entrance to the southerly portion of San Diego Bay across the Silver Strand. The Army Corps of Engineers proposed five alternative plans north of Crown Cove on property under the jurisdiction of the Navy. A preferred location for a second entrance has been described in: Preliminary Environmental Assessment, Second Entrance to San Diego Harbor, San Diego County, California (USACE, 1977a, Appendix A); and in: San Diego Harbor Second Entrance -- A Navigation Study,

First Edition -- Public Brochure (USACE, 1976b). The project is described in the former report on pp. 1-2, in part as follows:

> "Five alternative plans are currently being investigated. Four of the plans concern a second entrance to San Diego Harbor with varying widths, depth, and traffic crossing facility. The fifth plan, alternative 5, onsiders widening and deepening of the existing navigational channel."
>
> "The second entrance channel would cross the peninsula that forms the western perimeter of San Diego Bay. North Island, Coronado, and the Silver Strand are the major physical components of the peninsula. The City of Imperial Beach is located at the southern limits of the peninsula. The preferred location for a second entrance crossing is immediately north of the Silver Strand State Beach and within the city limits of Coronado ...This location would provide the shortest, most direct ocean access route to existing marine terminals, would cost the least to construct, and is preferred by the US Navy."
>
> "The preferred location of a second entrance channel crosses lands primarily in State and Federal ownership. The State lands (seaward side of State Highway 75) are presently leased to the Navy with the stipulation that they be returned to the State in an acceptable condition when no longer needed by the US Government. The Federal Government (Navy) owns much of the land bayward of State Highway 75."

The alternative preferred by the US Navy (number three) would provide a channel 600 feet wide and 48 feet deep; would include a fixed highway bridge with 220 foot vertical clearance, or a tube (tunnel) crossing 50 to 60 feet beneath the channel; and would allow navigation by maximum sized Navy traffic, commercial shipping, and recreational boating. The report (USACE, 1976b, 1977a) did not recommend a preferred alternative.

SOUTH BAY SALTLANDS

Planning District 9 (see Master Plan) includes 192 acres of land and 605.5 acres of water (submerged land). With the exception of the Western Salt Company salt evaporation ponds and the San Diego Gas and Electric Company (SDG&E) power generation facilities, this Planning District is undeveloped. No dredging or filling dates are recorded for this extreme southerly end of San Diego Bay. This Planning District does however include a complex of dikes which separate the extensive salt extraction area adjacent to the Otay River mouth into numerous individual salt evaporation ponds. In addition, a dike has been constructed to separate the cool water intake channel (north side) from the warm water discharge channel (south side) used by SDG&E.

The shoreline throughout this Planning District is primarily unprotected, see Figure 7. Sandy beaches and extensive tidal marsh and mudflat areas adjacent to the shoreline provide for a variety of recreational uses such as clamming, fishing, hunting, etc. Access to these areas is primarily over privately owned or leased lands.

Existing land and water uses include the production of salt through solar evaporation by Western Salt Company and electrical power generation by SDG&E.

Both uses are located on the eastern boundaries of this Planning District. Other land uses include occasional educational and scientific trips out onto the salt pond dikes, primarily associated with annual migratory water fowl censuses. The area is also used infrequently for occasional fishing and illegal hunting. Water depths in the adjacent areas are inadequate for navigation by all but very shallow draft boats and rafts.

The 1972 Master Plan designates the land areas as "Tidal Mudflats" and the water areas as "Aquaculture; Pond/Dike", both under the "Preservation and Research" category. Further bayward, the adjacent water area is designated "Shallow Water". On the extreme western edge an area is designated "Public Fishing Pier or Access".

Surrounding land uses to the east are within the jurisdictions of the Cities of Chula Vista and San Diego, as well as the County of San Diego. These areas are primarily in agricultural, commercial, light industrial, or low density residential uses. To the south, similar uses are found within the jurisdiction of the Cities of San Diego, Imperial Beach, and Coronado. To the west, land uses include the Naval Radio Station (Navy); and further to the north, along the adjacent shoreline, is the South Bay Marine Biology Study Area and Wildlife Preserve (County of San Diego, Department of Parks and Recreation). Adjacent areas continue to be served by the southernmost extension of the San Diego and Arizona Eastern Railroad (SD&AE), which forms a perimeter around the eastern and southern portions of this Planning District.

Surrounding area uses to the south and southeast have been described in greater detail in the Otay Mesa-Nestor Community Plan and Environmental Impact Report (City of San Diego, 1977b, pp. 2, 21), in part as follows:

> "The study area comprises approximatly 4,300 acres and is located in the northwesterly sector of the 17,750 acre San Diego Border Area. This area is bounded by S-117 and Leon Street to the south, the City of Imperial Beach to the west, the San Diego and Arizona Eastern Railroad, Main Street, and the San Diego City limits to the north, and I-805 on the east. The valley immediately north of the study area is within the Otay River floodplain and lies in unincorporated territory of San Diego County. The San Ysidro Community lies south of Otay Mesa in the Tia Juana River Valley is south of the Nestor Community and west of I-5."
>
> "This concept ((Concept 4 - The Selected Concept)) assumes the adoption of the Otay Mesa-Nestor Community Plan and promotes (1) development of a relatively self-contained community by increasing job opportunities, (2) a balanced community with a variety of housing types, (3) orderly development of conveniently located commercial facilities, (4) enhancement of the overall quality of the physical environment and retention of the Otay Valley in open space uses."
>
> "Concept 4 attempts to retain the residential character of the community while providing well located commercial facilities and industrial parks. This alternative promotes the retention of Otay River Valley as open space and preserves the valley walls through development controls. Only moderate population growth is anticipated and relatively few new community facilities are likely needed."

The Otay Mesa-Nestor Community Plan designates those land uses adjacent to the Port's South Bay Saltlands Planning District as primarily "Parks and Open Space", "Commercial", and "Very Low Density Residential".

In May, 1979, the California Coastal Commission approved the Otay Mesa-Nestor Land Use Plan, submitted by the City of San Diego as the first of 14 "segments" of the City's total Local Coastal Program (LCP). The Commission found "no substantial issue" as to conformity with the Coastal Act and no changes in land use designations were made in the original (1977) Otay Mesa-Nestor Community Plan. The Land Use Plan addressed about 1200 acres within the Coastal Zone, off Port tidelands, southeast of the Port's South Bay Saltlands Planning District.

Surrounding land to the south and southwest is within the jurisdiction of the City of Imperial Beach. The City of Imperial Beach has designated the lands adjacent to the southern portions of this Planning District in the Imperial Beach, California, General Plan 1990 (City of Imperial Beach, 1968), for "industrial" uses.

Open Space

UNDEVELOPED AREAS

Undeveloped areas (Summer, 1979) exist to a greater or lesser extent in each of the nine Port Planning Districts. It should be noted that physically vacant land may, nevertheless, be under a lease or on a permit. "Undeveloped" areas are defined for purposes of this EIR as physically vacant lands. This is in contrast to the California Coastal Act of 1976 definition of "development", which includes land/water used to store solid, liquid or gaseous materials, or which has been disturbed by grading, dredging, etc., and which for Coastal Act purposes are considered as "developed" areas.

Vacant parcels exist north of the Commercial Basin in the Shelter Island Planning District; along the Harbor Island east peninsula in the Harbor Island/Lindbergh Field Planning District; adjacent to the Coast Guard Station, Sea Port Village, Embarcadero Marina Park, and Navy Field in the Centre City/ Embarcadero Planning District; south of the Tenth Avenue Marine Terminal and the San Diego/Coronado Bay Bridge in the Tenth Avenue Marine Terminal Planning District; north of the Atkinson Shipbuilding facility in the National City Bayfront Planning District; along the outer portions of the D Street Fill, the G and H Street fills, and east of the Chula Vista Boat Basin in the Chula Vista Bayfront Planning District; along the North Coronado Bayfront shoreline area adjacent to Second Street and Orange Avenue in the Coronado Bayfront Planning District; on Crown Island and Grand Caribe (East Island) in the Silver Strand South Planning District; and on the land areas surrounding the South Bay Saltlands Planning District.

IMPROVED OPEN SPACE

As distinguished from undeveloped areas or vacant land, Port District open spaces include improvements which physically enhance the existing setting and thereby contribute to a more satisfying, stimulating environment. Existing Port improvements include: landscaping of park areas; areas adjacent to traffic interchanges and median strips; and/or narrow, isolated, and irregular shoreline areas where use and development potential is limited. Many areas throughout the Port's nine Planning Districts include completely landscaped parks which encourage and serve as completely unrestricted public access to the land/water interface. Public recreational facilities such as fishing piers, boat launching ramps, beaches, historic feature landmarks, vista areas, scenic routes, promenade pedestrian routes, and bicycle and pedestrian trails are also provided.

RECREATION/OPEN SPACE LAND AREAS

Recreation and improved open space land areas exist within eight of the Port's Planning Districts.

- Shoreline landscaping, a public fishing pier, and a public boat ramp, as well as an improved public sandy beach area, exist on the outer edge of the Shelter Island peninsula in the Shelter Island Planning District;

- Spanish Landing Park and beach area are located within the west Harbor Island Basin in the Harbor Island/Lindbergh Field Planning District;

- Harbor Island Shoreline Park is located along the outer shoreline of Harbor Island in the Harbor Island/Lindbergh Field Planning District.

-various pedestrian and bicycle promenades, landscaped areas, vista areas, and the passive and active Embarcadero Marina Park development, including a public fishing pier on the south peninsula, exist within the Centre City/Embarcadero Planning District;

-several sandy beaches, a 98-acre golf course, and Tidelands Park (proposed), and pedestrian/bicycle shoreline promenade, are located within the Coronado Bayfront Planning District;

-a public boat launching ramp, fishing pier, and landscaped park exist adjacent to the Sweetwater Flood Control Channel in the National City Bayfront Planning District;

-the Chula Vista Boat Basin and public boat launching ramp with parks and landscaping improvements, are located within the Chula Vista Bayfront Planning District.

All of the parks have been provided with public restrooms and other amenities. For additional details on recreation improvements, consult the Master Plan.

RECREATION/OPEN SPACE WATER AREAS

Various water uses occur around San Diego Bay in areas adjoining the Port's shoreline recreational areas: boat launching ramps, fishing piers, vista areas, and other public facilities where the need for open water is related to a shore activity. Open bay waters are used for many purposes including recreational, educational, scientific, and natural habitat preservation.

OPEN SPACE ELEMENT

The 1972 Master Plan Open Space Element includes three major planning concepts. The first deals with natural resource utilization and includes five categories of open space classification under "Preservation and Research" activities. The second classification deals with both commercial and public recreational areas under the "Recreation" category. The third classification includes areas over which detailed development controls are proposed in a "Limited Development" category.

The 1972 Master Plan includes development standards for certain areas under the category of "Limited Development, Light Intensity". These development standards control structure height, vista protection, architectural design, utilities undergrounding, landscaping, signing policies, and the provision of public access to the water.

"Limited Development" areas exist along the western edge of the Shelter Island peninsula and within the Shelter Island Yacht Basin; along the shorelines of Harbor Island in the Harbor Island/Lindbergh Field Planning District; along the Second Street shoreline portions of the Coronado Bayfront Planning District; along the Chula Vista Boat Basin northern shoreline in the Chula Vista Bayfront Planning District; and on East Island and North Island, in the Silver Strand South Planning District.

The 1972 Master Plan includes a route designated as "Bicycle Trail" through all nine Port Planning Districts connected with bicycle routes through other jurisdictions to form a continuous bikeway around the perimeter of San Diego Bay.

Public access for casual recreational uses along many portions of the San Diego Bay shoreline is available for fishing, swimming, picnicking, strolling, and bicycling. Locations of public bay access within each of the Planning Districts around San Diego Bay are geographically illustrated and tabulated along with their shoreline lengths in the Master Plan.

Air Transportation

The Port of San Diego's Master Plan area and vicinity is a major center of commerce and industry for the entire San Diego region. Air transportation for passengers and cargo into the San Diego Bay area via San Diego International Airport (Lindbergh Field) constitutes a most influential factor in maintaining vital economic links with the downtown San Diego central business district, the shipping commerce associated with the Port of San Diego, and the resultant economic stability and growth potential of the greater San Diego region.

SAN DIEGO PLAN FOR AIR TRANSPORTATION

Because air transportation in San Diego is a regional issue, the Comprehensive Planning Organization (CPO), an association of local governments formed to assure overall areawide planning for the San Diego region, has drafted a San Diego Plan For Air Transportation (SANPAT). The objectives and findings of SANPAT are described in the Executive Summary, San Diego Plan for Air Transportation, Final Report (CPO, 1976a) in part as follows:

> "The San Diego Plan for Air Transportation (SANPAT) is intended to serve as a guide for airport development within the San Diego Region through 1995. It is sufficiently detailed to enable the region's airport operating agencies to carry out definitive master plans for each individual airport. The planning effort, which was initiated in 1971, has provided for local, technical, and policy level input through specially appointed ad hoc committees, which have monitored the program and formulated recommendations to the CPO Board of Directors at key decision points. An extensive public information and public hearing program that included the appointment of a citizen hearing board to take testimony was carried out to ensure citizen participation in the decision making process.
>
> Tasks carried out in the initial phases of the effort included inventorying existing airports, preparing aviation demand forecasts, evaluating existing facilities to determine their ability to meet future requirements, and carrying out a preliminary evaluation of alternative potential sites to serve the Region's needs. As a result of this evaluation and CPO Board actions, the number of commercial airport alternatives was reduced to the following: Lindbergh expansion, Lindbergh realignment, civil Miramar, Carmel, and San Diego-Tijuana (Otay Mesa). Twenty-three potential general aviation airport alternatives were also retained for further consideration.
>
> Following public hearings and extensive deliberation by CPO member agencies, the following policy was adopted in April of 1976 by the CPO Board of Directors within the context of the updated regional transportation plan:
>
> Lindbergh Field in its existing runway configuration is designated as the site most suitable for serving commercial air transportation needs of the San Diego region through 1995. The ongoing airport system plan should be expeditiously completed based upon the decision to retain Lindbergh."

On January 15, 1979 the Comprehensive Planning Organization adopted the 1978 Update of the Regional Transportation Plan which contains an Aviation Element (CPO, 1978f). It states in part (pp. 71):

> "The San Diego Plan for Air Transportation (SANPAT) airport systems plan has been incorporated into the Regional Transportation Plan as the Aviation Element. The plan is intended to serve as a guide for both commercial and general aviation developments within the region through 1995. The airport systems plan is sufficiently detailed to enable the region's airport operating agencies to carry out definitive master plans for each airport.
>
> The primary recommendation of the plan is that an airspace management element be prepared for the San Diego region based on the findings of the National Transportation Safety Board and FAA recommendations emanating from the recent aircraft accident as well as the SANPAT study. The plan also calls for a vote of the people to determine the future use of Lindbergh Field as a commercial aviation facility, and to consider possible options to the Lindbergh site.
>
> To better accommodate existing and projected passenger demand, the West Terminal expansion at Lindbergh Field is presently under construction and scheduled for completion in early 1979, ((completed July, 1979)). While staffs of the responsible agencies have agreed to work cooperatively to improve access and develop a land use plan for the Lindbergh Field area, work has not yet begun on either project."

Further, the Plan delineates Aviation Policies specifically related to Lindbergh, as follows:

> "CPO shall prepare and adopt an airspace management element for the San Diego region. This will include consideration of the National Transportation Safety Board findings related to the September 1978 air crash, previous SANPAT information, as well as revised FAA procedures and plans for San Diego air navagational facilities.
>
> The issue of whether or not another commercial airport should be developed for the time period beyond 1995 should be submitted to the appropriate voters in 1980. At the 1980 primary election the voters should decide whether another airport site should be considered. If the decision is affirmative, then the voters should consider alternative sites at the 1980 general election.
>
> All information pertaining to the site alternatives identified in the SANPAT study should be updated and made available to the public in sufficient time for consideration prior to the 1980 primary election. This should include information on the costs of alternative sites as well as the cost of remaining at Lindbergh Field.
>
> Lindbergh Field in its existing runway configuration is designated as the site most suitable for serving the commercial air transportation needs of the San Diego region through 1995. Except for safety and maintenance projects and projects currently underway, the Lindbergh Field facilities

should not be further expanded until after a decision is reached on its future role following the 1980 elections. Projects utilizing federal funds will be considered by the CPO through the A-95 process.

A Master Plan identifying Lindbergh Field facility requirements through the year 1995 should be prepared by the San Diego Unified Port District by 1980 for incorporation into the 1980 Regional Transportation Plan.

The City of San Diego shall coordinate the development of a Route Location Plan and an evaluation of other options for improving near term access to Lindbergh Field. This will require the joint efforts of the City of San Diego for improvements to the local arterial system, the California Department of Transportation for localized improvements to the interstate highway system, the San Diego Unified Port District for the development of improved access within the airport boundaries, the US Department of Defense for military real property right-of-way considerations and other appropriate agencies.

In light of Lindbergh Field's role as the region's air-carrier airport, commercial operations should be given first priority and general aviation activity should be limited so that it will have no adverse impact upon commercial aviation.

In recognition of the severe noise problem which exists at Lindbergh Field, CPO encourages the immediate development and implementation by the San Diego Unified Port District of a definitive California State Noise Standard compliance program. Mitigation measures considered should include, but not be limited to, conversion of severely impacted areas to compatible land uses, acoustical treatment of impacted properties, purchase of noise aviation easements, restriction on the types of aircraft permitted to operate, and limiting the hours of operation. It is recognized, however, that while the purchase of noise easements and the acoustical treatment of structures will fulfill the legal requirements of the State Noise Standards, residents will remain subject to the adverse impacts of noise. Major investment in mitigation measures should be limited until the future role of Lindbergh Field is determined following the 1980 elections.

A 1995 Comprehensive Land Use Plan for Lindbergh Field should be prepared in accordance with the CPO's responsibilities acting as the airport land use commission. This plan should be based upon the influence area which takes into account accident potential and those areas adversely impacted by noise.

In recognition of the Federal Aviation Noise Abatement Policy which states that the primary obligation to address the airport noise problem is a local responsibility, CPO encourages the State of California to reevaluate the California State Noise Standards in order to strengthen and clarify the local enforcement responsibilities of the County and to establish provisions for the funding of noise compliance programs.

It is recognized that the accommodation of unconstrained general aviation demand within the 1978-1995 planning period will require the development

of two training strips with the conversion of one to a full service airport. In order to preserve the option to develop these strips, the process of site selection and property acquisition should be pursued immediately by an appropriate designated agency.

Responsibility for the further development, management and operation of the region's existing aviation facilities should remain with the current operating agencies. An appropriate entity to implement the new commercial aviation site should be designated if a new airport site is selected following the consideration by the voters.

Pursuant to its regional aviation planning responsibilities, the CPO shall maintain a current facility inventory, document plan implementation actions, assist the region's airport operating/implementation agencies in obtaining state and federal funding supprot, establish formal plan review and update procedures to be carried out in conjunction with the regional transportation plan update required under state law and undertake such additional efforts necessary to provide the information needed for the ballot issue in 1980.

CPO should appoint a permanent Aviation Advisory Committee to facilitate the coordination between all appropriate aviation agencies and interest groups, to formulate plan change and new commercial aviation site recommendations for CPO action and to recommend an entity to implement a new commercial aviation site should one be selected."

The regional setting of commercial, military and general aviation airports in the San Diego region has also been summarized in the 1978 Regional Transportation Plan (CPO, 1978f) in part as follows:

"The region's existing airport system comprises one major commercial air-carrier facility, Lindbergh Field; twelve publicly administered general aviation airports; four military aviation facilities; and a number of private airports, heliports, and emergency strips ... and the United States Coast Guard operates a heliport and seaplane station adjacent to Lindbergh Field."

SAN DIEGO INTERNATIONAL AIRPORT (LINDBERGH FIELD)

Lindbergh Field was dedicated as an airport August 16, 1928, after the land area was first filled in 1925.

Facilities at Lindbergh Field which provide air transportation service to over 6,000,000 passengers a year, an average of about 16,000 a day, and more than 25,000 tons of air cargo handled annually, are summarized in the description provided in the West Terminal Project, Lindbergh Field EIR (SDUPD, 1975b) .in part as follows:

"Lindbergh Field serves as the international airport for the San Diego metropolitan area. It is the only airport in San Diego County which is served directly by commercial air carrier operations; eight major air carriers and three air taxi operators occupy space in the existing terminal facility.

Lindbergh Field is situated on a 487 acre site on the tidelands of San Diego Bay, and is therefore within the jurisdiction of the San Diego Unified Port District, operator of the airport.

The existing terminal facility ((1975)) is a relatively new building which opened in 1967, and provides a wide range of passenger services such as ticketing, baggage claim, a major food/beverage concession, car rental and six 160 foot ground level aircraft loading gates and ten 200 foot diameter ground level aircraft loading gates for commercial air carrier operation. At the east end of the field, there is also a modern general aviation terminal operated by Jimsair, the field's primary fixed base operator (FBO). This operator and Lockheed Air Terminal provide most of the general aviation services such as repair, fueling, charter, and instruction flights. In addition, there are general maintenance and parking area for servicing commercial aircraft, air cargo facilities, fuel farm, inflight food service building, and rent-a-car ready area. The only major maintenance facility is operated by Pacific Southwest Airline (PSA). Other facilities include the FAA control tower, fire house, waste disposal building, and parking facilities for 2,929."

Air Transportation provided through the East Terminal facilities was greatly enhanced in terms of efficiency by the completion (July 1979) of the West Terminal project as described in the West Terminal Project, Lindbergh Field EIR in part as follows:

"The proposed West Terminal project ((completed July, 1979)) is an addition to the air terminal facilities of Lindbergh Field. It will occupy a ground area of approximately 110,000 square feet in a one and two level building, linked with a pedestrian bridge over the parallel enplane and deplane roadways. The building will closely resemble the existing terminal in its appearance, and will provide second level boarding access for ten additional aircraft gate positions. The project will include the westerly extension of the on-site roadway system, and will increase the number of automobile parking spaces from 2,929 to approximately 4,000 spaces. External access will continue to be provided via Harbor Drive, with an additional loop construction in the northwest quadrant of the interchange. The site will be landscaped to blend harmoniously with the ornamental vegetation previously planted.

The project does not include any improvements to the present runway system or its air operations capacity."

The relationship of the West Terminal project to the East Terminal facilities at Lindbergh Field is described in the West Terminal Project, Lindbergh Field EIR in part as follows:

"The West Terminal project ((completed July 1979)) including the terminal building facilities, aircraft parking area improvements, and roadway parking area additions will allow Lindbergh Field to accommodate 8,000,000 passengers every year without undue stress. The present ((1975)) Lindbergh Field passenger load is about 4.3 million passengers a year. It is expected that 8,000,000 would be reached in the early 1980's. Thus, the thrust of the project is accommodating near-term needs between now and that time, since the design capacity of the present terminal (4.0 million/year) has already been reached.

Past experience at Lindbergh Field, as well as current experience at other major commercial airports indicates that passenger loadings generally respond to air travel demands as related to a region's population growth, economy, and overall transportation network. The present runway capacity at Lindbergh Field is 175,000 air carrier operations/year, a figure which is not expected to be reached until after the 1990's, based on current trends. Presently ((1975)) Lindbergh Field is handling about 70,000 carrier operations per year. This project is specifically focused on ensuring that a high level of service is maintained at Lindbergh Field between now and the early 1980's."

Circulation

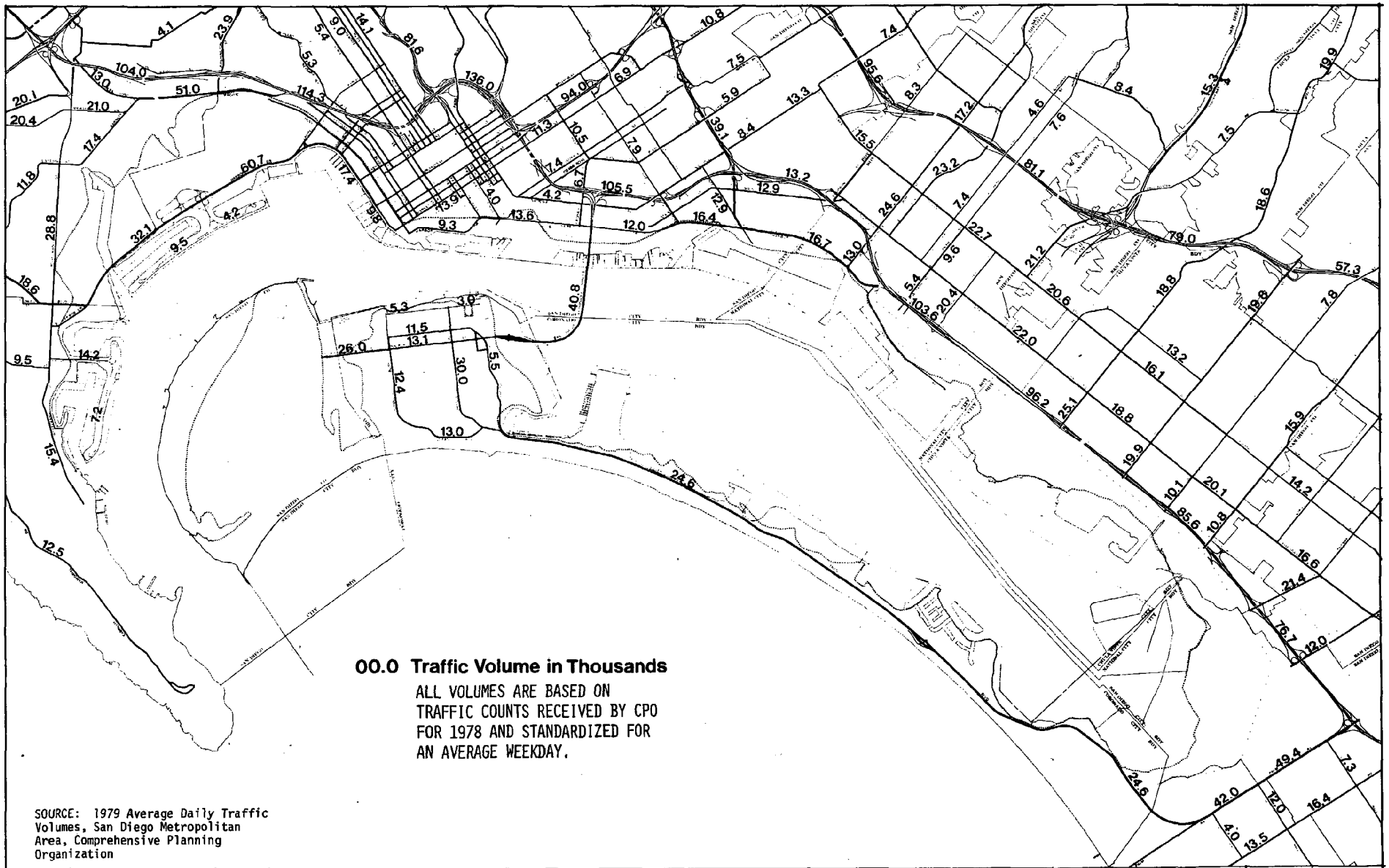
SAN DIEGO BAY REGIONAL CIRCULATION

Vehicle traffic circulation within and surrounding the Port's Master Plan area is interconnected throughout the San Diego region by a network of major freeway systems. Interstate 5 and 805 provide north-south direction linkages between Orange County and Los Angeles areas and the US/Mexico border. Interstate 5 allows close access connections to the eastern boundaries of Port tidelands and thereby provides the most critical regional transportation link to the San Diego Bay industrial areas, Lindbergh Field, and to US Naval Facilities. Interstate 805, further inland to the east, links more distant easterly areas to the San Diego Bay region via several east-west connectors, such as Highway 94. Recreational and commercial centers in Mission Valley and Mission Bay are connected to Interstate 5 by an east-west linkage via Interstate 8, see Figure 8.

Rail service is provided to the Master Plan area by two major freight and passenger lines. The Atchison Topeka and Santa Fe Rail Road (AT&SF) provides passenger service (via AMTRAK) from northern areas, to the Santa Fe passenger station adjacent to the Port's Centre City/Embarcadero Planning District. AT&SF also provides a freight line with extensive marshalling and switching yards further south to the Port's Tenth Avenue Marine Terminal. The San Diego and Arizona Eastern Railway (SD&AE) provides freight service connections between the Port's National City Marine Terminal and eastern areas, including Imperial Valley and Arizona areas. A crossover connection between the AT&SF and SD&AE lines near the Tenth Avenue Marine Terminal provides freight connection access from northern areas to the Port's National City Marine Terminal.

A major project proposal adjacent to the Port's Master Plan area, with regional circulation importance is the San Diego Light Rail Transit Project being instituted (1979) by the Metropolitan Transit Development Board (MTDB). The proposal is summarized in the Guideway Project, Centre City San Diego to San Ysidro, Supplemental Draft EIR (MTDB, 1978a, pp. 4b-4c) in part as follows:

> "The construction and operation of an approximate sixteen mile, light rail transit (LRT) vehicle system from the west side of the Santa Fe depot in Centre City San Diego, via "C" Street and Twelfth Avenue via the SD&AE railway track to San Ysidro.
>
> The electric powered vehicle(s) would operate at grade on dual tracks on "C" Street and Twelfth Avenue to Imperial, then south on 13th Avenue along the side of the SD&AE railway yard where it joins, west of Sigsbee Street, the single track of the main line. The LRT will share useage of track with the SD&AE railway on the main track.
>
> Passing tracks as required would be provided for the LRT in the yard at Twelfth Avenue to San Ysidro.
>
> Operation of the LRT is planned for 7 days a week from approximately 6:00 AM to 1:00 AM with typically 15 minute headways during the day. The schedule will be set in a manner which will accommodate straight service on the line.


00.0 Traffic Volume in Thousands
ALL VOLUMES ARE BASED ON TRAFFIC COUNTS RECEIVED BY CPO FOR 1978 AND STANDARDIZED FOR AN AVERAGE WEEKDAY.
SOURCE: 1979 Average Daily Traffic Volumes, San Diego Metropolitan Area, Comprehensive Planning Organization
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ANALYSIS

"C" Street from Kettner Boulevard to 10th Avenue is planned as a pedestrian/ transit street having restricted traffic service; 10th Avenue to 12th Avenue, then south to the SD&AE main track will have the LRT operating in mixed traffic. (PUC classification C-1)."

The proposed MTDB Guideway project would provide service to a total of seven different areas with 15 different stations, many with adjacent parking lots to be constructed at locations placed throughout the seven designated areas, (MTDB, 1978b), see Appendix B, Figure B-14.

The MTDB Guideway project proposes an efficient mode of passenger transportation along its corridor, east of Port tidelands and parallel with I-5. The project, however, would require joint useage of the existing SD&AE railway which, as has been mentioned, is the primary means of north-south freight movement in support of Port of San Diego industrial and maritime activities.

Another major proposal with regional circulation importance adjacent to the Master Plan area is the Bay Route Bikeway. This proposal is a joint powers agreement between the cities of San Diego, National City, Chula Vista, Imperial Beach, and Coronado; the County of San Diego; and CALTRANS to construct a 22 mile bikeway around a major portion of San Diego Bay. The project is described in the Bay Route Bikeway Draft EIR (City of San Diego, 1978e) in part as follows:

"The 22 mile bikeway extends from the intersection of Pacific Highway and Harbor Drive in the City of San Diego through the jurisdictional limits of National City, Chula Vista, San Diego County, Imperial Beach, and into the City of Coronado. The entire project is within the perimeter of the San Diego Coast Regional Commission. Several segments are within the San Diego Unified Port District. In the cities of San Diego and National City, the bikeways project follows the Pacific Coast Bi-Centennial Route for approximately 5 miles.

The recommended project includes constructing about 7.8 miles of Class I Bikeway (separate paved path, 10 feet to 16 feet wide), 11.8 miles of Class II Bikeway (striped bike lane on existing streets), and 3.0 miles of Class III Bikeway (shared lane on existing streets). Most of the Class I separate bike path is to be constructed within the San Diego Arizona Eastern Railway right-of-way along State Highway Route 75 from Imperial Beach to the City of Coronado proper. Railroad tracks were removed by the railroad company several years ago except for about 200 feet of track located near 7th Street in Imperial Beach. Another short, 0.4 mile, segment of Class I bikeway is proposed between Bay Boulevard and 19th Street in the City of San Diego."

About two-thirds of the proposed bikeway project would consist of signing, striping or minor widening along existing streets. About one-third of the proposed project would consist of a separate bikeway most of which would be constructed within the San Diego and Arizona Eastern Railway right-of-way along State Highway 75, from Imperial Beach into the City of Coronado.

The northern extension of the proposed bikeway which begins at the intersection of Pacific Highway and Harbor Drive in the City of San Diego, is intended to

connect with the Port's 1972 Master Plan Bicycle Trail. The Port's Bicycle Trail provides for a bikeway through the Coronado Bayfront and from Shelter Island around Harbor Island and the Embarcadero to the Bay Route Bikeway connection.

Vehicle traffic circulation within the Port's Master Plan area is described as follows for the Port's nine Planning Districts. Data have been obtained from the Comprehensive Planning Organization's updated 1979 regional traffic volume map (CPO, 1979) and accompanying tables; as well as the Circulation Analysis prepared for the San Diego Unified Port District by Berryman & Stephenson, Inc. (1979). See also Appendix B for Circulation Analysis Summary Traffic Circulation and Congestion information, and Speed and Delay Studies.

SHELTER ISLAND

Tidelands Access

Regional vehicular access into Planning District 1 is from Interstate 5 and 8 freeways, about two miles to the east. The transition is made on local major streets. Rosecrans Street and Harbor Drive are the principal feeder routes from other local streets. Local access is provided via streets which cross Rosecrans and lead down to the waterfront, particularly Canon Street, Shelter Island Drive and Nimitz Boulevard. Scott Street also links these streets and provides additional access.

Street System

Shelter Island Drive serves the Shelter Island peninsula. A two-lane collector street, it has a right-of-way of 80 feet and a paved surface 50 feet wide. The street collects local traffic, provides on-street parking and access to abutting commercial properties, and accommodates commercial truck-trailer movements of large boats or frozen fish. Circulation to upland areas is provided by inland roads such as Rosecrans or Scott Street.

Harbor Drive is a six-lane major street which connects downtown City of San Diego to Point Loma. It provides a northern connection to Scott Street for access to Shelter Island. Other local streets are extensions of the Point Loma grid pattern and terminate near the waterfront.

Traffic

Average Daily Traffic (ADT) Counts of representative streets in Planning District 1 are given in Table 1.

Traffic in the Shelter Island area is relatively heavy. At peak times traffic may be backed up due to traffic signals or vehicles turning into driveways. Heavy congestion is infrequent and for relatively short periods.

The Shelter Island peninsula is connected to the mainland by a long, narrow causeway developed with many active boatyards and businesses. Traffic is somewhat impeded by movement onto and from the boatyards and businesses along the corridor. Street parking, pedestrian crossings, and cars pulling out of driveways cause traffic flow to slow down.

Traffic congestion is most frequent on Shelter Island Drive from Rosecrans Street (off tidelands) to the traffic circle on the peninsula. Intermittent congestion

Table 1

Shelter Island, Planning District 1, Average Daily Traffic Counts

Street	Cross Street	Lanes	ADT
Harbor Drive	Navy Estuary	4	35,700
Harbor Drive	East of Scott Street	4	23,400
Scott Street	South of Harbor Drive	4	13,900
Shelter Island Drive	Anchorage Lane	2	14,200
Shelter Island Drive	North of Traffic Circle	2	1,200
Shelter Island Drive	South of Traffic Circle	2	7,200
Anchorage Lane	Shelter Island Drive	2	1,600
Rosecrans Street (Off Tidelands)	Shelter Island Drive	4	20,100
Rosecrans Street (Off Tidelands)	Nimitz Boulevard	4	28,100
Nimitz Boulevard (Off Tidelands)	Harbor Drive	4	15,900

also occurs at the turn from westbound Harbor Drive to Scott Street and in the area immediately around Fisherman's Landing.

Parking

The total number of parking spaces in Planning District 1 is 5,069 (March, 1979), including 2,327 public spaces and 2,742 private (leased) spaces. Most of the public spaces are contained in the public lots scattered throughout the area, expecially on the bay side of the peninsula and at Fisherman's Landing. There are a total of 544 curbside parking spaces.

Private spaces also exist at hotels, restaurants and other businesses. Some are available for public use. A total of 258 parking spaces are reserved for boat storage at three yacht clubs on the peninsula.

Parking space demand on Shelter Island is a result of the high activity level of all the uses. Because of space limitations, corridor businesses provide a minimum amount of on-site parking. Cars are forced to park at the curb, which causes congestion in some areas. Weekend parking space demand is high near recreation areas, while weekday parking demand is highest near the boating businesses on the corridor. The Sportfishing Landing area experiences continuous parking shortages during the peak fishing season.

Other Circulation Aspects

San Diego Transit bus service is provided along Rosecrans Street but there is no service directly into Planning District 1. Most of the hotels on Shelter Island provide limousine service for their guests, and a tourist bus visits the area as part of its normal service.

Existing streets provide bicycle access to Shelter Island, but there are no special facilities such as lane or grade separation.

In addition to the usual sidewalks serving the parks and commercial businesses on Shelter Island, the Port District has constructed a waterfront pedestrian path along Fisherman's Landing.

HARBOR ISLAND/LINDBERGH FIELD

Tidelands Access

Regional access into Planning District 2 is from Interstate 8 via Nimitz Boulevard and Harbor Drive and from Interstate 5 via Rosecrans Street or Laurel Street. Both of these routes involve considerable travel over local streets before entering the district.

Street System

Airport and Navy facilities block street access except from east or west along the southern edge, or from the east and north on Pacific Highway. Thus, all traffic must arrive on Harbor Drive or Pacific Highway. A potential bottleneck is, however, avoided because turn options are restricted.

Harbor Drive is a connector street between Point Loma and downtown San Diego and provides access to Lindbergh Field and Harbor Island. It also is the

access road for three major employers, PSA, Ryan Aeronautics, and part of Convair, and several smaller businesses. It is a six-lane carrier classified as a major street.

Pacific Highway is a peripheral road forming the northeast boundary. Laurel Street is another boundary street connecting Pacific Highway and Harbor Drive on the southeast.

Traffic Counts

Average Daily Traffic (ADT) Counts of representative streets in Planning District 2 are given in Table 2.

Due to the high activity levels at Lindbergh Field, industry on the Harbor Island peninsula, and serving as the major downtown to Point Loma link with major Naval facilities, Harbor Drive has high traffic volume. At 61,900 vehicles per day, it carries more traffic than any other street in San Diego, but flows smoothly due to a straight, open design and few intersecting driveways. Congestion does occur during rush hours, during peak airport use times, and when accidental bottlenecks occur. A major congestion factor is the necessity to manually manage employee traffic from Ryan during shift changes.

Laurel Street is the primary access street around the east end of the airport, and therefore experiences fairly constant high level use. The short blocks east of Pacific Highway which include a railroad crossing exacerbate this problem. Harbor Island Drive, however, is not congested.

Traffic congestion in Planning District 2 occurs at the following locations:

- Harbor Drive between Laurel Street and Harbor Island Drive due to airport traffic, local employment, and Harbor Island activities.

- Laurel Street, caused by airport traffic and other westbound traffic.

Parking

A total of 14,531 parking spaces exist in the Lindbergh Field/Harbor Island Planning District (June, 1979). Of this total, 5,740 are public parking spaces, including 3,783 pay spaces at the airport and 1,957 other public spaces, mostly at Spanish Landing Park and Harbor Island. There are 437 curbside on-street spaces.

There are 8,791 private parking spaces. These are primarily utilized for employee parking by Convair, Ryan, PSA, and other major area employers. The total includes 2,917 spaces on Harbor Island associated with commercial recreation uses.

Parking shortages are primarily restricted to industrial uses where manufacturing employment fluctuates. Occasional parking shortages occur during peak use times on Harbor Island but are usually of short duration.

Other Circulation Aspects

San Diego Transit bus service is provided to Lindbergh Field and along Pacific Highway (several routes). All routes go to the downtown San Diego area and

Table 2

Harbor Island/Lindbergh Field, Planning District 2, Average Daily Traffic Counts

Street	Cross Street	Lanes	ADT
Harbor Drive	East of Navy Estuary	4	35,700
Harbor Drive	West of Laurel Street	6	61,900
Harbor Drive	West of Winship Lane	6	60,700
Harbor Island Drive	North of Harbor Drive	4	17,600
Harbor Island Drive	South of Harbor Drive	4	13,600
Harbor Island Drive	West of H.I. Traffic Circle	4	9,500
Harbor Island Drive	East of H.I. Traffic Circle	4	4,200
Stillwater Road	North of Harbor Drive	2	700
Winship Lane	North of Harbor Drive	2	3,900
Pacific Highway	North of Laurel Street	6	19,600
Washington Street (Off Tidelands)	North of Interstate 5	4	21,900
Laurel Street (Off Tidelands)	East of Pacific Highway	4	23,700

from there link up to others going regionwide. Harbor Island hotels provide limousine service to the airport, train, or intercity bus stations. A tourist busline also provides transportation to major tourist attractions. Curbside taxicab service is provided at the airport, and rental cars are available at the airport and along Pacific Highway.

A Class I (separated) bicycle path runs on the south side of Harbor Drive between Harbor Island Drive and Laurel Street. Because of their design, other streets are easily used by bicycles. Some intersections may be hazardous for bicycle use, particularly Harbor Drive/Laurel, and Pacific Highway/Laurel. Bicycle paths also are provided in Spanish Landing Park and along the Bay side of Harbor Island.

Many of the above mentioned bicycle paths are utilized by pedestrians. Extensive, improved pedestrian walks exist on Harbor Island and Spanish Landing Park. No sidewalks are available on the north side of Harbor Drive, forcing pedestrians to cross to the south side or walk through parking areas.

CENTRE CITY/EMBARCADERO

Tidelands Access

Principal access into Planning District 3 is made via Interstate 5 from the north, along Kettner Boulevard and intersecting east/west streets or Pacific Highway; from the south, along Grape Street; from Point Loma and areas south along Harbor Drive; and from the east along Ash Street, Broadway, or Market Street.

Street System

Internal circulation is along Pacific Highway and Harbor Drive. Both have considerable through traffic and are major arterials which connect with other parts of San Diego. Harbor Drive carries 60,000 vehicles per day west of Laurel Street; 40,000 at Hawthorn; 16,000 south of Grape; and 10,000 south of Broadway.

South of Grape Street, Harbor Drive serves primarily as local access to adjacent activities. Pedestrian movements are heavy and parking maneuvers are frequent. South of Broadway, Harbor Drive is further constricted, discouraging through traffic.

Pacific Highway, a six-lane divided arterial, borders Planning District 3 on the east. Traffic volumes are relatively light because the Interstate 5 freeway functions as the main north/south coastal road in this area. Pacific Highway is, however, a major access road to downtown San Diego, the Embarcadero area, and to various tideland tenants.

The remaining tideland streets of this grid patterned system are the termini of east-west streets serving the Centre City area. They provide access from downtown San Diego and cross-circulation within the Embarcadero area. Grape and Hawthorn are one way streets which provide access from Interstate 5 to downtown San Diego, the airport, and upland areas surrounding North San Diego Bay.

Traffic Counts

Average Daily Traffic (ADT) Counts of representative streets in Planning District 3 are given in Table 3.

Table 3

Centre City/Embarcadero, Planning District 3, Average Daily Traffic Counts

Street	Cross Street	Lanes	ADT
Harbor Drive	West of Laurel	6	61,900
Harbor Drive	Hawthorne	6	35,300
Harbor Drive	Ash	6	17,700
Harbor Drive	North of Broadway	4	12,500
Harbor Drive	South of Broadway	2	12,500
Harbor Drive	Pacific Highway	4	12,400
Harbor Drive	Fifth Avenue	4	12,400
Pacific Highway	Laurel	6	16,700
Pacific Highway	Ash Street	6	12,500
Laurel Street	Harbor Drive	4	17,900
Hawthorne Street	Harbor Drive	3	14,100
Grape Street	Harbor Drive	3	13,000
Ash Street	Harbor Drive	4	10,500
Broadway	Harbor Drive	4	9,700

In general, traffic flow on Planning District 3 streets is relatively uncongested. During off-peak hours, the flow is steady with delays caused by necessary traffic signals. During peak hours, traffic flow is slow but stable, with intermittent delays at traffic signals. Occasionally traffic flow becomes more restricted and delays more lengthy, but queues rarely occur.

Congestion occurs at the following locations:

- -Harbor Drive at Laurel Street, caused by conflict with Lindbergh Field traffic. Regulated by traffic signal.

- -Harbor Drive at Hawthorn/Grape Streets, caused by airport-freeway traffic and local employment peak traffic. Well regulated by signals. Heavy most times, congested during peaks.

- -Laurel, Hawthorn, and Grape Streets, due to short blocks which cause intersection blockage. Aggravated by work shift peaks and train crossings. Probably the most critical location due to high volumes and short blocks.

- -Harbor Drive at Ash Street, caused by intermixture of tourist traffic with local and through traffic. Pedestrian activity high during midday.

Parking

There are 2,850 public parking spaces in the Centre City/Embaracdero, 936 of which are on-street spaces. In the tourist areas, many spaces have been metered to regulate heavy demand. Public parking lots are located on Broadway Pier, G Street Mole, and the Harbor Seafood Mart. These lots do not include about 1,100 spaces in the adjacent County of San Diego Administration Building lots, off Port tidelands.

Private parking (actually leased parking which is at times used by others) totals 2,553 spaces. Some of these are reserved for employee parking such as for Solar Industries or Campbell Shipyards, but most are used by customers of the commercial businesses along Harbor Drive and adjacent streets.

Parking is not in short supply in the Centre City/Embarcadero Planning District except during peak demand times near the Solar Turbine plant and the County building, along main tourist area near Broadway and Harbor Drive, and at the Harbor Seafood Mart.

Other Circulation Aspects

Bus transportation to the Centre City/Embarcadero is provided by San Diego Transit Corporation. Several routes run along Harbor Drive and Pacific Highway.

A separated bicycle path has been constructed on Harbor Drive between Broadway and Market Street. In other parts of the Centre City/Embarcadero, bicyclists must use local streets or parking areas. Bicycle traffic along the Embarcadero is relatively light.

Pedestrian activity in Planning District 3 primarily involves local workers and tourists. Employment centers such as Solar and the County of San Diego Adminis-

tration Building generate walking traffic during shift changes and lunch hours. Tourist attractions including Broadway Pier, Anthony's Restaurants, and the Star of India draw pedestrians on weekends and on weekday afternoons. Although pedestrian traffic signals have been installed in some of these critical areas, they are not always utilized.

TENTH AVENUE MARINE TERMINAL

Tidelands Access

Regional access in Planning District 4 is from Interstates 5 and 15, and State Highway 75. Principal feeder routes from these freeways are Crosby Street and Harbor Drive. Harbor Drive provides major access from the north and south. Other access roads are 8th Avenue, Gull Street, Belt Street, Crosby Road, 28th Street, and 32nd Street.

Street System

Few streets are located on tidelands in Planning District 4 because most tenants front on Belt Street and Harbor Drive, both peripheral roads. Access to the Tenth Avenue Marine Terminal is via Crosby Road which is an extension of Crosby Street. Gull Street provides additional tenant access.

Traffic Counts

Average Daily Traffic (ADT) Counts of representative streets adjacent to Planning District 4 are given in Table 4.

Industrial employers in Planning District 4 attract heavy employee and business related traffic. Congestion occurs during shift changes at Van Camp Seafoods, Sun Harbor Marine Industries, National Steel and Shipbuilding Company (NASSCO), and to some extent at adjacent smaller industries. Shift changes occur 2-4 times daily, usually on weekdays only. Peak vehicle traffic congestion typically lasts 10-15 minutes. Local collector street capacity is generally adequate to handle most commuter traffic, but local congestion does occur at 28th Street, Crosby Street, and other north-south streets.

Train crossings east of Belt Street and east of Harbor Drive cause occasional backups onto intersecting streets. Truck traffic from Tenth Avenue can also be heavy at times.

Parking

There are a total of 2,035 parking spaces in Planning District 4. Of these, 257 are on-street (curb) parking spaces and another 297 are public spaces at the Tenth Avenue Terminal and the Port District Maintenance Yard. The remaining 1,481 are private spaces on leased land, most of which are reserved for employees or for limited business purposes.

Parking is in short supply in Planning District 4. About 50,000 people are employed in the general industrial and Naval Station areas between the Interstate 5 freeway and the Bay. The existing 1,481 private spaces excluding Naval Station parking, are not adequate to accommodate the demand on the tidelands portion of this general area. Additional spaces are available on upland areas, but off-street space is scarce, which results in high use of curbside parking by industrial commuters. Demand is highest at NASSCO and Sun Harbor Industries.

Table 4

Tenth Avenue Marine Terminal, Planning District 4, Average Daily Traffic Counts

Street	Cross Street	Lanes	ADT
Crosby Street	South of Harbor Drive	2	4,200
28th Street	North of Harbor Drive	2	10,500
32nd Street	North of Harbor Drive	6	21,600
Harbor Drive	West of Beardsley Street	2	13,600
8th Avenue	North of Harbor Drive	2	4,000

Other Circulation Aspects
Rail spurs serve the Tenth Avenue Terminal and feed back to the San Diego and Arizona Eastern (SD&AE) and the Atchison Topeka and Santa Fe (AT&SF) main tracks. Other spurs serve Kelco, NASSCO, and other tideland tenants.

NATIONAL CITY BAYFRONT

Tidelands Access
Regional access to Planning District 5 is available from Interstate 5 via 24th Street or 13th Street. Nineteenth Street also allows local access from nearby uplands. Access to the National City Marine Terminal is directly from 24th Street.

Street System
Tidelands Avenue forms part of the National City Bayfront east boundary and is the main street of Planning District 5. All activity in the National City Bayfront is industrial-related, except for a public boat launching ramp. Four-lane streets carry employee traffic and truck traffic associated with lumber storage and other industries. Quay Avenue, 28th Street, and 19th Street, are minor low volume local streets that connect the main streets and provide access to businesses.

Traffic Counts
Traffic congestion is not apparent in Planning District 5. Traffic is nearly all industrial except for that associated with the public park/launching ramp which has access along Tidelands Avenue to the waterfront.

Parking
Parking is readily available on all tidelands parcels. Of the 1,239 total parking spaces, 836 are public spaces, primarily on-street parking and trailer parking at the National City Boat Launching Ramp. Of the private spaces, 244 are at the former International Telephone and Telegraph Company (ITT) Plant location.

Other Circulation Aspects
No bus, bicycle or pedestrian facilities are provided in Planning District 5.

CORONADO BAYFRONT

Tidelands Access
Regional access into Planning District 6 is available from the south along State Highway 75 which enters Coronado via the Silver Strand, or from the east over the San Diego-Coronado Bay Bridge. Local access is available via State Highway 75 and Orange Avenue, a prime arterial, as well as from several local streets which abut the Coronado Bayfront, primarily Glorietta Boulevard, 1st, 2nd and 3rd Streets, and A and B Avenues.

Street System
Public streets on Port District tidelands which serve the general Coronado community include portions of First and Second Streets, C and D Avenues adjacent to the City of Coronado Public Works yard, and a portion of Pomona Avenue near

Glorietta Bay. Some abandoned, closed streets remain on a former Navy Housing site north of the San Diego-Coronado Bay Bridge.

Traffic Counts

Because there is very little traffic-generating development on tidelands in Planning District 6, most of the traffic passing on nearby streets results from off-tidelands activities, particularly the Navy.

Average Daily Traffic (ADT) Counts of representative streets adjacent to Planning District 6 are given in Table 5.

Traffic congestion near tidelands in Planning District 6 occurs primarily at the Third/Fourth Street couplet which provides the approach and exit streets for the San Diego-Coronado Bay Bridge. Peak traffic significantly impacts the entire circulation pattern in the north part of the City of Coronado, primarily from the Naval Air Station and Amphibious Base, City of Coronado (1977b). Additional congestion occurs along State Highway 75 where high traffic volume enters Coronado from the south. This area, specifically the Pomona/Highway 75 intersection, has a high accident rate.

Parking

There are 109 off-street and 42 on-street parking spaces on tidelands streets in Planning District 6. Additional upland spaces include 32 at the Bridge Toll Plaza; 71 along Orange Avenue; 67 at the Coronado Yacht Club; and 76 at the Glorietta Bay Marina.

Parking is not in short supply on tidelands because private uses provide adequate on-site parking. Additional parking exists in unmarked areas near Little League baseball parks and on vacant land. Parking demand sometimes exceeds available spaces in the Chart House/Glorietta Bay Marina area.

Other Circulation Aspects

San Diego Transit bus transportation is available over the San Diego-Coronado Bay Bridge. The nearest stop to tidelands is at Second and C. The bus continues to the Naval Amphibious Base and then passes near the Glorietta Bay tidelands.

The buses mentioned above have bicycle racks to enable riders to connect to San Diego over the San Diego-Coronado Bay Bridge. Although no special bicycle facilities exist, most local Coronado streets are suitable for bicycling.

No improved pedestrian facilities exist on tidelands.

CHULA VISTA BAYFRONT

Tidelands Access

Regional access into Planning District 7 is available from Interstate 5 via J Street. Access from the City of Chula Vista is provided from F and J Streets and the Tidelands Avenue link. There is no paved access to the D Street fill area.

Street System

Tidelands Avenue, a four-lane divided collector street, is the principal street

Table 5

Coronado Bayfront, Planning District 6, Average Daily Traffic Counts

Street	Cross Street	Lanes	ADT
SD-Coronado Bay Bridge	Glorietta Boulevard	5	35,000
First Street	E Avenue	2	3,400
First Street	B Avenue	2	2,600
Second Street	A Avenue	2	2,600
Glorietta Boulevard	3rd Street	2	700
Glorietta Boulevard	5th Street	2	1,300
Glorietta Boulevard	Monterey Avenue	2	1,800
Pomona Avenue	State Highway 75	2	4,200
State Highway 75	Pomona Avenue	4	24,000

serving the Chula Vista Bayfront. G and J Streets service some additional areas. Quay Avenue is very lightly used.

Traffic Counts
Interstate 5 carries about 77,000 vehicles per day near Planning District 7.

Traffic on Tidelands Avenue is heavy during shift changes at the adjacent Rohr Industries but the street has adequate capacity to handle this traffic. Short, undedicated connections between F and G Streets, which handle northbound traffic become congested at times.

Parking
There are 1,859 parking spaces on Port District tidelands in Planning District 7. Of these 1,250 are public spaces, 564 of which are on-street spaces mostly on Tidelands Avenue near Rohr, and 686 of which are off-street parking spaces located near Rohr, at the end of G Street, and at the Chula Vista Boat Basin launching ramp area. All of the 609 private spaces are located on a leased lot at the corner of Tidelands Avenue and G Street.

Additional overflow parking areas are available on unleased tidelands. Parking areas are underutilized, however, because Tidelands Avenue parking is unmarked.

Other Circulation Aspects
Buses connect downtown Chula Vista with Rohr Industries on H Street, but no bus lines run directly onto tidelands. No special bicycle facilities are provided in Planning District 7, but local streets are adequate for bicycling. No improved pedestrian facilities exist.

SILVER STRAND SOUTH

Tidelands Access
Regional and local access into Planning District 8 is from State Highway 75 and local streets within adjacent Coronado Cays residential development. Since Port District tidelands are limited to Crown Isle and Grand Caribe Isle, access consists of extensions of adjacent road systems to these two areas. Crown Isle is directly accessible via Coronado Cays Boulevard and Grand Caribe Isle is accessible via Grand Caribe Causeway.

Street System
No paved street exists on Crown Isle, and only a short two-lane road to the Coronado Cays sales office exists on Grand Caribe Isle.

Traffic Counts
Traffic along Grand Caribe Causeway is very light and is generally only associated with users of the Coronado Cays sales office.

Parking
Parking is limited to a single paved lot adjacent to the Coronado Cays sales office.

Other Circulation Aspects
No bus facilities or improved bicycle or pedestrian facilities exist in Planning District 8.

SOUTH BAY SALTLANDS

Tidelands Access
No regional or local access is provided directly to tidelands within Planning District 9. Access to adjacent areas is provided primarily along Palm Avenue and State Highway 75 to the south and west.

Street System
No improved streets exist within the South Bay Saltlands. The Western Salt Company ponds include a network of dirt roads for private access along numerous earth fill dikes.

Traffic Counts
Vehicle traffic is primarily limited to infrequent off road vehicle use and very light employee traffic associated with operation of the Western Salt Company.

Parking
No improved parking areas exist within Planning District 9.

Other Circulation Aspects
No bus facilities or improved bicycle or pedestrian facilities exist in Planning District 9.

Navigation

The existing physical features and improvements of San Diego Bay proper which relate to navigation and shipping into and out of the Port's Master Plan area include ship channels, boat channels, boat berthing facilities, anchorage areas, boat slips, and marinas. The following description relates closely to the Land and Water Use section in this EIR and the discussion on Water Based Transporation Systems in the Master Plan.

SHIP CHANNELS

The main ship channel from the bay entrance, between Point Loma and San Diego Point on the North Island peninsula, generally extends as a dredged improvement past the Coronado Bayfront, where the deeper channel is located along the extreme eastern margin of San Diego Bay, for a total distance of about twelve miles. The main ship channel provides a range of depths and widths for ship movement. From the entrance to the US Navy aircraft carrier berthing area on the eastern shore of North Island the main channel provides a depth of 42 feet at mean low or lower water (MLLW) and a width which varies from 600 to 2,000 feet. From this point on to the Tenth Avenue Marine Terminal the channel depth is maintained at about 40 feet MLLW and width varies from 600 to 1,900 feet. From the Tenth Avenue Marine Terminal south to the National City Marine Terminal the main channel continues at a depth of 35 feet MLLW and a width varying from 600 to 1,350 feet.

The San Diego-Coronado Bay Bridge spans the main channel between the Coronado peninsula and the San Diego marine industrial area to the south of the Tenth Avenue Marine Terminal. The bridge includes two spans over the main channel with a vertical clearance of 195 feet mean higher water (MHW) and a clear width of 600 feet. The last span is located at the pierhead line on either side of the main channel and provides a vertical clearance of 175 feet MHW and a clear width of 500 feet.

For additional discussion on the relationship of the main ship channel to the possibility of a proposed second entrance as well as additional main channel dredging which may be associated with such a federal government proposal, reference is made to both the Land and Water Use section of this EIR and the Water Based Transportation System of the Master Plan.

BOAT CHANNELS

Various boat channels exist within San Diego Bay to provide closer shore access, for smaller commercial and recreational vessels, along lanes which are generally too shallow and too narrow to accommodate larger ships.

In the Shelter Island Planning District boat channel access exists at the opening to the yacht harbor at the southern end of the Shelter Island peninsula maintained at a depth between 19 and 21 feet MLLW. At the entrance to the commercial basin a boat corridor is available at the northern end of the Shelter Island peninsula with a depth of between 17 and 21 feet MLLW.

Small boat corridors exist within both the Lindbergh Field/Harbor Island Planning District and the Centre City/Embarcadero Planning District. Adequate depth for small craft navigation is maintained within the east and west basins of Harbor Island. Within the Crescent Zone of the Embarcadero area and at the entrance and within the interior of the Fifth Avenue Marina area small boat corridors are currently (1979) being developed.

Adjacent to the Coronado Bay Bridge and easterly along the Coronado Bayfront shoreline, a 400 foot wide boat channel is located about 1,000 feet offshore. The channel has a depth of between 15 and 17 feet MLLW and is dredged shoreward to within about 400 feet. This boat channel passes beneath the San Diego-Coronado Bay Bridge adjacent to the south Coronado Bayfront subarea and provides access for shallow draft recreational sailing and power boats to Glorietta Bay, further to the southwest.

Adjacent to the National City Marine Terminal, in the Port's National City and Chula Vista Bayfront Planning Districts, boat channels exist from the entrance to the Sweetwater Flood Control Channel, dredged to about 35 feet MLLW, and extending southerly about 1,000 feet west of the mudflat of the D Street Fill. Depth of this channel decreases from 25 to 18 feet, with widths varying from about 500 to 700 feet between the Sweetwater Channel and an area approximately west of Gunpowder Point. From this point two additional boat channels proceed in a southerly direction; one channel is closer to the shore allowing access to small boat building facilities at G Street adjacent to Rohr Industries in Chula Vista. This channel has a dredged depth of between 18 and 15 feet between 1962 and 1968. Widths vary from about 200 to 400 feet. The second boat channel further in the bay provides access to the Chula Vista Boat Basin and public launching ramp facilities. It is approximately 200 feet wide and has been dredged to provide shallow draft clearance (about 14 feet MLLW) to within about 1,000 feet of the Boat Basin where the depth decreases to about 6 feet MLLW.

On the western shoreline of South Bay, remnants of a boat channel remain which had provided access for small boat launching and was dredged in 1944, 1953, and 1975 to a depth of about 7 feet MLLW for a width of about 200 feet. This channel has been often called Emory Channel and proceeds for about 2,000 feet in a southwesterly direction from an area offshore and south of Coronado Cays Grand Caribe (East Island) down to a shoreline area adjacent to State Highway 75 and the County of San Diego's Marine Biology Preserve.

BOAT BERTHING

Boat berthing (in addition to launching and haulout facilities for commercial or recreational vessels) with appropriate adjacent water access depths exists at many places throughout San Diego Bay. The locations, facilities, and the numbers of vessels which can be accommodated has been inventoried and includes a boat and slip count (SDUPD, 1977b).

The Shelter Island Planning District provides boat berthing with launching and haulout facilities for small to medium size recreational vessels in the yacht harbor and for medium size commercial vessels within the Commercial Basin.

In the Harbor Island/Lindbergh Field Planning District boat berthing has been developed in the west basin for recreational and some commercial vessels. In the east basin it consists primarily of specialized berthing for institutional and research vessels.

The Centre City/Embarcadero Planning District allows both shallow and deep-draft berthing for recreational, commercial, and military vessels at the Crescent Zone of the Embarcadero proper, and includes the B Street Pier, Broadway Pier, and the military facilities of the US Navy Pier. Cruise-ship facilities such as customs are avilable at the Broadway Pier. Specialized berthing facilities for the commercial fishing fleet, including tuna seiners, exist along the Embarcadero and at the G Street Pier area slightly to the south. The Fifth Avenue Marina will be developed with piers, slips, and other amenities for recreational boating.

Further to the south the Tenth Avenue Marine Terminal and adjacent shipyards and marine industrial areas provide a variety of deepdraft berthing for large ocean going vessels and specialized commercial vessels including oceangoing freighters and larger commercial fishing boats. Further to the south in the marine industrial area specialized berthing exists, primarily deepdraft berthing for a variety of craft including the Kelco kelp harvesters, and the various drydocks and ship ways of NASSCO for the construction of freighters, military ships as well as large oil tankers.

To the south, past the thirteen piers of the US Naval Station, the Port's National City Marine Terminal in the National City Planning District includes deepdraft berthing on the northern and western sides of the terminal wharf. A 35 foot deep channel extends the main San Diego Bay channel to the Sweetwater Flood Control Channel to provide deep water access to the southern wharf of the National City Marine Terminal (known as the Sweetwater Wharf).

The Coronado Cays residential development contains numerous berthing facilities for shallow draft recreational vessels, both sail and power boats of a variety of sizes. The Coronado Bayfront area includes commercial boat construction and repair operations including launching and haulout facilities for commercial or recreational vessels along the Orange Avenue shoreline, and marinas and a City of Coronado boat launching ramp and Glorietta Bay.

ANCHORAGE AREAS

Ship anchorage for oceangoing vessels concentrates primarily in the area west of the B Street Pier but includes all navigable waters of the harbor except designated channels, cable and pipeline areas, other specially designated anchorages, and the naval restricted areas.

Special boat anchorages have been set aside and marked on coastal charts to identify places of refuge and to ensure safe, efficient moorage areas for small craft. Specific locations are designated together with conditions for their use: two within the Shelter Island Planning District, one within the yacht harbor and one within the commercial basin area; one within the Fifth Avenue Marina in the Centre City/Embarcadero Planning District; and one along the northern shoreline of Glorietta Bay adjacent to the Coronado Golf Course.

More specific descriptions of these anchorage areas are provided on coastal charts as well as described in the Project Description section for Planning Districts 1, 3, and 6.

Anchorage of vessels is in some cases specifically prohibited along some portions of shoreline adjacent to recreational areas frequented by water-skiers. For example, in Coronado anchorage of vessels is prohibited along the northern portion of the Golf Course area (City of Coronado Municipal Code 13.16.540), while further to the south anchoring of vessels is authorized use (City of Coronado Municipal Code 13.16.550) and extends into the Glorietta Bay subarea as an officially designated anchorage (US Anchorage A-5).

BOAT SLIPS/MARINAS

Boat slips and marinas can be found at various locations for a variety of uses throughout the Port's Master Plan area. A general breakdown of the facilities which exist by their general use classifications is as follows: nine boatbuilding and repair facilities; 13 pleasurecraft marinas; 4 yacht clubs, all of which also include marinas; 4 main sportfishing landings; 3 main commercial fishing landings and facilities; 5 separate fuel docks and support facilities; and a total of 11 unclassified marine craft facilities including guest docks, special fishing clubs, and improved anchorages.

The May 1979 San Diego Bay Boat and Slip Count compiled by the San Diego Unified Port District Harbor Police indicated: 718 slips and boats at anchor in the Commercial Basin area of the Shelter Island Planning District and 2,090 in the Yacht Harbor; 1,662 in the Harbor Island/Lindbergh Field Planning District; 936 in the Coronado Bayfront Planning District, however, included in that count was the US Navy Sailing Club; 60 in the Centre City/ Embarcadero Planning District; and at anchorage area A-3 (currently under marina development) the Grape Street piers and the G Street piers a total of 112. The combined total count for slips, berths, and vessels at anchor in San Diego Bay as of May 1979 was 5,518.

Additional detailed information is available in the Master Plan in the section dealing with Commercial Fishing, Pleasurecraft Marinas, Sportfishing, Marine Sales and Service, Boat Sales, and Boatbuilding and Repair. Marine facilities have been inventoried by Planning District including the locations of various dockside improvements including fire protection facilities, guest docks, and pumpout facilities.

Public Services and Facilities

Public services and facilities which exist within and adjacent to the Port of San Diego's Master Plan area are a combination of specific urban support services and facilities provided by the Port of San Diego for areas within Port tidelands and an extension of the urban support services and facilities which are provided by incorporated cities in areas adjacent to tidelands boundaries. Although the Port of San Diego has representation from the five member cities, only four cities including the cities of San Diego, Coronado, Chula Vista and National City, as well as military installations of the US Navy and US Marine Corps provide facilities from adjacent areas. An additional feature which makes urban support services and facilities unique for public use upon tidelands is that no specific permanent residential uses are permitted on Port tidelands, therefore, the public services and facilities which are provided are more of a special nature for the commercial industrial and recreational developments that exist on Port tidelands. Those services and facilities include sewerage systems, water supply, storm drains, electricity, gas and telephone, fire protection, police protection, and refuse collection.

SEWERAGE SYSTEMS

San Diego Metropolitan Sewerage System

Sewerage facilities which presently serve the Port's Master Plan area are provided by the San Diego Metropolitan Sewerage System. Otherwise known as Metro, the existing waste water treatment system provides waste water disposal and treatment facilities for all of the various uses on tidelands as well as those uses which interface with tidelands activities from upland areas. These facilities have been summarized in the description provided in the San Diego Metropolitan Facilities Plan Waste Water Treatment, Reclamation, and Disposal 1975-2000 Final EIS (EPA, 1977), in part on pages 2 and 3 as follows:

> "The San Diego Metropolitan System provides municipal and industrial waste water treatment and disposal to the cities of Chula Vista, Coronado, Del Mar, El Cajon, Imperial Beach, La Mesa, National City, Lemon Grove, and San Diego; special districts serving unincorporated areas (Lakeside, Montgomery, Palmarado, Santee, Spring Valley, Orlando, and Otay Municipal Sanitation Districts); and the US Navy. Emergency sewerage services provided to the City of Tijuana, by California, by diverting raw sewage from Tijuana into the Metropolitan system during power outages and other system failures in the Tijuana Treatment Facility.
>
> Physical structures in the Metropolitan system are owned and operated by the City of San Diego and capacity in the system is allocated on a contractual basis with the communities listed above. The San Diego Metropolitan Waste Water Treatment System consists of large interceptors which come together at Pumping Station Number One near Lindbergh Field before proceeding as a single interceptor to the Point Loma Metropolitan Treatment Facility. The design capacity of the southern interceptor (15 miles in length) increases from 27.6 million gallons a day (mgd) at its southern terminus to 198 mgd at Pumping Station Number One. The design capacity of the northern interceptor (2 miles in length) is 186.4 mgd. The interceptor from Pumping Station Number One to

the Point Loma Plant (5 miles) has design capacity that varies from 337.8 to 360.3 mgd. These main interceptors are fed by a number of community and inter-community interceptor systems.

Point Loma Waste Water Treatment Facility has a rated primary treatment capacity of 120 mgd with on-site sludge digestion. Stabilized sludge pumped to Fiesta Island in Mission Bay is de-watered and used as a soil amendment. Non-disinfected primary effluent is discharged to the ocean from an outfall 11,508 feet offshore. Design capacity of the outfall is 240 mgd average daily flow (ADF).

The existing metropolitan treatment system is faced with problems or potential problems related to:

1. Capacity. The present average dry weather flow ADF through the San Diego Waste Water Treatment Facility at Point Loma is approximately 115 mgd (114.9 mgd ADF for January, February and March 1977) which is near the design capacity of 120 mgd; consequently, the design capacity of the treatment facility will be exceeded in the near future.
2. Requirements of the Federal Water Pollution Control Act (FWPCA) Amendments (PL 92-500), and the California Water Code, Division 7. The California Regional Water Quality Control Board - San Diego Region adopted waste discharge requirements ... for the San Diego Point Loma Waste Water Treatment Plan ocean outfall. NPDES permit requirements are set for each waste discharge to protect water quality; implement water quality control plans; and if the discharge is to the surface navagable waters of the United States, to meet the requirements of the FWPCA (administered by EPA through the state).

The FWPCA (PL92-500) requires that by July 1, 1977, all publically owned waste water treatment facilities must utilize "secondary treatment" and if an industrial discharger sends its wastes through a publically owned treatment works, certain "pre-treatment standards" must be met. EPA defined the minimum level of effluent quality attainable by "secondary treatment" ...

The City of San Diego Waste Water Treatment Facility System, therefore, has two problems associated with the federal law as expressed in the NPDES permit. First, they are not in compliance with PL92-500 because they do not have secondary treatment at the facility (required by July 1, 1977) and second, they cannot meet future discharge requirements.

A third major concern of the San Diego region and the San Diego metropolitan waste water treatment system is the untreated waste water flow from the City of Tijuana, Baja California. The San Diego Metropolitan Waste Water Treatment System accepts emergency flows from Tijuana; however, emergency use comprises about 4.5 mgd on almost a daily basis. It is not known if any source control is practiced by Tijuana industry."

The San Diego Metropolitan Facilities Plan EIS identified and assessed a number of alternatives for waste water treatment, sludge disposal, reclamation/recycling, industrial source control, salinity control, and other facets of total waste water management programs. The following is a summary of the conclusions and

recommendations reached by the Facilities Plan and are arranged in their order of ranking with the first preference being listed first:

"1. Recommendation Number One - First Choice. Continue primary treatment at Point Loma and increase capacity to 150 mgd with a Phase II expansion to 200 mgd.

2. Recommendation Number Two - Second Choice. Continue primary treatment of up to 120 mgd at Point Loma. Construct a 30 mgd biological secondary sewer treatment plant at a central San Diego site.

3. Recommendation Number Three - Third Choice. Two different alternative plans;

a. Provide biological secondary sewage treatment plant (45 mgd) at Point Loma and a central San Diego site (105 mgd). Phase II add 50 mgd average daily dry weather flow capacity of biological secondary treatment at central San Diego site.

or

b. Install 150 mgd biological secondary plant in central San Diego and expand to 200 mgd in Phase II.

4. Recommendation Number Four - Fourth Choice. Construct a 70 mgd biological secondary facility in the Southbay area. Build a 40 mgd biological secondary facility for Tijuana. Construct a common land and ocean outfall for both facilities."

Areawide Water Quality Management Plan

The national goals of the Federal Water Pollution Control Act Amendment of 1972 are put forth in the Areawide Water Quality Management Plan, San Diego-Riverside Designated Area Summary (CPO, 1978m). The Plan would ensure that land development resulting from anticipated population growth would have adequate waste water facilities available at the appropriate time. The Areawide Plan based its sewage transmission and treatment needs and management responsibilities upon regional growth forecasts, which were agreed to by all cities and counties. One of the findings of the Areawide Plan was that the major coastal sewage treatment plants in the San Diego area are operating within about 10% of their design capacity but all are developing plans to expand. These plans to expand as has been indicated are described in greater detail both in the San Diego Metropolitan Facilities Plan EIS as well as the Waste Water Treatment System Needs and Management Responsibilities as stated in the CPO Areawide Water Quality Management Plan for San Diego-Riverside Designated Area. As summarized in the Areawide Plan on pages 53 through 58:

"The facilities identified in the Plan for the San Diego County portion of the planning area are based upon the regional growth (Series IV) forecasts, which were adopted or accepted by all local general purpose governments."

According to the forecasts approximately 2.3 million people will be served by sewers in 1995, generating some 207,000,000 gallons of sewage per day (mgd). The

areas's sewage treatment plant capacity is currently 162 mgd. Therefore, an additional 45 mgd in treatment plant capacity will be needed by 1995.

> "To provide sufficient capacity, the plan proposes expansion of twelve existing treatment plants ... Many new and replacement transmission facilities must also be constructed. In addition to expansion of existing treatment plants the plan also proposes recommendations for waste water reclamation projects. A single recommendation for areas adjacent to Port tidelands was made for the City of Coronado under a waste water reclamation project alternative 1, Irrigation of Coronado Municipal Golf Course. The feasibility for this proposal is currently being investigated for using treated sewage water for irrigation of the Coronado golf course. If implemented, such a reuse facilty could utilize approximately 0.75 mgd, and may reduce to some extent, conveyance costs and flow demands on the existing sewage distribution."

It should also be again emphasized a capacity of existing sewerage facilities includes those commercial, industrial, and recreational contributors from areas within the Port's Master Plan area which have been taken into account in the Areawide Plan Regional Growth Forecast. The specific locations of all waste water treatment and transmission facilities existing in and around the Port's Master Plan area as well as detailed descriptions of the proposed locations and nature of facilities of new treatment plants in addition are also given in pages 54 through 57 of the Areawide Plan.

Additional specific detailed information regarding the existing sewerage system facilities in other areas of the Port's Master Plan area are provided in the Shelter Island Precise Plan EIR (SDUPD, 1976e) and in the Embarcadero Development Plan EIR (SDUPD, 1976a), the Coronado Bayfront Development Plan EIR (SDUPD, 1978d), and the Chula Vista Bayfront Precise Plan Development Program Background Report (SDUPD, 1974d).

WATER SUPPLY

Water supply to the Port of San Diego's Master Plan area is generally via incorporated cities and municipal water districts adjacent to the Plan area. The Shelter Island Planning District water supply as described in part by the Shelter Island Precise Plan EIR (SDUPD, 1976e), is as follows:

> "The Planning District is served by the City of San Diego water distribution system. All fresh water comes into the area by way of two 16 inch cast iron pipe (CIP) mains located in North Harbor Drive and a 12 inch CIP main located in Rosecrans Street. The uplands areas are fed by 6 inch CIP mains located in the streets perpendicular to Rosecrans. These mains also run into tidelands areas. Shelter Island is served by a 12 inch asbestos-concrete main off the Rosecrans main."

The City of San Diego water distribution system also provides water supply to the Harbor Island/Lindbergh Field Planning District via the North Harbor Drive CIP main. The Centre City/Embarcadero Planning District is supplied water as described in the Embarcadero Development Plan EIR (SDUPD, 1976a), as follows:

"The project area is currently served with water by the City of San Diego through a 16 inch cast iron pipe buried in Harbor Drive. Water for San Diego comes from the watershed east of the city and from the Colorado River.

While no figures are available showing current water use in the project area, if San Diego can provide sufficient water for both uses (Weaver, 1974). The city has proposed replacing the existing 16 inch line in Harbor Drive with a 30 inch line when funds are available."

The Tenth Avenue Marine Terminal Planning District water supply is provided as described in the Tenth Avenue Marine Terminal Access Road Relocation EIR (SDUPD, 1974e), as follows:

"University Heights reservoir, approximately 4-1/2 miles northeast of the project site, supplies water to the project area. This reservoir feeds an existing 16 inch water main adjacent to the Santa Fe railroad tracks. This is connected with 8 inch water lines under Beardsley and Water streets, and a 6 inch water line under Crosby Street."

National City Bayfront, the Chula Vista Bayfront, Silver Strand South, and the Southbay Saltlands, are all provided water service as described in the Rohr Marine, Inc. Shipbuilding Facility EIR (SDUPD, 1978a), as follows:

"Water service to the project area is provided by the Southbay Irrigation District (formerly the California American Water Company), which receives its water from the Colorado River via the San Diego aquaduct. Total demand for the service area, which includes National City, Chula Vista and Bonita areas, averages approximately 17,000,000 gallons per day. On a high demand day, as much as 30,000,000 gallons could be provided if necessary (Bennet, 1977).

Distribution facilities in the project area include a 14 inch line on Tidelands Avenue and a 10 inch line on Terminal Street (Davis, 1977)."

The Coronado Bayfront is provided water supply as described in the Coronado Bayfront Development Plan EIR (SDUPD, 1978d), as follows:

"City of Coronado water supply and distribution facilities presently serve the Coronado Bayfront Development Plan area. The city purchases potable water from the privately held California American Water Company, which in turn, purchases water from the San Diego County Water Authority, a member agency of the Metropolitan Water Districts of Southern California (MWD). The MWD obtains water from the Colorado River and the California Water Project (Feather River Project).

Water is supplied to the Plan area on the south from a 16 inch mainline along Strand Way, and on the north, from a 24 inch mainline across San Diego Bay from the City of San Diego's water distribution system..."

STORM DRAINS

Throughout the Port of San Diego's Master Plan area numerous storm drains of a variety of sizes convey surface runoff from adjacent off-tidelands urban drainage areas across tidelands within the Port of San Diego's Master Plan area. With few exceptions, storm drains convey rainfall runoff directly into San Diego Bay, generally across easements held by the city adjacent to the storm drain location. For the specific location and sizes of storm drains which convey surface runoff across tidelands into San Diego Bay the references sited in the previous Water Supply section would provide additional detailed information.

Flood Control

With the exception of the Sweetwater River Flood Control Channel adjacent to the National City Marine Terminal in National City the Port's Master Plan area includes no major flood control facilities or storm drainage facilities. Potential flood hazards throughout the Port's Master Plan area are generally low due to relatively small contributing source areas and short distances from adjacent water sheds to San Diego Bay. Local ponding in various areas periodically causes inconvenience but little damage results. Portions of some District tidelands such as the Coronado Bayfront adjacent to the City of Coronado have been tentatively designated as special flood hazard areas by the Federal Department of Housing and Urban Development (HUD). It should be noted, however, that these designations are only preliminary and are based largely upon the existing topographic contours and projected base flood elevations of a one year flood which qualified the area only for a first stage study program which indicates the need for further study. The potential for flooding in the Sweetwater River area in general both adjacent to the Sweetwater Flood Control Channel and to the Sweetwater River Marsh has been described in the Chula Vista Bayfront Development Project EIR (Chula Vista Bayfront Redevelopment Agency, 1976), in part as follows:

> "According to the US Army Corps of Engineers (1975), large floods are believed or known to have occured in the Sweetwater Basin in 1825, 1862, 1916, 1927, and 1937. Medium and small floods occured in 1889, 1891, 1906, 1921, 1938, 1941, and 1943. The largest known flow on the Sweetwater River occured on January 27, 1916, when, at the Sweetwater Dam, a peak flow into the reservoir of 45,500 cubic feet per second (cfs) was reported for one hour. No floods have been reported since 1943, and there have not been any outflows from the reservoir since a 410 cfs flow over the spillway during the April 1943 flood."

A delineation of the 100 year flood plan in the Chula Vista Bayfront Planning District indicates that only those tidelands immediately adjacent to the shoreline at the mouth of the Sweetwater River and west of Tidelands Avenue between E and F streets would be affected by such a flood. These areas are currently undeveloped with the exception of agricultural land.

ELECTRICITY, GAS, AND TELEPHONE

San Diego Gas and Electric Company (SDG&E) supplies both electrical power and natural gas to all of the Planning Districts within the Port's Master Plan area. Electrical power is provided via several main transmission lines from the SDG&E

Southbay power plant, and the SDG&E Silvergate power plant. The Coronado Bayfront Planning District is served via electrical power provided by a 69 kv main transmission line across San Diego Bay connected to a substation on Orange Avenue and First Street adjacent to tidelands.

Existing transmission lines, substations, and distribution systems appear to be adequate to meet the existing and future electrical power requirements of the Port of San Diego's Master Plan area. Future electrical generating capacities and natural gas supplies for proposed tidelands developments are available, but are largely dependent upon regional, state, and national energy policies on fuel resource utilization.

For aesthetic and public interest considerations, SDG&E has future plans to underground electrical power facilities within and adjacent to many locations within the Port's Master Plan area. First priorities are assigned to those areas where, at the present time, facilities intrude on bay views from adjacent uplands.

Telephone service is provided throughout the Port of San Diego's Master Plan area by Pacific Telephone. Future undergrounding of electrical power facilities will likely include concurrent undergrounding of telephone facilities in many areas as well.

Additional detailed information as to the locations, capacity, and future expansion considerations for electricity, gas, and telephone utilities throughout the Port's Master Plan area is available in the reports sited previously in the Water Supply and Storm Drain sections.

FIRE PROTECTION

Fire protection is provided to the Port of San Diego's Master Plan area by the city fire departments of San Diego, National City, Chula Vista, and Coronado, as well as by the Port District Harbor Police. Specific locations and detailed descriptions of equipment of the various fire protection facilities within individual Planning Districts of the Port's Master Plan area are also provided in the previously referenced reports regarding other facilities and services. Assistance with fire protection along shoreline areas is provided by the Port District's fire boats docked at the Harbor Police facility on Shelter Island and at the G Street Pier. Response time to most places within the Plan area for such occurances as vessel or shoreline fires is approximately 8 minutes. A history of the fires which have occured throughout Port of San Diego tidelands indicates that most fires have been minor and associated with small grass fires, vandalism, and fires associated with boats or vehicles along the shoreline.

POLICE PROTECTION

Law enforcement within the Port of San Diego's Master Plan area is provided jointly by the Harbor Police and the Police Departments of the cities of San Diego, National City, Chula Vista, and Coronado. Specific locations, equipment, and staffing levels for the various police departments are also

provided in the reports previously referenced above for Public Facilities and Services. Response time for police protection both from the San Diego Harbor Police and backup by the police departments from the various cities to most places within the Port's Master Plan area is about 15 minutes or less. The San Diego Harbor Police currently (1979) operate with a force of 75 patrol officers plus 9 supervisors, three police vehicle units as well as the fire fighting and logistic support of four vessels. Individual support of specific activities concerning customs, navigation, as well as federal and state boating requirements enforcement are also assisted by the US Coast Guard vessels and personnel stationed within the San Diego Bay area.

REFUSE COLLECTION/DISPOSAL

Refuse collection service is provided throughout the Port's Master Plan area as well as to some immediately adjacent areas largely by private firms as well as the trash collection services of the cities of San Diego, National City, Chula Vista, and Coronado. A large number and variety of receptacles and dumpsters is currently located on and adjacent to developed and partially developed areas throughout Port tidelands. Refuse collected within Port tidelands is disposed of at the Otay Sanitary Land Fill within the City of San Diego.

Socio-Economic Characteristics/Growth

SOCIAL CHARACTERISTICS

The social characteristics of developed and undeveloped areas within the Master Plan area have been described in the Socio-Economic Factors Port of San Diego Master Plan Revision Program, Section I: Social Characteristics; Section II: Economic Characteristics (SDUPD, 1972b). Although there are nine Planning Districts, the socio-economic analysis included fourteen planning units to represent the characteristics not only within the Port's jurisdiction but also of the surrounding area. Because Port tidelands cannot be developed for residential purposes, no permanent "population" exists within the Master Plan area. The following descriptions are provided in summary from the Socio-Economic Factors Report (SDUPD, 1972b) for the fourteen planning units utilized in the study.

The Shelter Island Planning District Number 1 is summarized as follows:

> Point Loma is comprised of two basic groups - the young, single service men living in group quarters, and the older service family of normal size living in government housing. Because few persons are in the older age groups one may presume that the head of the household is employed, and that the tenure of families depends upon its employment by the federal government.
>
> The La Playa planning unit includes the commercial area of Shelter Island as well as the La Playa residential neighborhood. The population is older, more stable, and nearly all white. La Playa's population density is third highest despite some land being devoted to commercial use (Rosecrans Avenue and Shelter Island). La Playa can be classified as a family area, one where a few primary individuals reside and where almost no persons live in group quarters.

The Lindbergh Field planning unit within the Port's Harbor Island/Lindbergh Field Planning District is described as follows:

> While the airport forms the main identifier in this planning unit, nearly all the population is concentrated in two military bases - the US Naval Training Center and the US Marine Corps Recruit Depot. This fact colors the data analysis and explains much about this unique area. The Lindbergh Field planning unit contains the largest population, by far, of any area, and its population density exceeds any other planning unit, despite the great amount of land used by Lindbergh Field and therefore unavailable for residential purposes.

The Centre City/Embarcadero Planning District is described as follows:

> Centre City exhibits many characteristics associated with typical older inner city residential neighborhoods. There are very few children and a large number of older men. Fewer families reside here; in fact, Centre City has the lowest average family size of any planning unit. The number of widowed and divorced people is also about three times the city average. A typical resident of Centre City would be a middle-aged, single, white man renting an inexpensive apartment. This profile obviously simplifies the natural range of personal differences among a population, but can be useful in describing the most common type found in a particular area.

The Tenth Avenue Marine Terminal Planning District is described as follows:

> The Tenth Avenue Marine Terminal planning unit has a relatively small population with a moderate density, probably because of the disbursal of residential uses of the area's periphery. It contains some families and many others who appear in the working class category.

The Thirty-Second Street Naval Station planning unit is located between the Port's Tenth Avenue Marine Terminal Planning District and the Port's National City Marine Terminal Planning District. This off-tidelands area is described as follows:

> This appears to be a family area, outside of the Naval Station itself. A large number of the total population live in group quarters, which is undoubtedly related to the number of single males. For households, the family unit is similar to other typical ones around the Bay, with an average size quite normal. House values are the lowest of any planning unit. The dwellings are relatively inexpensive and probably somewhat crowded (excluding group quarters).

The National City Bayfront Planning District is described as follows:

> The National City Bayfront is a small unit with a few residents or housing units. The planning unit can be considered largely as an area of working class families and moderate housing, with little to distinguish it from other subareas on the east side of the bay.

The Chula Vista Bayfront Planning District is described as follows:

> The population is also older than most, averaging about 30 years old. A very small number of residents live in group quarters, making family type households the predominant housing class. Home values are less than Chula Vista's average, and are relatively low compared to other near-bayfront properties.

The Chula Vista Bayfront South planning unit, also within the Port's Chula Vista Bayfront Planning District, is described as follows:

> This planning unit is very similar to Chula Vista Bayfront North, because the population is concentrated in the eastern portion between Interstate 5 and Broadway. Social characteristics are also similar.

The Southbay Saltlands Planning District is described as follows:

> The Saltlands planning unit in the area, known as Palm City, and the northern portion of the City of Imperial Beach makes this the second largest unit in terms of population. The density, however, is average, probably because of the large amount of census tract 101.01 devoted to salt evaporation ponds but included in the land area summary.

The Silver Strand South Planning District is described as follows:

> Silver Strand South has only relatively few people, making it the least populated area. All of these are presumably living in the Coronado Cays luxury housing subdivision being built in phases on the bay side of the planning unit. There are no persons living in group quarters and most persons are white. The housing is among the most expensive.

The Silver Strand North planning unit which is between the Port of San Diego's Silver Strand South Planning District and the Coronado Bayfront Planning District, is described as follows:

> The Silver Strand North contains a large amount of Navy family housing and Navy barracks, which affects social composition as well as housing characteristics. The population is clustered, with a large amount of land set aside for non-residential uses, primarily beaches.

Men outnumber women by about 5 to 1, and half the men are between 20 and 24. These are apparently Navy men having advanced training at the bases and being housed there.

A very low percentage of both sexes are widowed or divorced, probably because of the demand of military housing.

All units are rented, with 84% being priced at $100 to $149 and the rest (almost) having no cash rent. Average rent is $130.

The Coronado Bayfront Planning District is a residential community with local employment opportunities provided mainly by tourist related services and employment within the governmental sector, as follows:

The Coronado planning unit comprises five census tracts clustered around the main part of the City of Coronado. It is densely developed, second only to the Lindbergh Field area, but has only a token group quarters population. The number of women exceeds the number of men in the older age group. Almost two-thirds of the adult population is married, showing a relatively large family situation. A very high percentage of women is widowed, somewhat less are divorced. Most of the adult female population were previously married, while only a few of the male population were married. The homes in Coronado are also the third most expensive, behind Silver Strand South (Coronado Cays) and La Playa.

The North Island planning unit off-tidelands and north of the Port's Coronado Bayfront Planning District is described as follows:

The North Island planning unit is co-terminus with the Naval Air Station and population density is low. There are few housing units, most of the population is living in group quarters and is made up principally of young, single, white males.

A great majority of men, and somewhat fewer women, are single. All units are rented, usually at no cash rent.

The following general observations regarding the sociological setting of the Port's Master Plan area and surrounding areas have been concluded from the Socio-Economic Factors Report.

- Areas under total, or near total, Navy control exhibit unusual sociological characteristics indicative of the specific functions for which they are used. The Navy areas should be identified and recognized for their place in the picture but they should not be presumed to typify the kind of population that would result from normal demand mechanisms characteristic of a civilian housing market.

- Older areas contain older people. La Playa and Centre City are good examples of established, settled neighborhoods where more permanent residents occur. The older areas may have a cohesive stability that relates to the needs of older people.

- The value of housing near the water - expressed in median rent and value of owner occupied units - depends primarily upon total neighborhood environment and how favorable it is for residential purposes. The dominant factor frequently is primary land use, for if an area is known as an industrial or commercial district, housing becomes scarce or values are depressed.

- Within the limited study area, population densities, housing values, and the social status of residents are inversely related to distance from the harbor entrance. In general, as distance from the entrance increases, values decrease. Major activity is clustered in the north bay.

- The characteristics of population around the bay generally correspond to those of the regional population as a whole. Localized exceptions can be identified but they do not greatly affect this generalization. If Navy lands are excluded, the only unique area is Centre City where housing is quite different from other areas, but this area is under redevelopment.

- When examining the racial composition of the nearby San Diego Bay populations, it is apparent that the area is predominantly white. There is a substantial number of persons belonging to races other than white or black; in some cases this group exceeds the black population by at least ten times.

ECONOMIC CHARACTERISTICS

The following description of economic characteristics within and surrounding the Port's Master Plan area is taken primarily from the Socio-Economic Factors Report of the Port's Master Plan Revision Program, Section II: Economic Characteristics (SDUPD, 1972b). Additional detailed updated information on individual specific areas is available in Comprehensive Planning Organization reports (CPO, 1976b and 1978g), and in the General Plans of the five cities surrounding the Master Plan area. In summary the report describes the economic characteristics of the San Diego Bay area dated at the early 1970's level in part as follows:

> "San Diego Bay, recognized as one of the ten best natural harbors in the world, is not only a focus of community identity for the San Diego region but is an economic asset of undetermined potential. Even the casual observer can notice what the bay means to San Diego - merchant ships entering the harbor; busy Navy installations along the shore; hotels; pleasure boats; fishing boats; the airport - all these visible objects are manifestations of a strongly functioning economy.

"If one attempts to measure the effect the Port of San Diego has on the total economy, however, he must be content to report on certain of its components such as shipping tonnage and income. In the large scheme, related activities, including manufacturing industries, depend upon tideland sites and the benefit of ocean access, both of which have incalcuable value."

The San Diego regional economy is strongly linked to Port activities on tidelands.* In particular, maritime and aviation activities, shipbuilding, industrial development, and commercial recreation rank among the most significant economic contributions of the San Diego Bay area. Both civilian employment and dollar value of goods and services produced can be used to rank economic activity and therefore describe the economic characteristics of the area. As measured by civilian employment the top four ranked major factors in San Diego's economy are government, wholesale and retail trade, services, and manufacturing. Regionally, the major factors are manufacturing, Navy and Marine payrolls, tourism, and agriculture.

Within and adjacent to the Master Plan area the major economic activities include shipbuilding; shipping; commercial and sport fishing; manufacturing; air transporations; tourism and recreation; retail commercial trade; and military training, supply, repair, and other operations.

GROWTH INDUCEMENT

Population increases for the Master Plan area and surroundings are anticipated to be slight in the near future as well as in the long term. Areas around the North Bay will show relatively little population increase in the near future, mostly by redevelopment and fill-in development. The South Bay will grow at rates varying with economic conditions and the removal of development constraints including those in South County and with increasing emphasis on the border area. Long-range population forecasts for the growth of the five incorporated cities surrounding the Port District indicate population increases. Since residential use is not permitted on tidelands none of the population increase itself will be on Port District jurisdiction.

Projected smaller household sizes, increasingly restrictive land use economics, rising local property values, and anticipated increased costs of energy and transportation all influence the rate of population growth for the area surrounding the Master Plan area. As population gradually increases, the supply of low and moderate income housing may not be sufficient by meet demands. New housing may be developed in the city areas adjacent to Port tidelands, but land use economics will create pressure within communities to replace low or middle income housing with moderate to high income housing. The high cost and limited availability of land may induce medium to high density development replacing lower density single-family units in some areas.

Population projections for the five cities surrounding the Master Plan area have been developed by the Comprehensive Planning Organization in the Series IV Regional Growth Forecasts: 1975-95 (CPO, 1978h).

*See also discussion in Summery Section on page 4 on public works financing from tenant lease revenues rather than from property taxes.

Population projections by CPO indicate that all cities project a 20 year growth of 70-100%. Additional residential units will be completed and occupied in older areas of the city of San Diego, such as the Centre City Development area. Declining family size projected for many areas could, however, result in a loss, rather than a net gain in overall population, particularly outside the urban core.

North Bay Planning Districts are already substantially developed, as are the surrounding residential and commercial areas. There have been recent increases in one person households in North Bay Planning Districts which are responsible for reductions in average family size and for lowering of population estimates.

South Bay Planning Districts include large vacant or underdeveloped areas available for housing construction. Growth in the areas surrounding these Port Planning Districts may be expected. Only the City of Chula Vista has additional room for expansion into the back country. Most of the City of Chula Vista's population growth will likely occur as a result of annexation and/or development of rural, undeveloped lands. Further, as pointed out in the Socio-Economic Factors Report, (SDUPD, 1972b):

> A major factor in the south bay's future will be the decision whether to allow urban uses in the Tijuana River valley. Construction of flood control facilities there will precipitate heavy demands for housing and in turn, attract industries, shopping centers, and similar activities. Even without the flood control measures growth in this area will be substantial.

With the exception of the City of San Diego's Centre City Development area and some small sites adjacent to Port tidelands, the general plans of the cities surrounding Port jurisdiction do not show substantial new areas for residential growth near the tidelands, but instead allow gradually increased densities in already existing developed areas. The City of Coronado, has some areas for new housing within the center city grid area. The City of National City is in the process of converting some substandard housing areas to non-residential uses. The general attempt by the cities surrounding the Port's jurisdiction seems to be to reserve bayfront areas for industrial or recreational uses while allowing housing just near enough that such uses would not be incompatible with residential activities.

The Port's Master Plan area includes existing support facilities such as public services and commercial centers which could affect or be affected by growth in the surrounding area. Existing support facilities included within the cities surrounding Port tidelands appear adequate to accommodate estimated population growth projections, but do not appear to have high growth inducing potential for the area. Implementation of the General Plan Housing Elements of the cities surrounding Port jurisdiction may induce population growth. Most of this growth inducement, however, may occur as a result of the provision of visitor accommodations and new commercial operations rather than new housing, and may increase the demand for supporting public services and infrastructure. It is primarily in this respect that growth inducement from Port development may interface with that resulting from residential population increases in adjacent cities.

An increase in tourist related businesses will contribute to the economic growth of the five cities surrounding the Port's Master Plan area, through sales tax revenues, transient occupancy taxes, and spending by employers and employees for payroll taxes and local government services. Such economic growth may induce population growth in surrounding areas. Increased residential density in the Centre City Development area, the City of Coronado, and the National City-Chula Vista area may result from the development of lower and middle income housing projects. This increase in housing density may induce more families to remain in these areas rather than to seek affordable housing elsewhere.

Visual Quality

VISUAL APPEARANCE

The visual quality of San Diego Bay constitutes an important and attractive resource within the Port's jurisdiction. The 1972 Master Plan (SDUPD, 1972d), specified in Section VIII of the Planning Goals that:

> "Views should be enhanced through the preservation of panoramas, accentuation of vistas, and shielding of the incongruous and inconsistent."

The overall visual image and character of San Diego Bay and adjacent areas convey an attractive impression. The aesthetic appeal of San Diego Bay and surrounding areas have long been one of the area's greatest assets. Overall, the attractiveness of the area seems to be based upon unique topographic features, including adjacent uplands; encircling hills on three sides; and the southern orientation of the Bay entrance to the Pacific Ocean. These features convey a pleasing arrangement which blends with other topographic forms including the 300 to 400 foot high Point Loma peninsula; the curving narrow Silver Strand; ocean and bay views available throughout the area; and various mountains, mesas, canyons, and gentle river valleys in the background. As summarized in the Port District Appearance, Master Plan Revision Program (SDUPD, 1972c), in part as follows:

> "There is a sense of the whole. From anywhere on tidelands the major landmarks, such as Point Loma and Coronado Bridge, can be seen. Loss of orientation is virtually impossible. Although the tidelands area is fractionalized into districts, there are always the predominantly unifying factors of the bay itself, the ever visible highlands, and, to a lesser extent, the transportation artery around the bay."
>
> "The same visible factors provide a sense of place. The hills gently enclose. They do not forbid, but comfort. The bayshore provides a unifying band around which activities flow. The bay itself is an identifying focal point."

In the San Diego Bay region the visual orientation is very strong in the direction of the Bay itself. Existing open spaces, including vacant land, landscaped areas and other amenities contrast with and complement many of the surrounding residential, commercial, industrial, and recreational uses.

Prominent points of interest or landmarks, which dominate the visual appearance of San Diego Bay and adjacent areas, include the San Diego/Coronado Bay Bridge; the downtown San Diego skyline; the Hotel del Coronado and the Coronado Shores condominiums on the Coronado peninsula; the Port's Tenth Avenue Marine Terminal and National City Marine Terminal and container crane; the marine industrial areas, particularly the National Steel and Shipbuilding Company (NASSCO); and the Point Loma peninsula. These features provide a variety of interesting and scenic vistas and are visible from many points throughout the San Diego Bay area.

Visual qualities which characterize individual Planning Districts throughout the Port's jurisdiction reflect the general or predominant land uses in the particular area. For example, the commercial and recreational facilities, including visitor oriented centers with hotels and restaurants on Shelter Island and Harbor Island, provide an overall varied visual impression, but one which combines with centers of intense use and activity. The areas along the Embarcadero, including Broadway Pier, Sea Port Village, and Embarcadero Marina Park, convey interest and visual diversity as well as a spacing of pedestrian oriented recreational amenities. In contrast, the Port's Tenth Avenue Marine Terminal; the adjacent marine industrial and shipbuilding area; the US Naval Station; and the Port's National City Marine Terminal, reflect the visual characteristics of the unique marine industrial uses which occupy these areas. Further to the south, the Chula Vista Bayfront area represents a combination of industrial and agricultural uses with a rural character.

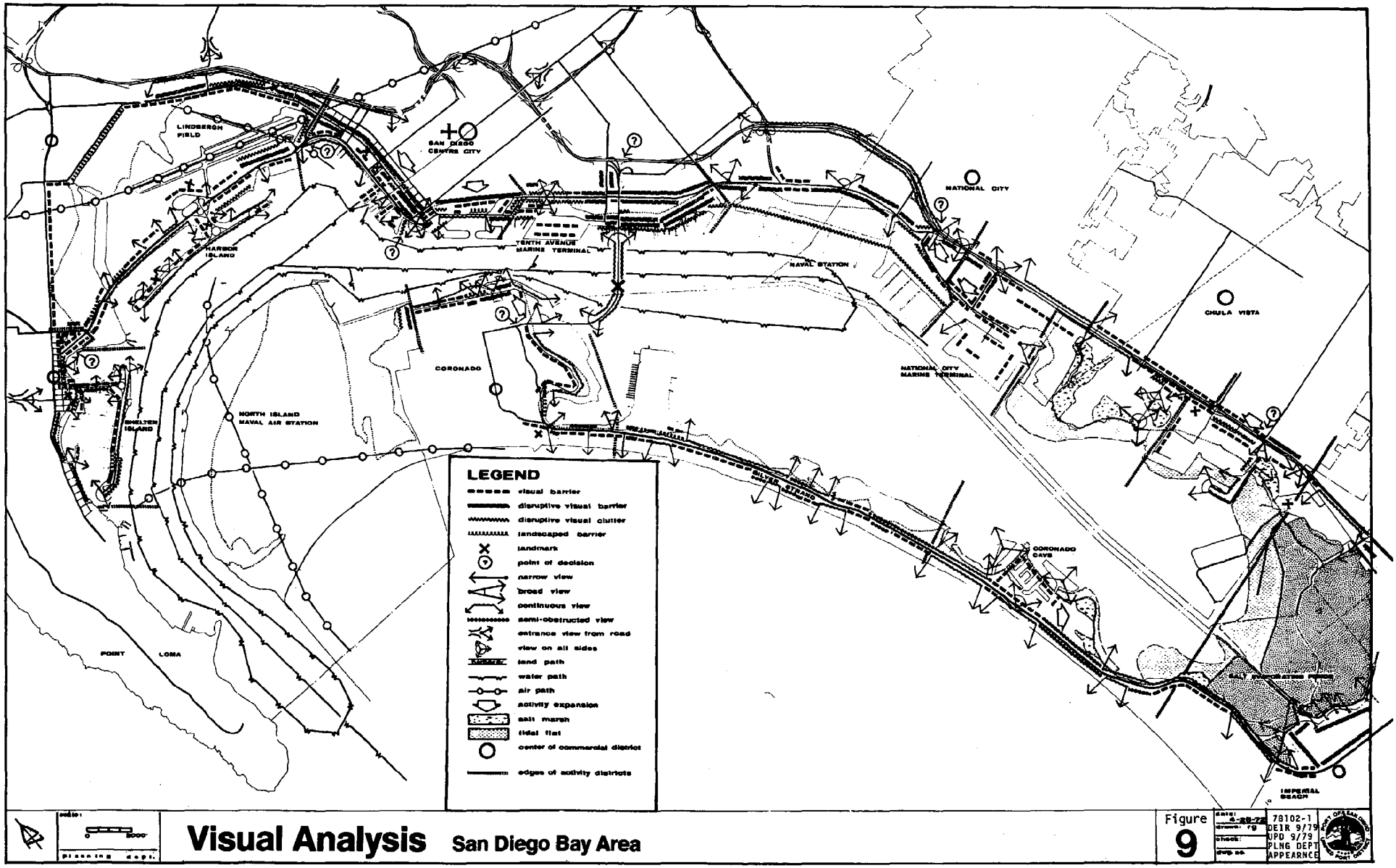
South San Diego Bay conveys an expansive visual impression that is generally featureless, but has added interest because of the large number of waterfowl that inhabit the area. Toward the ocean, the open stretch of the Silver Strand is interrupted only by the Coronado Cays marina residential development, the Silver Strand State Beach in the southern area, and by the Naval Amphibious Base in the northern area. Further north, along Glorietta Bay, past the marinas, the appearance is park-like along the Coronado Golf Course. Outstanding features are the curved San Diego/Coronado Bay Bridge, and the prominence of the condominium high-rise towers. These are located within the City of Coronado, adjacent to the Hotel del Coronado and the downtown area. Further on to the Coronado peninsula, the North Island Naval Air Station and aircraft carrier berthing areas shift the attention to the military uses that exist in this portion of San Diego Bay. The downtown San Diego skyline is separated by the San Diego/Coronado Bay Bridge from the marine industrial character of South Central Bay.

In addition to the physical setting of San Diego Bay, other factors influence the overall visual appearance of Port tidelands and surrounding areas. These other factors include: weather influences, such as the contrast between cloudy overcast and bright sunlit days; the time of year, for example, low winter sun makes viewing in some areas more difficult; and the time of day and day of the week, for example, the weekend concentration of vehicles and utilization of parking lots can dramatically change the visual appearance of an area.

Additional, more detailed, visual descriptions and analyses of several specific areas within the Port of San Diego's jurisdiction are available in many of the EIR's and other reports and documents listed in the References section under the San Diego Unified Port District entries.

AVAILABLE VIEWS

A comprehensive visual analysis of available views in the San Diego Bay area has been conducted and the results are presented graphically in Figure 9. A number of visual elements were analyzed, including continuous, and panoramic views, as well as areas wherein visual disruptions, clutter, or barriers exist.



Visual Analysis San Diego Bay Area

Figure 9

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APPEARNCE

Among the more important existing available views are the numerous areas throughout San Diego Bay, particularly near the shoreline, wherein continuous, broad, or panoramic views exist. Such views are found along the outer edge of the Shelter Island peninsula, and within the Shelter Island Municipal Yacht Harbor and Commercial Basin; along the outer edge of the Harbor Island peninsula and inner shoreline of the Spanish Landing Park area; along the Embarcadero's Crescent Zone, Sea Port Village, and Embarcadero Marina Park areas; along the north Coronado Bayfront shoreline, the Coronado Golf Course, and the San Diego/Coronado Bay Bridge; along several areas within and adjacent to National City and the Sweetwater Marsh complex, particularly the E and F Street marshes, the J Street peninsula, and the Chula Vista Boat Basin area; along the shoreline adjacent to the salt ponds south of the SDG&E Plant in South Bay; along the western shoreline of South Bay and including North Island and East Island on the Coronado Cays; and along both sides of the Silver Strand.

In addition to views on or adjacent to Port tidelands, spectacular bay views exist from higher elevations along portions of Interstate 5 adjacent to Lindbergh Field and to the US Naval Station in National City. A more detailed discussion and definition of the terms used in the visual analysis, is provided in Figure 9, and in the Port District Appearance, Master Plan Revision Program (SDUPD, 1972c).

The visual analysis of San Diego Bay and adjacent areas also included an inventory of major vista points, see Figure 10. These have been classified as: taken of the Bay from uplands; of uplands from the Bay; and of the Bay from major land paths. Panoramic vistas are also highlighted on this illustration. Perhaps most notable are the large number of vistas available from moving vantage points, such as adjacent streets and highways.

Noise Quality

The noise environment within and adjacent to the Port's Master Plan area is complex and attributable to many different sources. Noise is unwanted sound. What is "unwanted" is defined by the individual; it varies widely and is influenced by the relationship to the noise source (i.e., dog owner, neighbor, hunter, motorcyclist, pilot), emotional state and many other factors. Governmental regulations address health aspects.

Noise is generated by aircraft in the vicinity of San Diego International Airport (Lindbergh Field) and North Island Naval Air Station (NAS) on the Coronado peninsula.

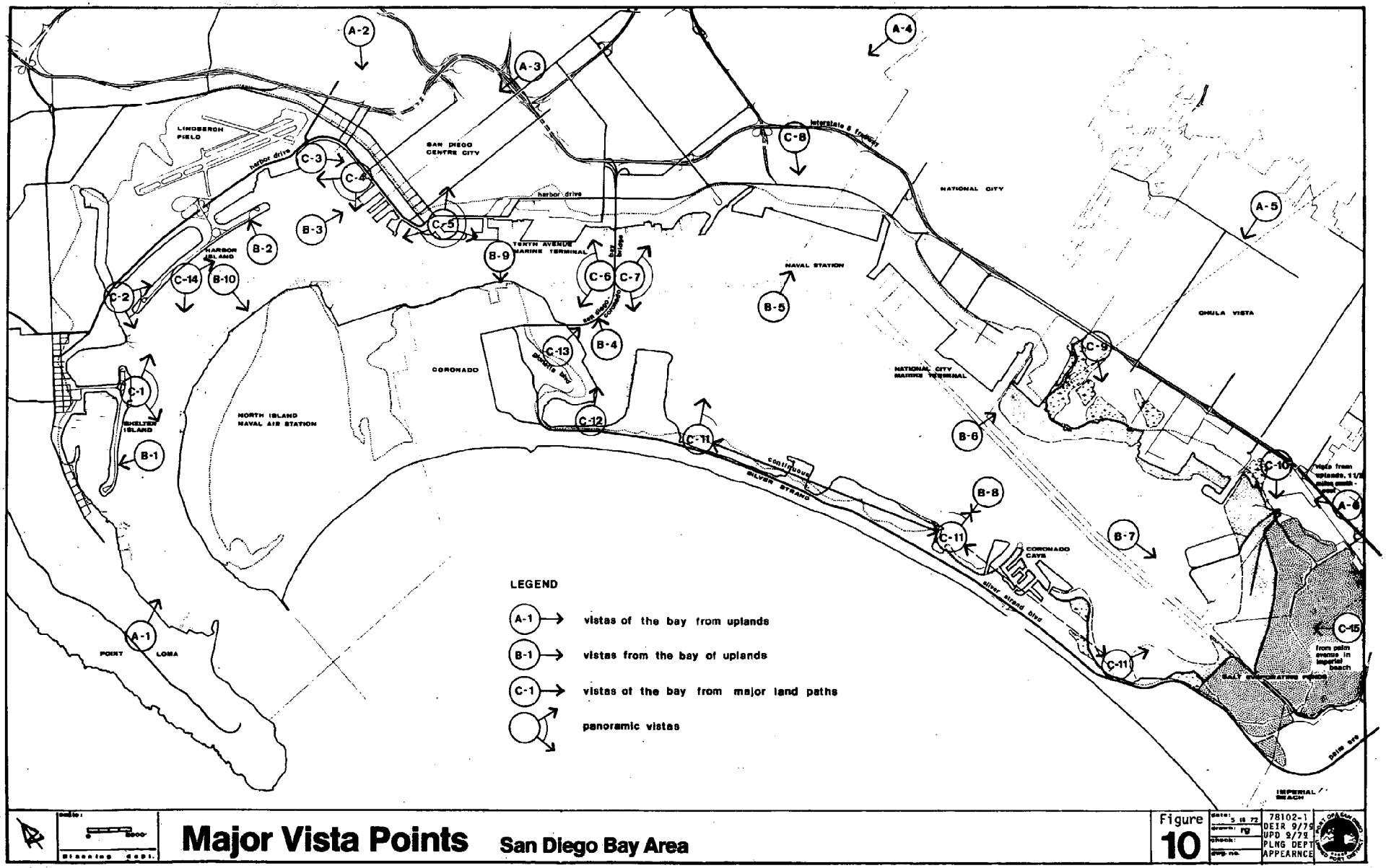
More widely distributed noise sources such as motor vehicle traffic including automobiles, trucks, buses, and motorcycles, exist along streets, highways, and freeways throughout and adjacent to the Master Plan area. Military, commercial, and privately owned vessels which operate in San Diego Bay also contribute to the noise environment. Various railroad activities along the Atchison-Topeka and Santa Fe Railroad (AT&SF) and the San Diego and Arizona Eastern Railway (SD&AE) constitute another noise source.

Fixed noise sources associated with military, industrial, commercial, recreational, and institutional activities also exist within and around the Master Plan area. Short duration, infrequent noise sources such as emergency vehicle sirens, local construction activities, and various community activities including musical events, parades, picnics, carnivals, etc., exist on a temporary basis.

The noise environment is described in a general sense because of the variety, number, and complexity of noise sources involved. More detailed information is provided, however, for aircraft operations and motor vehicle traffic as the primary contributors to the noise environment. Individual reports are referenced to provide information in greater detail for the types of site-specific noise sources.

Noise levels discussed herein are expressed in decibels (dB) usually measured on the A-weighted scale (dBA), which most closely approximates the human hearing response. Decibels indicate a relative measurement of sound energy on a logarithmic scale. An increase of 3 decibels represents a doubling of the sound energy, for example 53 dB represents twice the sound energy of 50 dB, etc. This increase, however, is barely perceptible to most people, who are only able to distinguish sound level changes of approximately 3-5 dB. The actual increase in energy perceived by a person as "doubling the loudness" i.e., twice or half as loud, corresponds to about 10 dB.

For example, because of the logarithmic nature of noise descriptors, the noise from two similar automobiles instead of one (a 3 dB change) is not clearly discernible, while 10 rather than 1 appear to be twice as loud.



Major Vista Points San Diego Bay Area

Figure 10

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PLNG DEPT
APPEARNCE

Aircraft noise levels are expressed on the Community Noise Equivalent Level (CNEL), a continuous 24 hour scale which averages hourly noise events and takes into account all A-weighted sound (dBA) recieved at a point from a noise source which causes noise above some prescribed value. The CNEL scale not only averages noise, but in addition, includes weighting factors which place greater importance on noise generated during evening hours (7:00 PM to 10:00 PM), which is multiplied by a factor of three, and even greater importance upon noise generated during nighttime hours (10:00 PM to 7:00 AM), which is multiplied by a factor of ten.

Motor vehicle traffic noise, boat traffic, railroad operation, and other noise sources, are described for selected locations within and surrounding the Master Plan area. In some cases the noise samples have been statistically analyzed to determine the amount of time the measured noise levels exceeded selected reference points. Some noise levels are presented as a median (middle of the range of noise levels) and are expressed as L50. Other noise samples are averaged to include both day and nighttime noise (similar to CNEL), expressed as Ldn. Noise samples taken for only short time periods are expressed as a representative percentage, for example, 60 dBA L10 describes the maximum noise level (60 dBA) at some location, which is exceeded only 10% of the time over which the noise measurements were taken.

AIRCRAFT OPERATIONAL NOISE

San Diego International Airport (Lindbergh Field)

Noise generated by aircraft operations associated with Lindbergh Field is the result of a variety of circumstances and several influencing factors. An aircraft operation is defined as a takeoff or a landing. As stated in the Study of Noise Control Alternatives for San Diego International Airport Lindbergh Field, (Systems Control, Inc., 1978, p. 2-2) in part:

> "An understanding of the Lindbergh Field noise environment requires knowledge of the interdependent components of that environment. At every airport, runway length, approach area topography, landing aids, weather, aircraft performance, and aircraft operations combine to produce a site-specific situation that results in a unique spatial dispersion of noise energy."

Lindbergh Field is operated by the San Diego Unified Port District. It is used by commercial airlines which use various mixes of nine different aircraft types and by general aviation. The Boeing 727 accounts for about 65 percent of all commercial jet aircraft operations. About 70 percent of all departures are to destinations within 500 miles. About 90 percent of all takeoffs and landings by commercial airliners utilize an eastern approach and a western departure.

Lindbergh Field since 1975 has been under operating limitations from 12:00 midnight to 6:00 AM, as per Port District Resolution No. 75-226. On June 5, 1979, the Board of Port Commissioners extended the time from 11:30 PM to 6:30 AM to become effective September 4, 1979, and provided for 15 minute "grace" periods.

The accumulated noise levels for the calendar year 1978, produced the contours shown in Figure 11a which represent about 82,000 jet aircraft operations by scheduled air carriers. The Port District reports the measured 75 CNEL contour on a quarterly basis to the County of San Diego. The latest available (8/79) 75 CNEL contour data, ending June 30, 1979, is shown in Figure 11b.

The 1978 annual contours associated with Lindbergh Field are illustrated in Figure 11a. The contours were developed as stated in the SCI 1978 report on p. 4-7, in part as follows:

> "Quarterly and annual CNEL contours for Lindbergh Field have been generated using a master set of contours and correlating them with the data from the 12 permanent monitoring sites which are monitored continuously over the year. The 12 sites are located to monitor the 75 CNEL contour. Monitored data from the 12 months ending June 1978 were analyzed and the process of correlation was validated.
>
> Having obtained a validated and accurate 75 CNEL contour, the Integrated Noise Model (INM) was then used to generate this same contour. The prediction of the INM model had an excellent correlation with the verified 75 CNEL contour further validating the accuracy of the noise impact prediction. With minor calibration of the model, the 75 CNEL contour was duplicated within a 1 dB tolerance on the computer.
>
> Exact operational data for the 9 months ending September 1978 were collected from airline schedules and discussions with operations personnel. Based on that data, a projection for the October through December quarter was made to arrive at annualized operational data. Using the calibrated model, contours were then generated."

Noise Control Plan

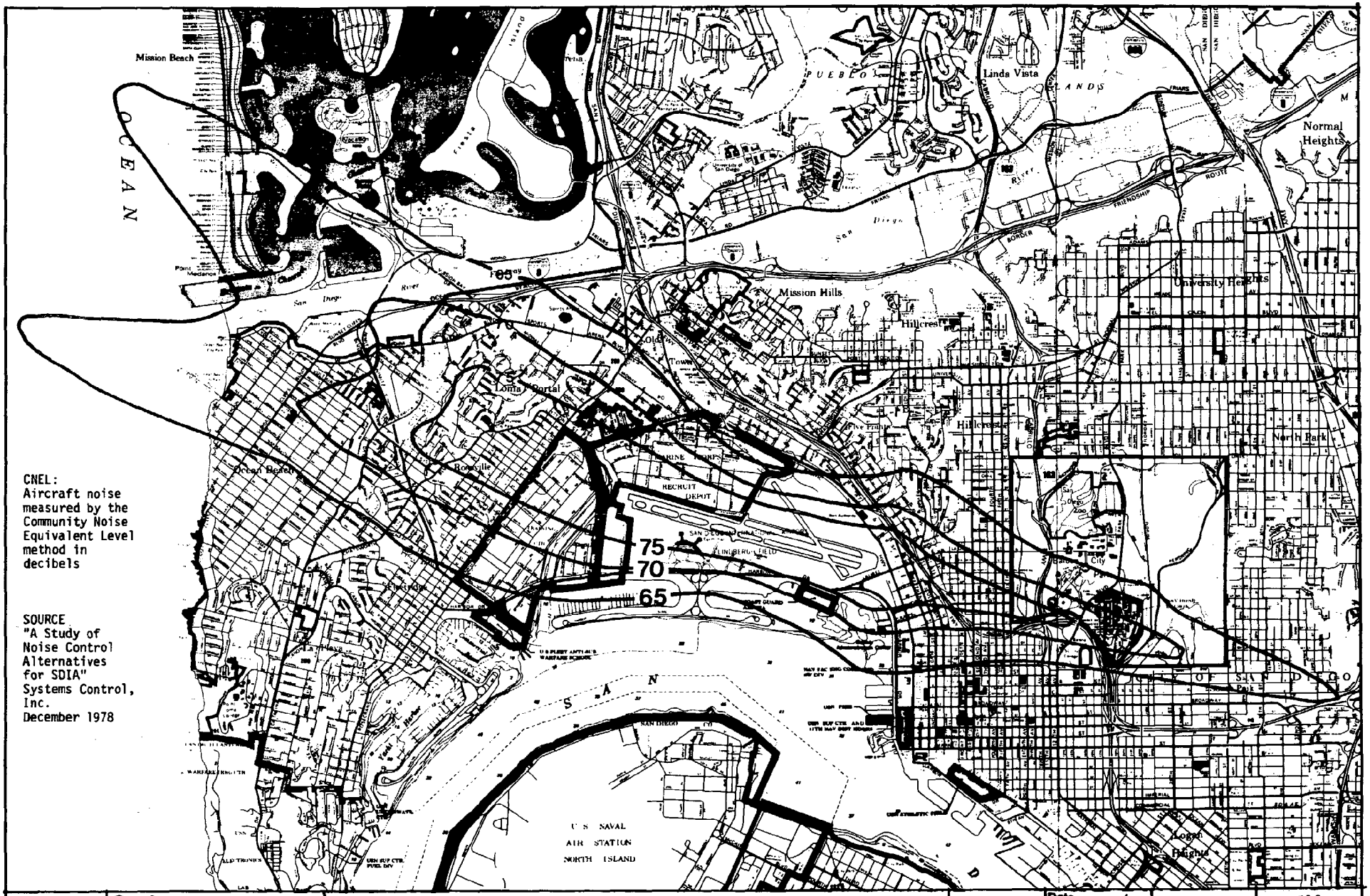
After consideration of the SCI report, the Board of Port Commissioners adopted a Noise Control Plan for Lindbergh Field. The Plan was adopted on December 12, 1978, and contains the following elements:

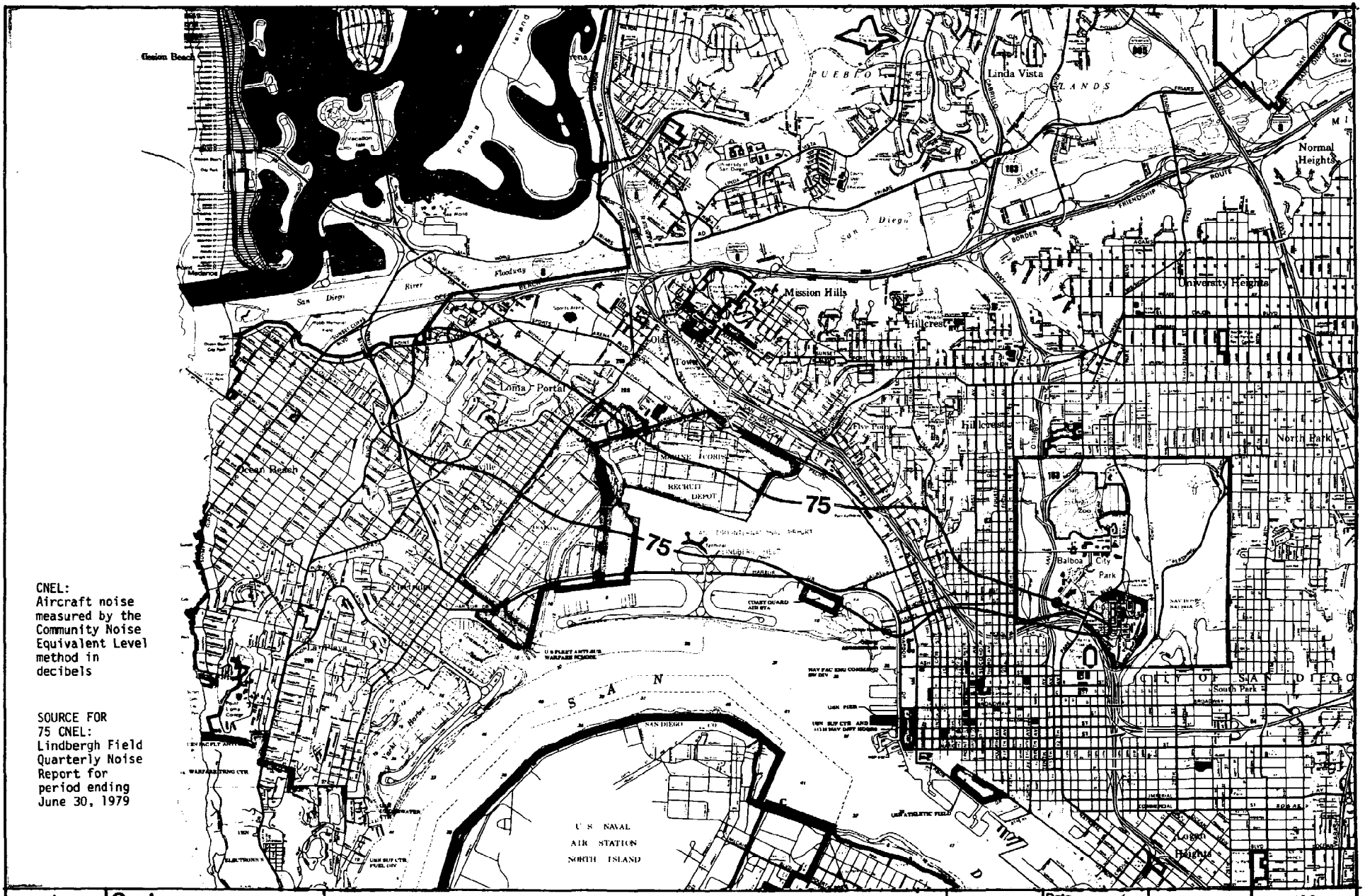
1. Alternatives Affecting Aircraft Operational Procedures and Techniques
2. Alternatives Affecting Land Use
    A. Land Acquisition
    B. Land Use Compatibility
3. Alernatives Affecting Airport Use
    A. Curfew
    B. Type Restriction
    C. Aircraft Scheduling
    D. Jet Aircraft Maintenance Runups
4. Airport Design
5. Noise Abatement Advisory Committee
6. Acceptance of Service by Commercial Air Carriers Not Presently Serving Lindbergh Field
7. Periodic Review of the Noise Control Plan

A discussion of these noise reduction programs can be found in the Port's Noise Control Plan (SDUPD, 1978f), attached as Appendix K. Following is the Plan's discussion for each item above.

1. Alternatives Affecting Aircraft Operational Procedures and Techniques

    Three of the items which the Port District was to consider in the development of its plan were a preferential runway program, alteration of existing arrival and departure paths, and changes in aircraft operational techniques (Items (3), (4) and (5) in Condition 3 of the


Mission Beach
OCEAN
Linda Vista
Normal Heights
Mission Hills
Hillcrest
Old Town
Loma Portal
Ocean Beach
Roseville
Hillcrest
North Park
RECRUIT DEPOT
SAN DIEGO INTERNATIONAL AIRPORT
LINDBERGH FIELD
75
70
65
U S NAVAL AIR STATION NORTH ISLAND
SAN DIEGO BAY
Logan Heights
CNEL:
Aircraft noise measured by the Community Noise Equivalent Level method in decibels
SOURCE
"A Study of Noise Control Alternatives for SDIA"
Systems Control, Inc.
December 1978
Scale
0
5000'
Planning Department
Aircraft CNEL Noise Contours
San Diego International Airport (Base year 1978)
Figure
11a
Date 6/19/79
Drawn Check ICS
Base
No. 0114198
78102-1
DEIR 9/79
UPD 9/79
PLNG DEPT
SCI 12/78
PORT OF SAN DIEGO
UNIFIED PORT DISTRICT



CNEL:
Aircraft noise measured by the Community Noise Equivalent Level method in decibels

SOURCE FOR 75 CNEL:
Lindbergh Field Quarterly Noise Report for period ending June 30, 1979

Scale
0 5000'
Planning Department

Aircraft CNEL Noise Contours
San Diego International Airport [Base year ending June 30,1979]

Figure 11b

Date 6/19/79
Drawn Check LS
Base
No. 0114/98

78102-1
DEIR 9/79
UPD 9/79
VAR. RPRT
6/30/79

PORT OF SAN DIEGO UNIFIED PORT DISTRICT

Variance Decision). The SCI report evaluates each of these items. However, as noise abatement strategies, each of these matters also require consideration of safety issues since they involve the actual flight of aircraft. Decisions regarding operational techniques and procedures utilized by aircraft in flight are under the sole regulatory jurisdiction of the Federal Aviation Administration, and the proprietor of an airport is in no position to substitute its judgment for that of FAA regarding the proper balance between noise abatement and safety considerations in evaluating any one of these items. In view of FAA's sole authority and responsibility for regulatory action in this particular subject area, the plan of the San Diego Unified Port District in respect to these items is as follows:

A. The Port Director is directed to forward a copy of the SCI Report to appropriate officers of the Federal Aviation Administration specifically referencing the information provided in that report regarding preferential runway, flight paths, and operational techniques. In view of the obligations which the Congress of the United States has imposed upon the Federal Aviation Administration through various amendments to the Federal Aviation Act of 1958, directing FAA to take such steps as it deems necessary or desirable to afford relief from noise in respect to those matters under its regulatory authority and control, the Port Director will request FAA to evaluate carefully the information provided in the SCI report to determine what noise benefits FAA can provide to the San Diego community.

B. The Port Dierector is directed to advise FAA and appropriate representatives of the airline industry of the Port District's support for continued research and experimentation regarding aircraft operational procedures which would be effective in reducing noise.

2. Alternatives Affecting Land Use

In litigation now pending in the San Diego Superior Court, certain owners of real property have alleged that the Port District has taken an interest in their property as a result of noise generated by jet aircraft using Lindbergh Field. Such an interest is commonly referred to as an avigation easement. The Port District's response in the litigation has been, among other things, that if the operation of jet aircraft at Lindbergh Field has indeed resulted in the acquisition of an avigation easement for noise in respect of the plaintiffs' properties, then the use constituting such as easement existed for a period more than five years prior to the time that the plaintiffs first filed their action, and has continued since that time. Therefore, it is the position of the Port District that it has acquired all necessary avigation easements for noise by prescription.

The Port District's position regarding its acquisition of a prescriptive easement for noise applies not only to those particular parcels of real property involved in pending litigation, but applies equally

to any and all parcels of real property which may be subject to noise generated by jet aircraft operations at Lindbergh Field.

Because of its past acquisition of these easements, the Port District is in compliance with the California Noise Standards and has a "noise impact area", as defined in the regulations, of zero. However, in previous variance proceedings, the Port District has stated publicly its position that, despite its acquisition of prescriptive easements, it was voluntarily participating in the variance proceedings because the Port District had hoped that the variance proceedings might evolve into a forum in which ideas regarding noise control at Lindbergh Field could be responsibly discussed. It has been expressly agreed by the parties to the past variance proceedings, and confirmed by the administrative law judge in each proceeding, that the Port District's application for a variance was made without prejudice to its position regarding the acquisition of its prescriptive easements.

A. Land Acquisition

Additional land acquisition programs are at least theoretically possible, including acquisition of fee interests rather than easements, and relocation of persons now residing in a noise impacted area. For the time being, the Port District has considered and rejected any program involving acquisition of a fee interest in residential properties for a number of reasons: First, the expense of such a project would be substantial. It is clear that, at least for the present, the citizens of California are interested in reductions, not major increases, in government spending. Second, acquisition of fee interests in residential properties would necessarily be accompanied by a conversion of the land to uses more compatible with airport operations, significantly changing the character of some existing neighborhoods. The Port District has had many indications from residents in adjacent areas that they do not presently favor such a program.

B. Land Use Compatibility

To the extent that zoning or other land use regulation could be used to convert land to uses which the Noise Standards would deem compatible with the operation of Lindbergh Field - or to prevent development of new and additional incompatible uses - such regulatory authority rests primarily with the City of San Diego. The Port District understands that, under compulsion of state law, the City is seeking to enforce some measure of soundproofing for new construction to meet a specified interior noise criterion. However, the City has also continued to permit new high density residential development within the "noise impact area" of Lindbergh Field even though the Port District has advised it of the inconsistency of its actions with the objectives of the Noise Standards, and despite objections by other interested persons and agencies.

The Port District therefore requests that the City of San Diego not make any further discretionary land use decisions which would serve to increase incompatable development within Lindbergh Field's 1986 criterion CNEL contour; and the staff is directed to continue

to encourage the City of San Diego to make land use decisions which are consistent with the operation of Lindbergh Field, and to object to those decisions which are inconsistent with the operation of the airport. In addition, should the City make a firm commitment to pursue aggressively the use of its land use regulatory authority in an attempt to improve materially the existing situation, the Port District remains willing to cooperate in the development and implementation of such a program.

3. Alternatives Affecting Airport Use

Certain items listed in Condition 3 of the Variance Decision come within a general category of regulations commonly known as airport use restrictions, specifically, items: (1) /"curfew"/, (2) /"restrictions to types of aircraft"/, (9) /"aircraft scheduling"/, and (10) /"location and time for engine run-up"/. The plan of the Port District with respect to each of those items is as follows:

A. Curfew

The SCI study shows that expansion of the Port District's existing curfew to the hours of 11:00 p.m. to 7:00 a.m. would have virtually no effect on Lindbergh Field's existing CNEL contours. However, the CNEL methodology itself may or may not be adequate to describe the impact or benefits to be realized from a nighttime curfew. It has been approximately three years since the present curfew was adopted by the Port District, and the Port District believes that it would be appropriate to solicit public comment and hold public hearings in the near future to permit the Port Commissioners to consider the effect of the existing curfew, and to consider whether or not there is any reason why the existing curfew should be expanded, contracted, or otherwise modified.

Therefore, the Port Director is directed to provide proper notice to the public and all other interested parties, and to schedule a public hearing before the Commissioners to take place not later than March 31, 1979, for the purpose of considering possible modifications to the existing curfew.* Further, because of the complexities of the curfew issue, the notice of hearing shall invite all interested parties to submit written comments or proposals regarding modifications to the curfew in advance of the public hearing so that the Commissioners may have an opportunity to review carefully any such submissions.

B. Type Restrictions

The landing permit agreements between the Port District and most of the air carriers now serving Lindbergh Field expire in March of 1982. A few of the landing permits expire prior to that date, but are renewable annually. The staff is directed to prepare an ordinance, to be effective in March of 1982 and upon expiration of the current landing permit agreements, which will thereafter prohibit any person from operating any aircraft at Lindbergh Field which is not certificated under the provisions of Part 36 of the Federal Aviation Regulations.

*This public hearing was held on March 6, 1979.

C. Aircraft Scheduling

Other than the matters discussed elsewhere in this noise plan, the Port District does not presently perceive any significant noise benefits which would be sufficient to justify further restricting the flexibility of the air carriers in the scheduling of their operations.

D. Jet Aircraft Maintenance Runups

The Port District has regulated the time and location for jet engine maintenance runups at Lindbergh Field for more than ten years. The SCI report indicates that no meaningful noise benefit would be realized by further restricting necessary maintenance operations at the airport. Therefore, the Port District will maintain in full force and effect its current regulations and procedures regarding jet enginer maintenance runups.

4. Airport Design

At the time the Port District retained Systems Control, Inc. to analyze various noise abatement alternatives which might be applicable to Lindbergh Field, there had been some public indication that the United States of America might be considering the abandonment of certain property to the north of Lindbergh Field now used for military purposes (the Marine Corps Recruit Depot /"MCRD"/). For that reason, the Port District requested SCI to analyze generally the feasibility of constructing a new runway through MCRD sufficient to serve air carrier aircraft, and to evaluate what noise benefits, if any, might be realized from the construction of such a runway. The SCI report considers two such runways, both on a heading of 300^{0}. One alternative is a runway with a length of 7200 feet, and the other is a 10,000 foot runway. In addition, SCI analyzed two different departure profiles from those runways in order to determine their respective noise impacts.

It is apparent from the SCI report that the construction of a new Runway 30, either 7200 or 10,000 feet in length, could be used only for take-off purposes and would not be available for landings. Thus, the construction of the runway would have no effect on the noise impact to the east of Lindbergh Field presently caused by aircraft landing on Runway 27. (Approximately 90% of the current landing operations occur on Runway 27.) Nor would the construction of the new runway have any effect on the noise impact on the areas to the west of Lindbergh Field which presently occur when conditions require aircraft to land on Runway 9. (Approximately 10% of current landing operations occur on Runway 9.) Further, during that period of time when conditions require aircraft to depart on Runway 9, the construction of the new runway would have no effect on the noise impact which now occurs to the east of Lindbergh Field during those take-off operations.

Nevertheless, it is clear that the construction of this new runway would provide substantial noise relief to the area west of Lindbergh Field, because it would redirect a significant portion of the take-offs which now occur on Runway 27. It appears to the Port District that this noise benefit may be of sufficient magnitude to justify the expense of constructing a new Runway 30.

Unfortunately, the land needed for the construction of Runway 30 is presently being used by the United States Marine Corps, and the Port District has no legal means, by eminent domain or otherwise, to acquire the property without the consent of the United States of America.

Therefore, the Port Director is directed to advise appropriate local, state and federal officials of the results of the SCI study by providing them with a copy of the SCI report, together with any additional information which might better explain the benefits to the public which would be realized by the construction of Runway 30; and the Port Director shall convey the Port District's interest in acquiring this property should it become available at any time in the future.

5. Noise Abatement Advisory Committee

As noted earlier, the Port District is currently a defendant in multi-million dollar litigation initiated by certain persons generally residing in the Loma Portal area of San Diego. The Port District has a public duty and responsibility to defend this litigation, and it has, and will continue to do so. Unfortunately, the existence of litigation substantially inhibits free and open communication between the parties. It now appears that a major segment of these lawsuits will be tried early in 1979, and may well be completed by July of 1979.*

The Port District has previously expressed the view, which it continues to hold, that litigation of this type is not an effective means to achieve noise control, nor is it a proper means to strike the delicate balance between the San Diego's need for an adequate commercial air transportation facility and the desire of persons living around the airport for a reduction of noise levels. Also, it is clear that the proprietor of an airport has limited authority to achieve a reduction of incompatible uses adversely affected by airport operations, and that other entities have the authority and responsibility for taking many of the measures which might result in some noise reduction.

The Port District is, of course, fully aware that there are substantial competing interests involved in the operation of Lindbergh Field which often appear to be irreconcilably in conflict. Nevertheless, if further attempts to improve the noise environment around Lindbergh Field are to be effective, all of these competing interests must be involved in a forum where they can communicate directly with each other. Obviously, such communication can be effective only if each of the interested parties and entities participates in good faith, with a full recognition of the valid and substantial nature of the concerns of each of the other parties, and with a willingness to accept the reality that compromise, rather than "total victory", is the only possible solution.

It may be that the conflicts between these competing interests are so great that they cannot work effectively together. Nevertheless, the potential benefit to be realized from effective communication between these interests is also great, and justifies an effort by the Port District to provide a forum in which those competing interests could work together if they so choose.

*The lawsuits are imminent. They were not tried by July of 1979.

Therefore, and subject to any further advice from the Port District's special counsel for litigation, on July 1, 1979, the Port District will establish a Noise Abatement Advisory Committee to be composed of representatives of all governmental agencies, commercial interests, the airline industry, and citizens groups which have a direct interest in the operation of Lindbergh Field.

The staff is directed to prepare recommendations regarding the composition of this Advisory Committee, as well as any recommendations they may have regarding its procedures.

6. Acceptance of Service By Commercial Air Carriers Not Presently Serving Lindbergh Field

(Note: This section, No. 6, was deleted by Resolution 79-16 on January 16, 1979, see Appendix K.)

In recent months, the current administration and the United States Congress have taken action to begin a process of reducing regulatory restrictions on the operation of the commercial air carriers in the United States. This process has been commonly referred to as "deregulation." As a result of one of the initial steps in this process of deregulation, certain air carriers, not presently serving Lindbergh Field, have been granted authority by the federal government to commence service to San Diego. Those air carriers have now, or are expected shortly to request the Port District's permission to commence scheduled operations at Lindbergh Field.

Deregulation of the commercial air carriers is a significant and substantial change in federal policy. Its effects on airport operations and airport use cannot now be accurately predicted. The ultimate effects of airline deregulation on the noise environment at Lindbergh Field are also extremely difficult to ascertain at the present time, and it may well be that this federal decision to deregulate will eventually require a substantial reevaluation by the Port District of its approach to noise control at Lindbergh Field.

Therefore, the Port District hereby declares a moratorium, effective through December 31, 1979, on the use of Lindbergh Field for scheduled operations by any commercial air carrier not presently serving the airport. *This moratorium is intended to permit the Port District sufficient time to evaluate the possible consequences of deregulation on the approach by the Port District, as proprietor, to noise control at Lindbergh Field. It is anticipated that, upon formation of the Noise Abatement Advisory Committee discussed above, procedures and policies for regulation of the use of Lindbergh Field by new and existing commercial air carriers will be a priority item for discussion, and that appropriate recommendations will be made by staff to the Port Commissioners for their consideration prior to the expiration of this moratorium.

*This moratorium was rescinded by Board Resolution 79-16 on January 16, 1979.

7. Periodic Review of the Noise Control Plan

Striking a proper balance between the desire for noise reduction and assuring adequate commercial air transportation service to San Diego is an extremely delicate process and involves numerous factors which are subject to change. Therefore, it is the intent of the Port Commissioners to review this noise control plan annually, or more frequently in the event that special circumstances should so dictate. The staff is therefore directed to schedule a regular time and meeting for the purpose of the annual review of this noise control plan. In connection with the annual review by the Commissioners, the staff shall prepare and submit a report to the Commissioners regarding the implementation and effects of the noise control plan during the past year, together with its recommendations, if any, for modifications to the plan.

North Island Naval Air Station

Additional noise is generated within the Port's Master Plan area by aircraft operations at the North Island Naval Air Station (NAS), located on the Coronado peninsula. The facility is operated by the US Navy and includes about twenty air squadrons, most of which include anti-submarine warfare aircraft. Facilities at NAS include two runways. Most aircraft landings occur on runway 29 (from the southeast along the Coronado ocean shoreline) and most takeoffs are normally on runway 18 (to the southwest, out over the Pacific Ocean). NAS has 24 hour aircraft operations under normal conditions. Flight patterns are influenced by the close proximity of Lindbergh Field and the Point Loma peninsula. The flight patterns, together with other factors and based on an averaged annual operations level of about 145,000 (about 11,700 per month) produce the CNEL contours shown in Figure 12. Military airports do not operate on schedules as do commercial airports, and large fluctuations from 3,000 to 20,000 air operations per month have occured at NAS and can again take place. The facility also includes aircraft and engine repair operations.

In addition to noise from aircraft operations during flight, noise is also generated by engine runups conducted for the purpose of testing the repaired engines prior to flight. Engines are tested, both in frames (engines in the aircraft) and out of frames (engines removed from the aircraft). About eight engine runups per day occur between 6:00 AM and 10:00 PM. Jet engine runups average about 8 minutes' duration at idle power, and about 4 minutes at higher power settings. Occasional jet engine runups are conducted between 10:00 PM and 6:00 AM to prepare for early morning missions, according to the US Navy (1977c). Propeller aircraft runups average about 2 minutes at full power.

Although no specific estimates of the number of persons, housing units, or residential acreages affected by aircraft noise from NAS have been developed, Figure 12 indicates that NAS aircraft operations and runups affect the noise environment in areas adjacent to several of the Port's Planning Districts. Specifically, the 65 dB CNEL contour extends over adjacent residential areas within the City of Coronado.

The NAS noise setting description is based upon noise surveys conducted at NAS and in Coronado by the Aircraft Environmental Support Office (AESO), report number AESO 311-74-2, (AESO, 1973); the Air Installations Compatible Use Zones

(AICUZ) Study, Naval Air Station North Island, San Diego, California (US Navy, 1977c); and the Aircraft Noise Survey Report, Naval Air Station/Naval Air Rework Facility, North Island, California (AESO, 1978). The CNEL contours illustrated in Figure 12 (AESO, 1978), indicate a reduction of the noise impact area shown on earlier 1973 CNEL contours. As stated on an unnumbered insert page following p. V-1, in the 1977 AICUZ (US Navy, 1977c) study:

> "Preliminary survey work shows a 65 CNEL contour line generally following Balboa Avenue in Coronado.
>
> The 65 CNEL contour curves around in the direction of the street pattern and intersects Ocean Avenue. A monitor at Ocean Avenue and "F" Avenue ... has been recording levels of 65 CNEL. Another monitor at the western end of Ocean Blvd. indicates a noise level of 75 CNEL at the station gate. Other land areas impacted by 65 CNEL or higher are portions of Ballast Point and the air station itself."

The NAS Noise Survey (AESO, 1978) indicates that no portions of Port Planning Districts are within the NAS 65 dB CNEL contour. The Port's Master Plan area is not experiencing noise levels from NAS in excess of those established specifically for residential areas, as specified by the California Noise Standards.

MOTOR VEHICLE TRAFFIC

Noise within and surrounding the Port's Master Plan area attributed to motor vehicle traffic is most pronounced along streets, highways, and freeways which have high average daily traffic (ADT) flow, high percentages of trucks and buses, and high actual speed of travel or steep grades. Areas of acceleration and deceleration, such as on-ramps and off-ramps, also tend to experience increased noise from vehicle traffic.

Transportation Noise Contour maps, which include 1973 noise contours from freeways, highways, railroads, and aircraft including the San Diego Bay area, are available at the Comprehensive Planning Organization (CPO). The contours are based upon the Wyle Laboratories Research Report: Development of Ground Transportation Systems, Noise Contours for the San Diego Region (CPO, 1973).

Vehicle traffic noise along streets and highways is primarily a localized noise source. State law establishes noise limits and time-phased criteria (55 dBA Ldn for residential areas) for vehicles operated on streets and highways. In addition, local agencies have enforcement power regarding such regulations and may, in fact, establish regulations in ordinances for more specific restrictions.

A general relationship between vehicle traffic noise and ADT has been described by the City of National City as referenced in the Marina/Columbia Residential Development EIS (City of San Diego Redevelopment Agency, 1979). Values are expressed in day-night average noise levels (Ldn) for six roadways within downtown San Diego. The relationship between traffic volume (ADT) and noise (Ldn) shows a reasonable level of agreement with actual traffic noise monitoring along major streets in the Marina/Columbia Residential Development area. The San Diego streets had ADT's between 7,600 and 21,300 and corresponding noise levels between 61 and 65 dBA Ldn. These data suggest that traffic noise

CNEL: Aircraft noise measured by the Community Noise Equivalent Level method in decibels.

SOURCE: "Aircraft Noise Survey Report, NAS/NARF, North Island, Calif." Aircraft Environmental Support Office, September 1978.

Scale 0 2000'

Planning Department

Aircraft CNEL Noise Contours

North Island Naval Air Station

Figure 12

Date 6/19/79 | Drawn | Check | Base | No. 9:14:79

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AESO
NAS/NARF

increases by 1 to 2 dBA Ldn for each additional 5,000 ADT. Consequently, a traffic flow of 5,000 ADT which produced 58 dBA Ldn might be expected to produce 68 dBA Ldn with a traffic flow of 40,000 ADT.

As a general rule, traffic noise increases about 3 dBA for every doubling of traffic volume; increases about 6 dBA for every doubling of speed; and decreases about 3 dBA for every doubling of distance from the center line of the nearest street (Fundamentals and Abatement of Highway Traffic Noise; Bolt, Beranek and Newman, Inc., 1973).

Because of the variables which influence vehicle traffic noise, and because of the use of different measurement methods, a description of vehicle traffic noise along streets and highways is provided for only selected locations within and adjacent to the Master Plan area.

Traffic noise within the Shelter Island Planning District has been described in the Shelter Island Precise Plan EIR (SDUPD, 1976e), on p. 33, as follows:

> "Vehicular traffic on the major and collector streets constitutes the predominant source of noise in the area, although traffic on local streets also contributes. The highest noise levels are associated with peak hour traffic. City of San Diego street noise contours show no problem areas."

Harbor Island/Lindbergh Field Planning District traffic noise has been estimated in the North Harbor Drive Noise Impact Report (CALTRANS, 1976c). Adjacent to the US Naval Training Center, traffic noise contours (L10) indicate 75 dBA, 100 feet from the North Harbor Drive center line and 70 dBA, 200 feet from the center line.

Traffic noise estimates (L50) within 100 feet of selected streets in the Centre City/Embarcadero Planning District have been provided in the Embarcadero Development Plan EIR (SDUPD, 1976a). Harbor Drive traffic generates 57 to 69 dBA; Pacific Highway traffic generates 56 to 60 dBA; Laurel Street traffic about 63 dBA; Hawthorn and Grape Streets about 58 dBA; and Ash, Broadway and Market about 56 dBA.

Noise measurements for the area adjacent to the Sea Port Village site in San Diego Embarcadero have been recorded in the Sea Port Village EIR (SDUPD, 1977c). Ambient noise measurements of motor vehicle traffic along adjacent areas of Harbor Drive and Pacific Highway showed an average noise level range of between 54 and 68 dBA.

CLIMATE AND METEOROLOGICAL CONDITIONS

The Port of San Diego's Master Plan area and the surrounding area including the cities of San Diego, National City, Chula Vista, and Coronado share climatic characteristics similar to those of the San Diego coastal area in general. This climatic region is classified as Dry Steppe (BSk) Koppen-Geiger classification system. The climate is characterized by ocean influenced, mild temperatures and light to moderate precipitation primarily during the winter months. The Master Plan area is situated on a semi-arid coastline with a long, dry, and uninterrupted summer season as summarized in the Natural Physical Factors of the San Diego Bay Tidelands (SDUPD, 1972a).

The three north San Diego Bay Planning Districts, which include Shelter Island, Harbor Island/Lindbergh Field, and Centre City/Embarcadero, are subject to minor localized minor climatic influences due primarily to the proximity of these areas to the Point Loma peninsula to the west. The intervening peninsula sometimes diminishes the direct effects of predominantly westerly winds and late afternoon sun in these Planning Districts.

Two meteorological stations exist within and in the Master Plan area; one at Lindbergh Field and the other at North Island NAS. Data gathered from these two stations are used as the basis of the climate descriptions for the Port of San Diego's Master Plan area and surrounding area, see Figure 13.

Precipitation

Average annual rainfall received at the Lindbergh Field 10.4 inches. Average annual rainfall at the North Island NAS is 8.4 inches. About 75% of the precipitation received in both areas falls between the months of December and March.

Heavy fogs occur in the San Diego Bay area approximately 24 days out of every year, most frequently in the fall and winter months; with the majority between November and January.

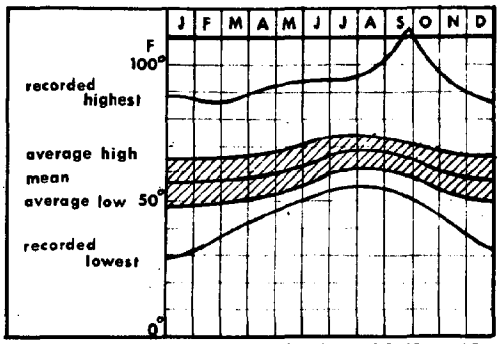
Air Temperature

Air Temperature as recorded at Lindbergh Field has an annual mean of approximately 63°F. Air temperature as recorded at North Island NAS at the Fleet Weather Facility has an annual mean of 62°F. Coldest temperatures (45-60°F) generally occur in January and the warmest temperatures (60-75°F) in August and September. In general, temperatures within the San Diego Bay immediate area are more moderate than the surrounding upland areas in general.

Wind Conditions

The most characteristic feature of wind conditions in the Port of San Diego's Master Plan area is the predominant sea-land breeze, which persists as a westerly daytime wind, sometimes countered at night with an eastern land breeze as a result of cold air drainage. The average wind velocity at North Island NAS is 5.5 knots. Average wind velocity at Lindbergh Field is 6.6 knots. The sea-land breeze is less persistent in the winter than in the summer, and strong winds and gales are infrequent except in the early fall and winter, when occasional hot, dry,

TEMPERATURE



source NAS NI, NAS IB, USDC

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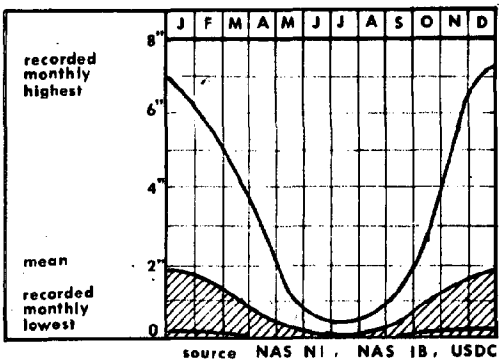
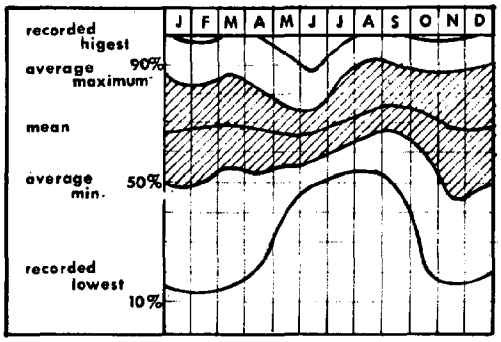


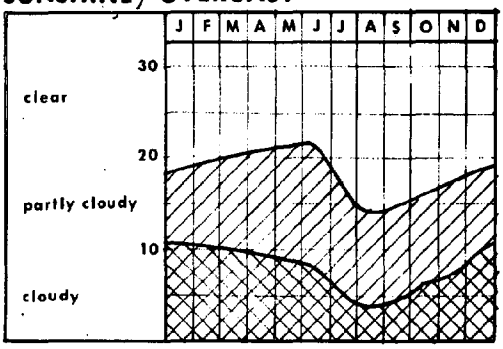
source NAS NI, NAS IB, USDC

HUMIDITY



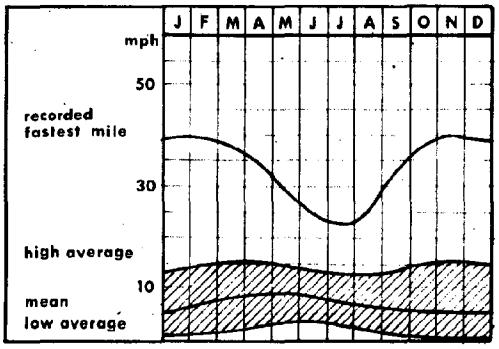
source NAS IB, USDC

SUNSHINE / OVERCAST



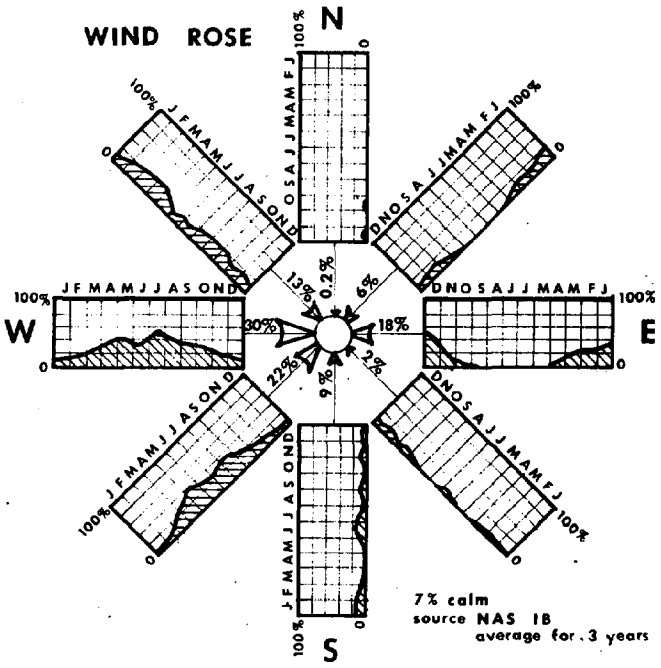
source USDC

WIND VELOCITY



source NAS NI, NAS IB, USDC

WIND ROSE



SOURCES:

Naval Air Station North Island (NAS NI)

Naval Air Station Imperial Beach (NAS IB)

U. S. Department of Commerce (USDC)

scale	**Climate and Meteorology** San Diego Bay Area	Figure 13	Date 6/71 Dwn RG Chk Base No 0114103	78102-1 DEIR 9/79 UPD 9/79 7563-25 FEIR 8/76
planning department				

(Santa Ana) winds blow from the east with great force. High temperatures are often accompanied by very low relative humidity, often below 20%.

AIR QUALITY

The Master Plan area in general experiences fewer air quality impacts than do the areas surrounding San Diego Bay, particularly inland foothill areas. This is largely because of the existing flat topography immediately adjacent to the central and south bay Planning Districts and the open ocean exposure to prevailing westerly winds, and the absence of major air pollutant emission sources to the west. The Master Plan area is situated in the western portion of the San Diego Air Basin, which includes the western two-thirds of San Diego County. This area has been designated as an Air Quality Attainment Maintenance Area by the California Air Resource Board. Project proposals within an Air Quality Attainment Maintenance Area must be evaluated as to their influence on control strategies to obtain and maintain established standards for major air pollutants.

Existing commercial and industrial vehicle traffic and activities on tidelands are the primary contributors to air emissions which define the air quality environment in the Master Plan area. Previously the Port District has submitted to the Comprehensive Planning Organization (CPO) the existing adopted Master Plan land use designations. The various general land uses were then subsequently used by CPO to assist in the determination of activity center data and related emissions projections during the development of the San Diego Air Quality Maintenance Plan (AQMP) (CPO, 1978j). The intensity and distribution of various land uses designated in the Port's Master Plan have only changed negligibly since the land use designation information has been submitted to CPO and, therefore, the various emission products for proposed Port developments have already been incorporated into the AQMP. The objectives of the AQMP are to achieve and maintain air quality standards throughout the San Diego Air Basin. The existing and proposed land use and resulting vehicle traffic circulation resulting in air emissions are fully accounted for in the AQMP projections.

The AQMP also accounted for air emissions for specific activities, anticipated to develop as allowed under various land use designations, using the Regional Emissions Trends Projections.* Development assumptions using these projections identify five major Emission Source Categories including;

- -Process Losses
- -Fuel Combustion
- -Air, Water, Rail Transportation
- -Motor Vehicles
- -Miscellaneous

and corresponding Activity Indicator Assignments based upon:

- -CPO Series IV B, Employment and Population Data
- -California Department of Motor Vehicles Registration Projections
- -CALTRANS Transportation Models ADT and BMT Data
- -CPO Regional Energy Plan Gasoline Comsumption Data
- -CPO SANPAT Annual Operations Data
- -SDG&E Energy Sales and Requirements Forecasts

* See Appendix C.

Temperature Inversions

The San Diego area in general and the San Diego bay and surrounding vicinity to a lesser extent, frequently experience strong temperature inversions together with light wind conditions in an easterly direction that are conducive to the concentration of air pollutants. Data from North Island NAS indicates that the base height of inversion (warm air) layers, which are about 1,500 feet above sea level or less, occur at a frequency of at least 18% of the time during the spring and summer months and no more than 16% of the time during the fall and winter months. The annual frequency of inversion layers with bases below 2,500 feet is 77% for the early morning period and 63% for the afternoon period. The annual average height is about 1,340 feet above sea level. The air pollution potential during the winter and spring months is generally lower than during the summer and fall months due to the high westerly wind velocities which tend to reduce the probability for temperature inversions. In general the San Diego area has a greater frequency of occurrence of temperature inversions than either Los Angeles or Orange County (US Department of Commerce, 1978).

Air emission sources within and surrounding the San Diego Bay area have been described in summary in the San Diego Harbor Main Channel Dredging Project EIS (USACE, 1975) in part as follows:

> "Because of the extensive vehicular traffic and industrial and commercial activities that are concentrated around the bayshore, the bay area is probably one of the most important sources of smog in the county. The major sources of air pollutants are industrial, commercial and residential activities, motor vehicles, and aircraft. It is estimated that seventy to eighty percent of the air pollutants are discharged from automobiles. Air pollutants discharged from boats and ships are not of sufficient magnitude to be considered a significant source. The major emissions are hydrocarbons, oxides of nitrogen, oxides of sulfur, carbon monoxide, and particulates."
>
> "The concentration of air pollutants is dependent upon the amount and rate of discharge into the air, and upon the rate of dispersion and mixing of the contaminants with clean air. Mixing is greatly inhibited by calm air conditions and the presence of temperature inversions that restrict circulation. Adverse meteorological conditions occur most frequently during summer and early fall. After sea breezes that occur near the coast are particularly effective in dispersing air pollutants. For this reason there are relatively low smog concentrations in the immediate vicinity of the bay."

Air Quality Monitoring

No specific air quality monitoring programs nor quantitative analyses have been conducted within the individual Planning Districts of the Master Plan area. The San Diego County Air Pollution Control District (APCD) operates air quality monitoring stations in close proximity to the Master Plan area in downtown San Diego east of the Centre City/Embarcadero Planning District and in South Bay east of the Chula Vista Bayfront Planning District.

Air quality monitoring data obtained from the downtown San Diego and Chula Vista stations cannot be used effectively to evaluate the local air quality characteristics of the Planning Districts to the west surrounding San Diego

Bay, since local emissions of primary pollutants, primarily produced by motor vehicle traffic are significantly dispersed within a few thousand feet of the emission source. Such is the case particularly for the Coronado Bayfront Planning District, the Silver Strand South Planning District, and to some extent for the Southbay Saltlands Planning District. Furthermore, air pollutants emitted within and adjacent to the Master Plan area are usually transported rapidly from their point of origin by westerly winds to upland areas further inland and to the east. Data from the San Diego downtown station and from the Chula Vista monitoring station are therefore presented for informational purposes only.

APCD monitoring data for the calendar year 1978 is based upon information obtained from the Air Quality and San Diego County, Annual Air Monitoring Report 1978 (APCD, 1979). These data indicated that the San Diego downtown station exceeded standards on 16 days for carbon monoxide and exceeded the standards for nitrogen dioxide on 9 days. Standards for photochemical oxidant (primarily ozone) were exceeded on 39 days. Particulate matter levels exceeded standards on 17 days. Monitoring data for 1978 compared to 1977 data shows a slight increase (38 to 39) in the number of days oxidant standards have been exceeded; a slight decrease (from 9 to 3) in the number of days the standards for nitrogen dioxide have been exceeded; and a slight increase (from 12 to 17) in the number of days the standards for particulate matter have been exceeded, see Figures 14 and 15.

By contrast, data from the Chula Vista Air Quality Monitoring Station indicates that the station exceeded standards on 8 days for carbon monoxide, and did not exceed standards for nitrogen dioxide. Standards for photo chemical oxidant (primarily ozone), however, were exceeded on 51 days as compared to 39 days for the San Diego downtown station. Particulate matter levels did not exceed standards. Monitoring data for 1978 compared to 1977 data shows a decrease (from 52 to 51) in the number of days photochemical oxidant standards have been exceeded; a decrease (from 2 to 0) in the number of days the nitrogen dioxide standards have been exceeded; and a decrease (from 2 to 0) in the number of days the standards for particulate matter have been exceeded.

High oxident values typically occur in March and April, and in September and October. Concentrations of carbon monoxide, nitrogen dioxide, hydrocarbons, and suspended particulates are usually highest during the fall and winter months.

San Diego Bay Area Air Quality

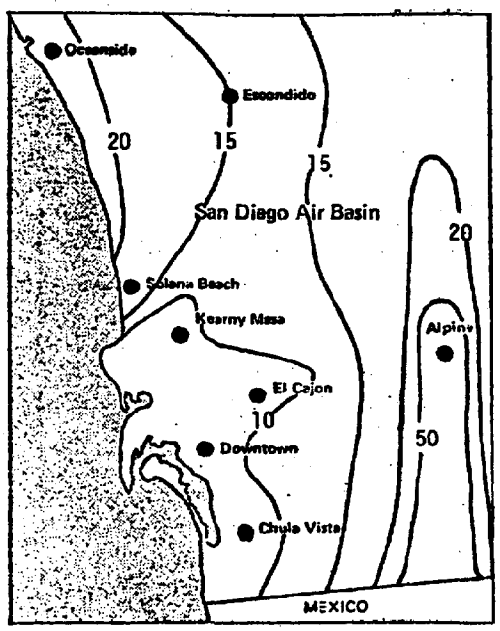
It is unlikely that ambient air quality within and adjacent to the westernmost Planning Districts within the Port of San Diego's jurisdiction is worse than that monitored at either the downtown San Diego station or the Chula Vista station. On the contrary, because of the proximity to open coastal waters, the prevailing westerly winds, and the absence of major air emission sources upwind, it is likely that ambient air quality at least in the Planning District areas on the western side and northern side of San Diego Bay is better than that experienced either in downtown San Diego or in Chula Vista.

The predominant existing source of air pollution within and adjacent to the Port's Master Plan area results from motor vehicle traffic. Major traffic

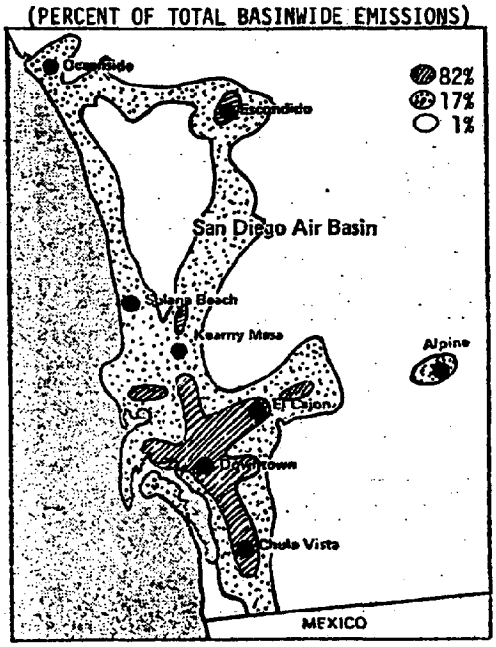
generators such as the San Diego-Coronado Bay Bridge and the Silver Strand Highway concentrate and focus approximately 35,000 vehicles per day and 28,000 vehicles per day respectively into these areas along the western periphery of the bay. Although heavy vehicle traffic also occurs to the east of the San Diego Bay area along I-5 and adjacent on-ramps and off-ramps, the prevailing westerly winds rapidly disperse and transport these air emissions further to the east away from the San Diego Bay area.

Other minor sources of air pollution include ship and boat exhaust emissions and fuel transfer vapors from various fuel docks in the Master Plan area. Ship and boat exhausts are under federal and state regulations and emission controls are installed at the point of manufacture. A total of 12 fuel docks are located in the Master Plan area. All are regulated by the San Diego APCD under existing "Permit to Operate" standards.

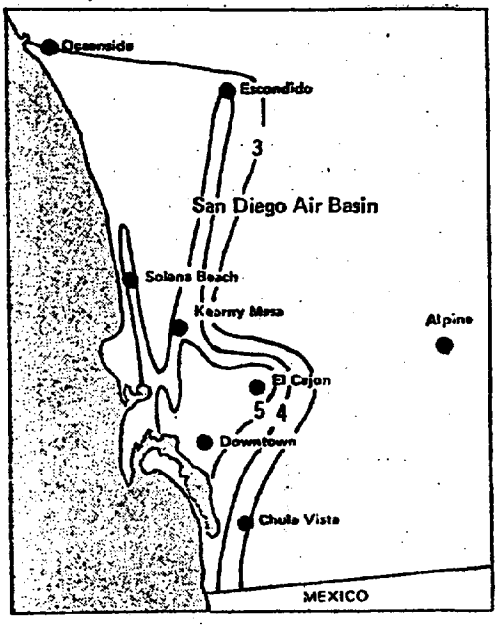
DAYS OF VIOLATION - FEDERAL 0.12ppm
PRIMARY OZONE STANDARD - 1978



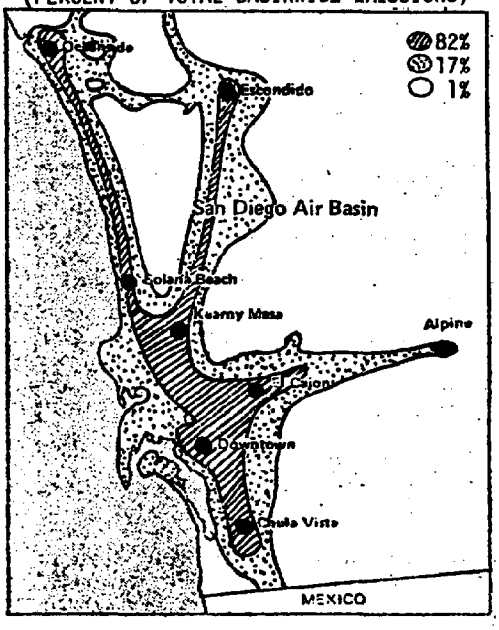
REACTIVE HYDROCARBON EMISSIONS
(PERCENT OF TOTAL BASINWIDE EMISSIONS)



NITROGEN DIOXIDE
ANNUAL AVERAGE-1978
(PARTS PER HUNDRED MILLION)



OXIDES OF NITROGEN EMISSIONS
(PERCENT OF TOTAL BASINWIDE EMISSIONS)



SOURCE: Air Quality in San Diego County
Annual Air Monitoring Report 1978: APCD

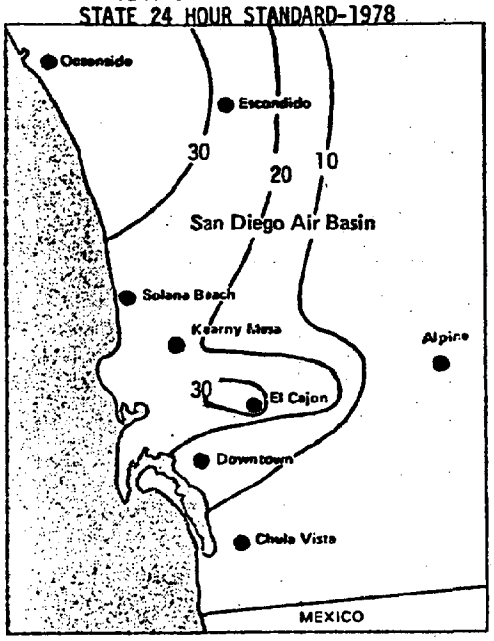
Air Quality
Geographical Distribution
Ozone, Hydrocarbon, Nitrogen Emissions

Figure **14**

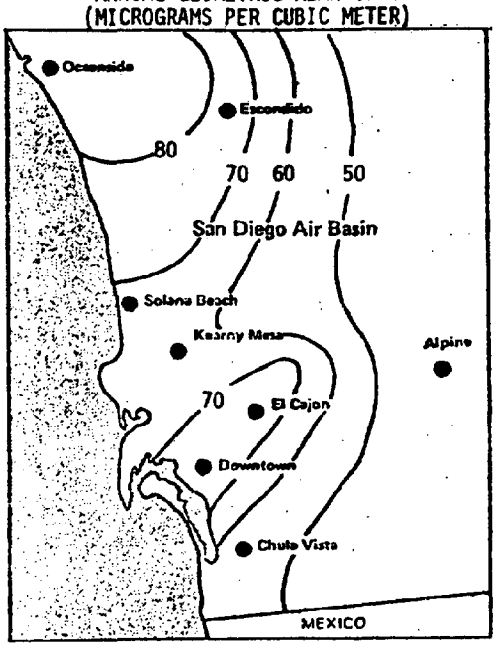
Date
Drn Chk
Base
No

78102-1
DEIR 9/79
UPD 9/79
APCD RPRT
9/78

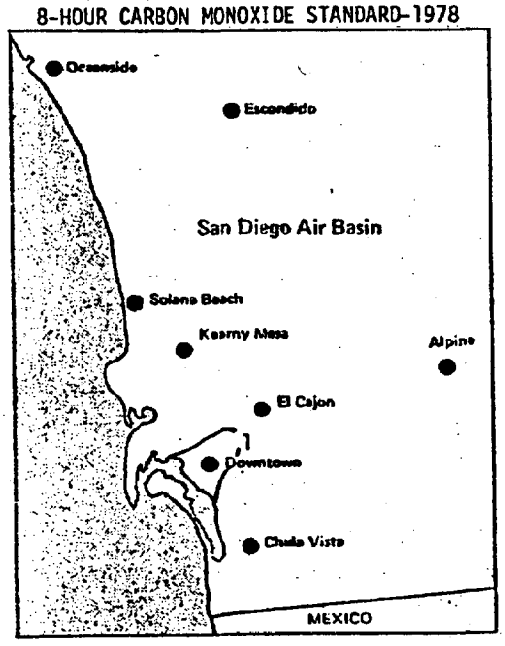
PARTICULATE MATTER
PERCENT OF SAMPLES EXCEEDING
STATE 24 HOUR STANDARD-1978



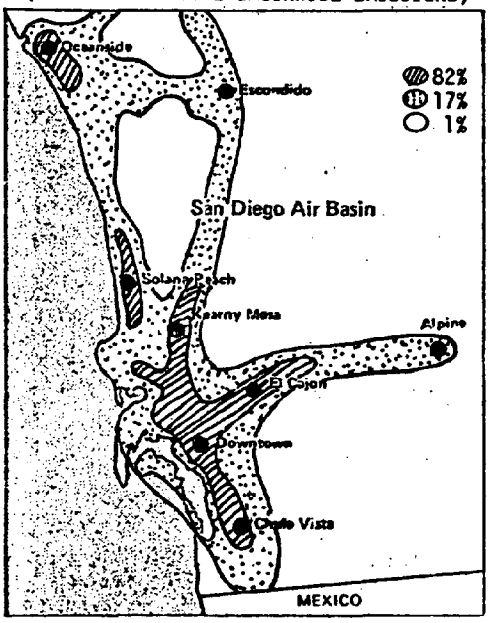
PARTICULATE MATTER
ANNUAL GEOMETRIC MEAN-1978
(MICROGRAMS PER CUBIC METER)



DAYS OF VIOLATION - FEDERAL
8-HOUR CARBON MONOXIDE STANDARD-1978



CARBON MONOXIDE EMISSIONS
(PERCENT OF TOTAL BASINWIDE EMISSIONS)



SOURCE: Air Quality in San Diego County
Annual Air Monitoring Report 1978: APCD

Air Quality
Geographical Distribution
Particulate Matter, Carbon Monoxide Emissions

Figure **15**

Date
Drn Chk
Base
No

78102-1
DEIR 9/79
UPD 9/79
APCD RPRT
9/78

Energy

The Port of San Diego Master Plan area and surrounding area share in common with the San Diego region the lack of any major naturally occuring, conventional energy resources. The Master Plan area as with the rest of San Diego County, has nearly all of its primary energy needs met by other areas. Approximately 43% of this imported energy is used directly in electrical power generation. The primary reference source for the information contained in this section is from the County of San Diego General Plan, Energy Element (County of San Diego, 1977).

About 23% of all of the region's energy supply is imported as oil. The majority of the energy used in electrical power generation is based upon imported residual fuel (oil).

About 31% of the imported energy into San Diego County is in the form of natural gas. About 11% of that amount is used for electrical power generation, the balance going for other uses, particularly light industries, commercial establishments and residences.

Gasoline and related fuels account for 32% of the energy supply for the county and all is used for purposes other than electrical power generation. The primary use of gasoline and related fuels as an energy supply is for the private automobile.

Dependence on the automobile and on electrical generation places residual fuels (oil) and gasoline and related fuels in prominance in terms of energy demand. Existing energy consumption trends provide few choices for energy supply, and any significant decrease in one of the two main energy sources, such as oil, could have significant impact on the economy of the San Diego region in general and upon the Port of San Diego's Master Plan area surrounding San Diego Bay in particular. Electrical power generation and transportation, which depend to a greater extent than others upon oil, and which combined equal more than 70% of San Diego County's total energy consumption, would be most impacted.

Future electrical generation capacities and natural gas supplies for proposed tideland development are available, but depend upon regional, state, and national energy policies on fuel resource utilization.

ENERGY CONSUMPTION

If existing energy consumption trends continue, the energy use growth rate in San Diego County in general would remain at approximately 3.5% per year, and annual natural gas consumption would reach about 4.9 billion therms (1 therm equals 100,000 BTU's) by 1985 and about 8 billion therms by the year 2000. This consumption rate is comparable to the national average only because the county's population growth rate exceeds most areas in the nation, even though the county-wide per capita consumption rate is about 20% less.

Per capita energy consumption in the Port of San Diego's Master Plan area and in the immediate surrounding area is comparable to that experienced throughout the

region, but the population growth rate of the area surrounding the Port's Master Plan area is considerably less than the county-wide average. Energy use growth rates in the Master Plan area and surrounding areas would, therefore, be expected to be essentially less than those experienced county-wide.

TRANSPORTATION USES

Heavy dependence, county-wide, upon private automobiles is evident both in the energy consumption attributed to the private automobiles and in the number of private automobiles which travel to and from the Master Plan area and surrounding areas.

A regional network of rail service with inter-connecting bus service could provide significant reduction in existing energy expenditures in the Plan area and in the surrounding area. Although at the present time the Metropolitan Transit Development Board (MTDB) is developing a proposal for such a combined rail service and bus transportation system, some Port District Planning Districts such as the Coronado Bayfront, the Silver Strand South or the Southbay Saltlands Planning Districts, are included in the planning objectives of the MTDB Light Rail Transit Development Plan.

SUPPLY AND DEMAND ASSUMPTIONS

If existing trends were to continue, the projected population and energy use growth rate for the San Diego area in general would necessitate large scale expansion of energy production facilities and/or a much greater importation of energy. The Port's Master Plan area does not include residential uses and the surrounding area is not expected to experience significantly increased population growth rates nor energy growth rates. The Bay area may nonetheless have less energy available due to a future shift in the energy supply distribution mix which may emphasize domestic fossil fuel, imported oil, or possibly nuclear power.

Existing Building Code provisions affect existing and future energy consumption patterns in the Port's Master Plan area. Building Codes apparently require energy saving construction practices, such as building insulation; and in some cases, the use of solar/thermal energy for heating swimming pools and supplementary water heating for residential and commercial applications, rather than natural gas. In addition, voluntary conservation efforts in the residential, commercial, and industrial sectors are being experienced and are anticipated to continue into the future. Lastly, automobiles manufactured after 1985 are assumed to be capable of reaching an average energy efficiency level of 27.5 miles per gallon as a result of the requirements of the Energy Policy and Conservation Act of 1975.

It is anticipated that new developments proposed for the Port's Master Plan area and for surrounding areas will be designed for optimum energy efficiency in accordance with the Energy Conservation Standards for new non-residential buildings, adopted by the State of California Energy Commission on February 6, 1976; and with the Energy Insulation Standards for Residential Buildings adopt-

ed by the State of California, February 22, 1975. These regulations prescribe energy conservation standards for all new residential and non-residential buildings in California. Specifically, the regulations include energy saving designs for lighting, heating, air conditioning, and hot water supply. These regulations encourage the use of solar and/or wind power and other "non depletable" energy sources. The regulations offer the options of utilizing building designs that consume less energy than standard designs. The regulations are currently enforced by local building officials through the building permit process.

Biology

The following description of the San Diego Bay area's biological resources has several objectives: it provides a master environmental assessment and references, describes the existing flora and fauna's environmental setting, and meets the requirements of the California Coastal Act of 1976, Article 3, Implementation; Master Plan, Section 30711(a), which states that a port master plan shall include (3):

> "An estimate of the effect of development of habitat areas and the marine environment, a review of existing water quality, habitat areas, and quantitative and qualitative biological inventories, and proposals to minimize and mitigate any substantial adverse impacts."

BIOLOGICAL SETTING SUMMARY

The following description of the biological setting is based upon references cited herein which describe biological surveys conducted in the terrestrial and the marine environment of the Port's Master Plan area and the surrounding area. The Executive Summary of a Biological Reconnaissance of Selected Sites at San Diego Bay by Lockheed Center for Marine Research (LCMR, 1979) is included as Appendix D-1.

The biological resources of San Diego Bay are closely linked to the physiographic, hydrologic, and water quality characteristics of the bay, summarized as follows:

Physiography

San Diego Bay is crescent-shaped, about 14 miles long, and from 1/4 mile to 2-3/4 miles wide. It covers 18 square miles and contains 300 million cubic yards of water at mean tide.

North Bay extends from the main entrance to the San Diego-Coronado Bay Bridge; Central Bay, from the Bridge to the Sweetwater Flood Control Channel; and South Bay, the remaining area to the south.

North Bay depths generally exceed 30 feet (70 feet maximum). Central Bay depths range from 10-15 feet except for the 30-40 foot deep main channel and berthing areas along the eastern shore. South Bay depths range from 0-8 feet, except for boat channels, 8-20 feet deep.

The bay is an "atypical" estuary because of limited intermittant fresh water input from the Sweetwater and Otay Rivers, from other small watersheds, and from surface runoff. As described by Ford (1968):

> "San Diego Bay is unique among large bays in the United States in that it presently receives minimal fresh water runoff and has a high evaporation rate ... During the summer months, both salinity and temperature in the inner bay are significantly higher than in its outer sections...; during the cooler months they are generally comparable, throughout most of the bay, to values for water on the open coast, although temperatures usually remain somewhat higher in the south bay."

Hydrology/Water Quality

Tides are "mixed" (two daily highs and lows). Average tidal range is 5.6 feet; near the entrance 3.7 feet; and extreme tidal range is 10 feet. The bay tidal prism (volume of water contained between high and low tide horizontal planes) is about one-third of its volume (96,000,000 cubic yards). About 30% of the bay water volume is exchanged per tidal cycle (12.5 hours). Tidal currents are strongest near the entrance and the narrows between the Tenth Avenue Marine Terminal and the Coronado Bayfront. North Bay maximum velocities are 2.9 feet per second (about two miles per hour) on ebb tide, and 2.2 feet per second (about 1.5 miles per hour) on flood tide. Central and South Bay tidal current velocities are much less. South Bay water circulation is generally clockwise.

Dissolved oxygen (DO) ranges from 4-8 milligrams per liter (mg/liter), comparable to many open ocean areas. Since August 1963, when the discharge of municipal sewage and industrial wastes into the bay was terminated, DO has increased. Former algal blooms and sludge layers have disappeared. The high surface to volume ratio of shallow South Bay water also promotes rapid aeration. Water temperatures range from 57-75^{0} F. South Bay sometimes reaches 84^{0} F due to reduced circulation, solar heating, and power plant thermal discharge. Salinities range from 33-35 parts per thousand (o/oo). Heavy rainfall may reduce South Bay salinities to 31 o/oo, while summer evaporation may increase salinities to 36 o/oo.

Moderately high current velocities, two tidal changes per day, and a high ratio of tidal prism volume to bay volume below the tidal prism (about 1 to 3) help to stabilize water temperature, salinity, and high dissolved oxygen levels, all of which contribute to a productive environment for bay marine life. Good water circulation and tidal flushing also provide high nutrient levels essential to larval (just hatched) and juvenile (early stages) marine life.

Habitat/Vegetation Types/Including Rare and Endangered

San Diego Bay is a major and important spawning area for ocean and bay fishes, and the marine and terrestrial habitats are an integral element in the interconnected food web of the adjacent ocean waters. The area contains seven marine and six terrestrial habitat/vegetation types. Habitats categorized by elevation or depth include: terrestrial (above extreme high tide line); intertidal (between tidal levels); shallow subtidal (from mean low tide to 18 feet); and deep subtidal (18-70 feet).

San Diego Bay includes 10,230 acres of open water, 58% shallow subtidal habitat and 42% deep subtidal habitat. The area surrounding the bay (including some areas outside the Port's jurisdiction) includes 3,600 acres of terrestrial and marine intertidal habitat: 1,250 acres of disturbed or landscaped vegetation; 650 acres of mudflats; 350 acres of tidal marsh and salt flats; 200 acres of sandy beach; 950 acres of salt ponds; and 200 acres of native terrestrial plant communities including the Coastal Dune Sand Plant and Maritime Sage Scrub. At least 100 species of marine and terrestrial plants have been identified in the Bay area. Seven rare endangered terrestrial plants occur in the tidal marsh habitat and in the Coastal Dune Sand Plant and Maritime Sage Scrub plant communities.

Animal Life/Including Rare and Endangered

San Diego Bay marine and terrestrial habitats support a wide diversity and high abundance of animals. At least 200 different species of resident or migrant birds use the Bay for feeding, nesting, or resting. More than 60 species of fish and at least 200 species of marine invertebrates, including clams, lobster, crab, shrimp, etc., many of commercial or recreational importance, are found in San Diego Bay. Three rare and endangered birds, including the California least tern, the light-footed clapper rail, and Belding's Savannah sparrow reside in and/or utilize the Bay area.

BIOLOGICAL RESOURCES MAPPING/REFERENCES

The following category descriptions are a guide to information on nine maps entitled Biological Resources, Water/Sediment Quality, covering each of the Port's Planning Districts, see Figures 16-24. Specific references which deal with the location of individual biological resources are indicated by small numbers adjacent to the animal or plant life symbols or habitat vegetation areas. This section provides a detailed description of the interpretation of each of the map symbols for marine and terrestrial habitats and vegetation and for animal life.

Terrestrial Habitats/Vegetation

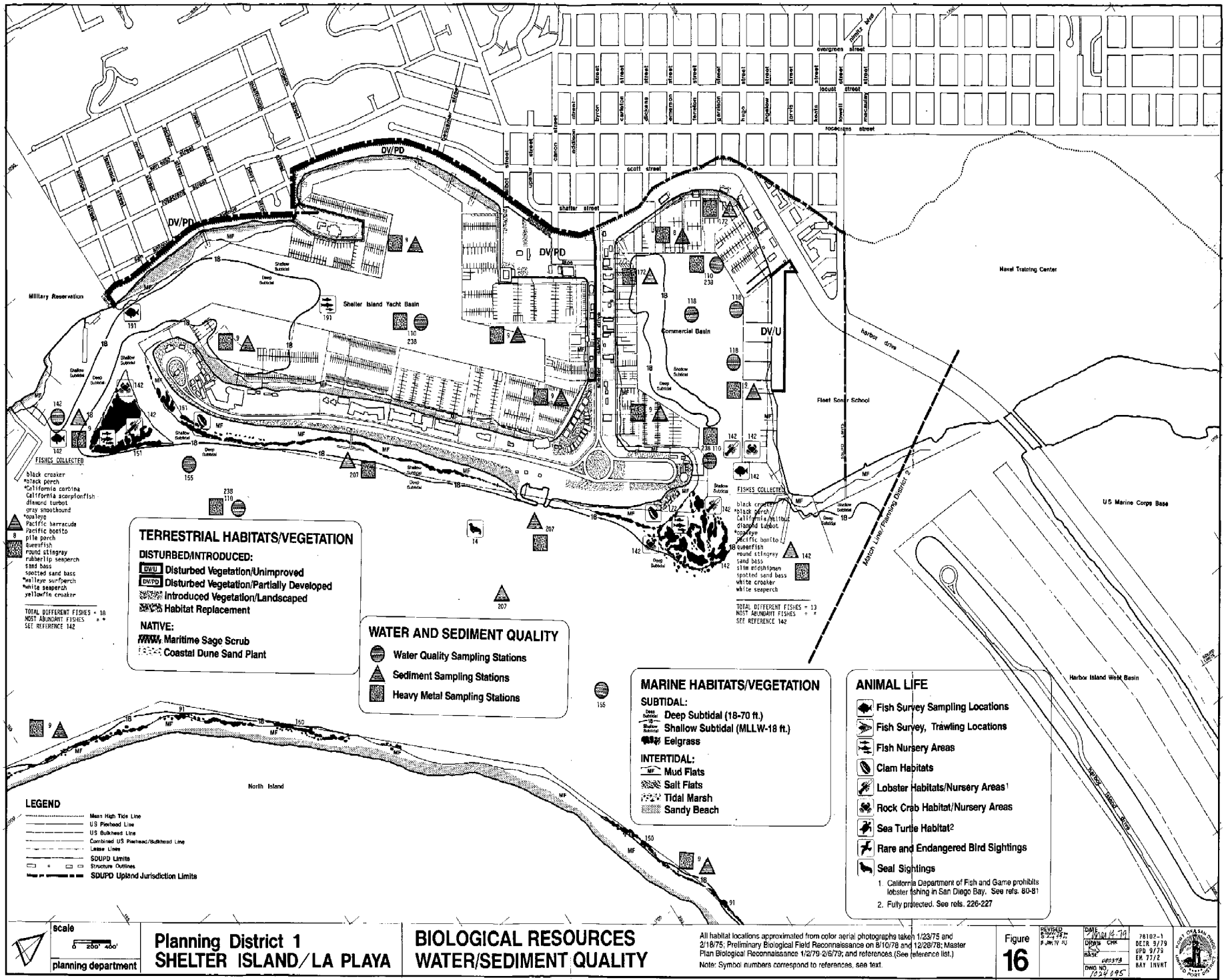
This category of biological resources indicates the location and extent of disturbed/introduced terrestrial habitats and vegetation, and native terrestrial habitats and vegetation. Classification of native habitats and vegetation follows plant community nomenclature of Thorne (1976). Terrestrial habitats/vegetation are herein defined as those which occur above the extreme high tide line.

- Disturbed/Introduced -

This category includes all non-native terrestrial habitats and vegetation which are the intentional or unintentional result of human activities. Although not often apparent, disturbed areas, such as vacant lots, also provide habitat for plants and animals that are well adapted to urban impacted settings.

Disturbed Vegetation/Unimproved: This category includes areas such as artificial fill which may include native plant species; however, the native plant community no longer maintains its integrity. The area may also include a number of different adventitious weedy plant species. The areas are unimproved in that no buildings or other structures are present. Such areas are contrasted with barren areas devoid of vegetation.

Disturbed Vegetation/Partially Developed: This category is similar to the previous one but does include buildings and other structures interspaced with the disturbed vegetation; again, primarily weedy adventitious species.



Planning District 1
SHELTER ISLAND/LA PLAYA

BIOLOGICAL RESOURCES
WATER/SEDIMENT QUALITY

All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/6/79; and references.(See reference list.)

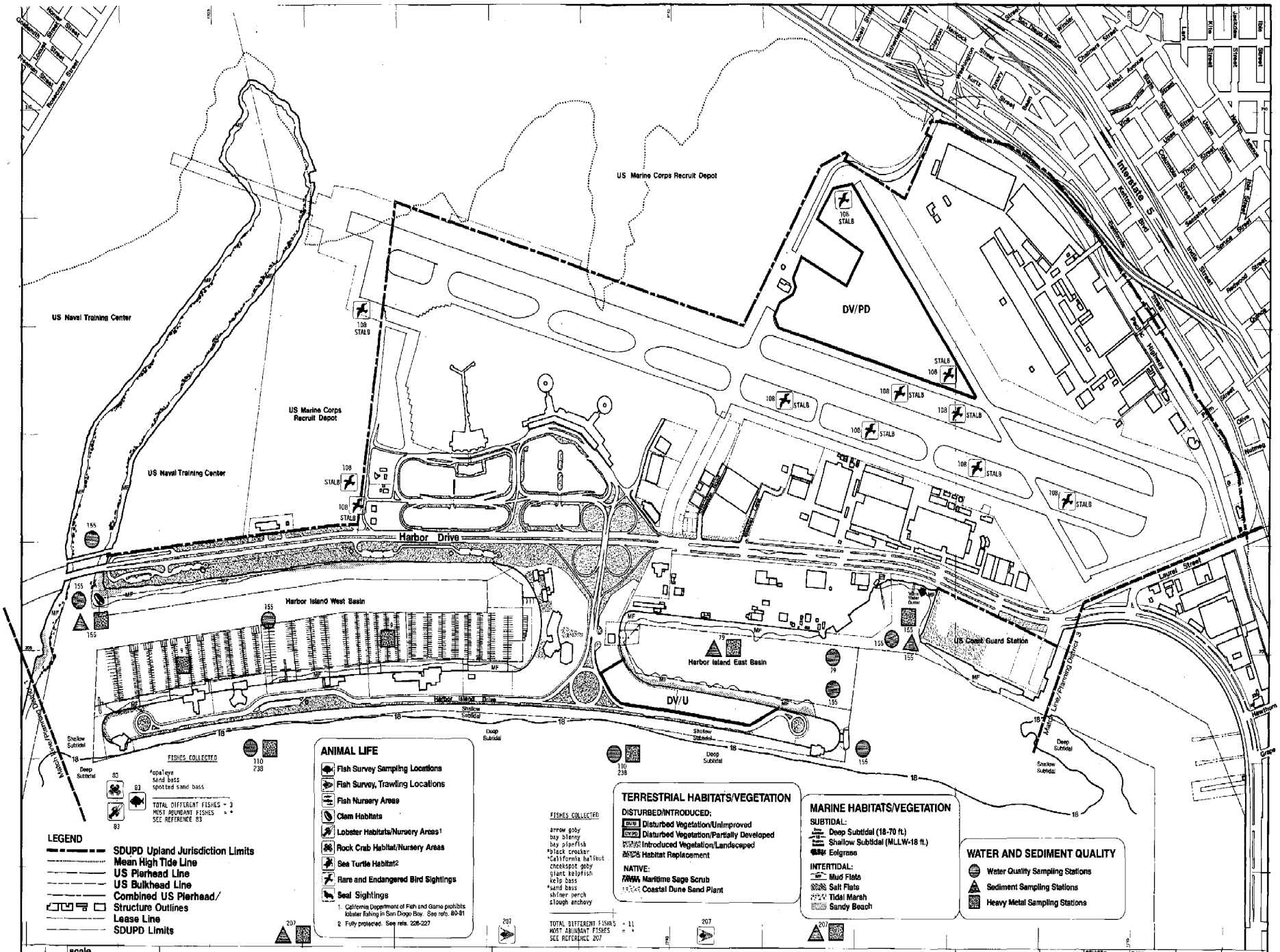
Note: Symbol numbers correspond to references, see text.

Figure **16**

REVISED 5-24-79 8-24-79 8-JAN-79 RG

DATE 2 JAN 79
DRAWN CHK
RASE
DWG NO. 1024195

78102-1
DEIR 9/79
UPD 9/79
EM 77/2
BAY INVNT



scale 0 200' 400'

planning department

Planning District 2
LINDBERGH FIELD/HARBOR ISLAND

BIOLOGICAL RESOURCES
WATER/SEDIMENT QUALITY

All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/6/79; and references (See reference list.)

Note: Symbol numbers correspond to references, see text.

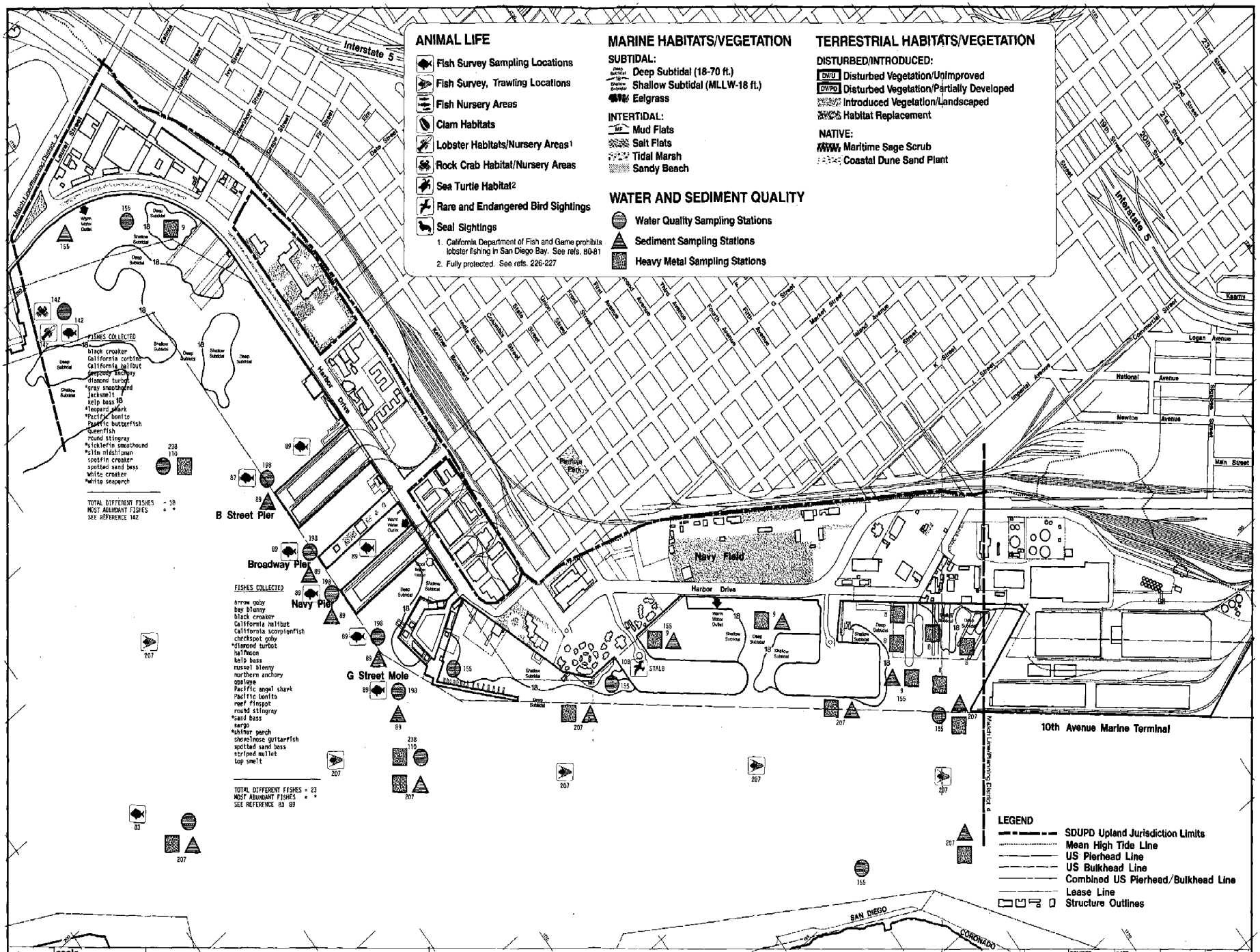
Figure 17

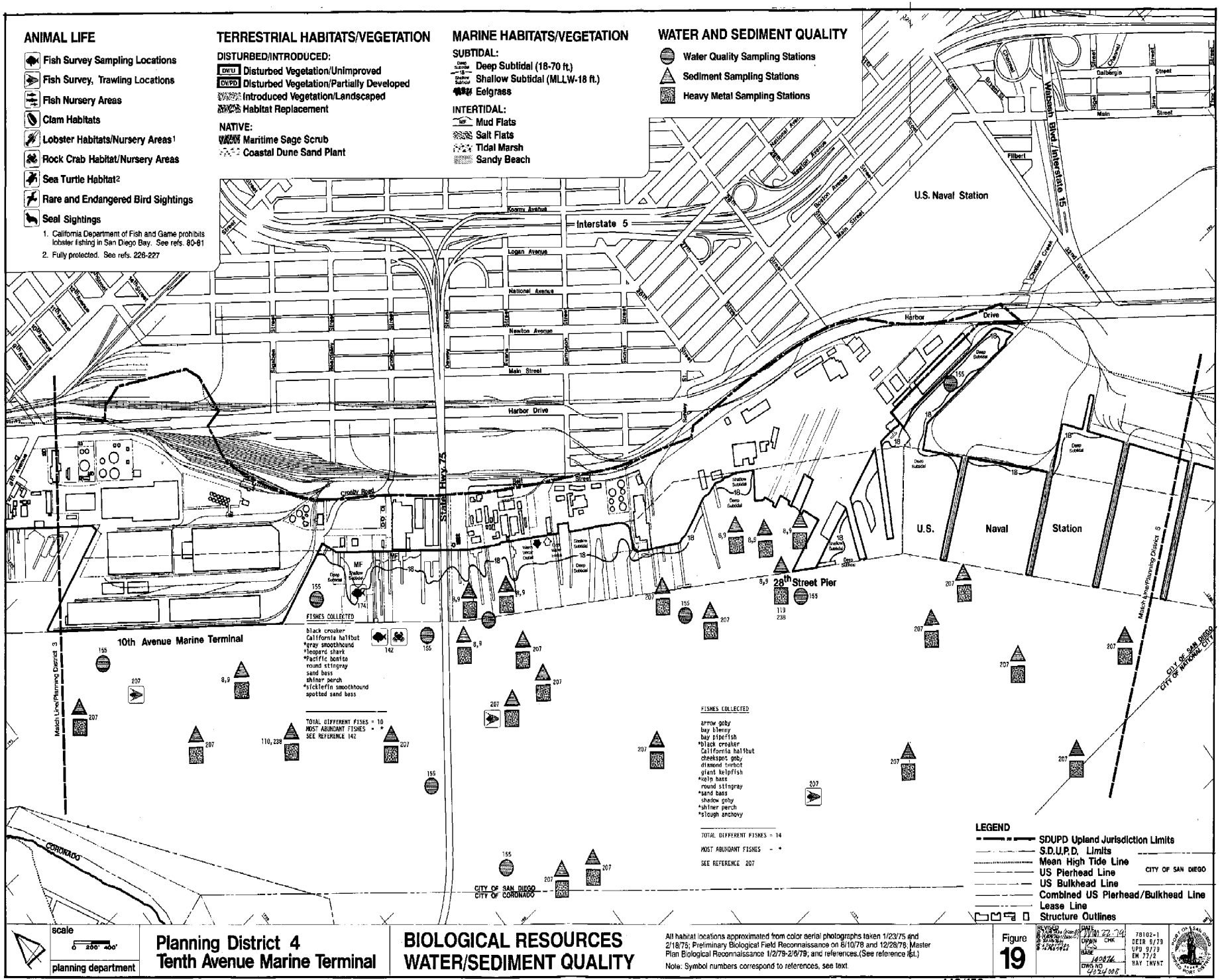
REVISED

DATE 11/14/79
DRAWN CHK
BASE 120374
DWG NO. 2024011

78102-1
DEIR 9/79
UPD 9/79
EM 77/2
BAY INVNT

PORT OF SAN DIEGO UNITED PORT DISTRICT


ANIMAL LIFE
Fish Survey Sampling Locations
Fish Survey, Trawling Locations
Fish Nursery Areas
Clam Habitats
Lobster Habitats/Nursery Areas[1]
Rock Crab Habitat/Nursery Areas
Sea Turtle Habitat[2]
Rare and Endangered Bird Sightings
Seal Sightings
1. California Department of Fish and Game prohibits lobster fishing in San Diego Bay. See refs. 80-81
2. Fully protected. See refs. 226-227
MARINE HABITATS/VEGETATION
SUBTIDAL:
Deep Subtidal (18-70 ft.)
Shallow Subtidal (MLLW-18 ft.)
Eelgrass
INTERTIDAL:
Mud Flats
Salt Flats
Tidal Marsh
Sandy Beach
WATER AND SEDIMENT QUALITY
Water Quality Sampling Stations
Sediment Sampling Stations
Heavy Metal Sampling Stations
TERRESTRIAL HABITATS/VEGETATION
DISTURBED/INTRODUCED:
DV/U Disturbed Vegetation/Unimproved
DV/PD Disturbed Vegetation/Partially Developed
Introduced Vegetation/Landscaped
Habitat Replacement
NATIVE:
Maritime Sage Scrub
Coastal Dune Sand Plant
FISHES COLLECTED
black croaker
California corbina
California halibut
deepbody anchovy
diamond turbot
*gray smoothound
jacksmelt
kelp bass
*leopard shark
*Pacific bonito
Pacific butterfish
Queenfish
round stingray
*sicklefin smoothound
*slim midshipman
spotfin croaker
spotted sand bass
white croaker
*white seaperch
TOTAL DIFFERENT FISHES = 18
MOST ABUNDANT FISHES = * *
SEE REFERENCE 142
B Street Pier
Broadway Pier
Navy Pier
G Street Mole
FISHES COLLECTED
arrow goby
bay blenny
black croaker
California halibut
California scorpionfish
checkspot goby
*diamond turbot
halfmoon
kelp bass
mussel blenny
northern anchovy
opaleye
Pacific angel shark
Pacific bonito
reef finspot
round stingray
*sand bass
sargo
*shiner perch
shovelnose guitarfish
spotted sand bass
striped mullet
top smelt
TOTAL DIFFERENT FISHES = 23
MOST ABUNDANT FISHES = * *
SEE REFERENCE 83 89
Navy Field
Harbor Drive
Pershing Drive
Pantoja Park
STALB
10th Avenue Marine Terminal
Interstate 5
Kettner Boulevard
Harbor Drive
Broadway
Ash Street
Beech Street
Cedar Street
Date Street
Front Street
First Avenue
Second Avenue
Third Avenue
Fourth Avenue
Fifth Avenue
Union Street
State Street
Columbia Street
Pacific Highway
Market Street
Island Avenue
K Street
L Street
Imperial Avenue
Commercial Street
National Avenue
Newton Avenue
Logan Avenue
Main Street
Kearny
23rd Street
20th Street
19th Street
Market Line/Planning District 4
LEGEND
SDUPD Upland Jurisdiction Limits
Mean High Tide Line
US Pierhead Line
US Bulkhead Line
Combined US Pierhead/Bulkhead Line
Lease Line
Structure Outlines
SAN DIEGO
CORONADO
scale
0 200' 400'
planning department
Planning District 3
CENTRE CITY EMBARCADERO
BIOLOGICAL RESOURCES
WATER/SEDIMENT QUALITY
All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/8/79; and references.(See reference list.)
Note: Symbol numbers correspond to references, see text.
Figure
18
REVISED
DATE 7 MAY 21-79
DRWN CHK
BASE
DWG NO. 80674
DWG NO. 5024-10-5
78102-1
DEIR 9/79
UPD 9/79
EM 7772
BAY INVNT



scale 200' 400'

planning department

Planning District 4
Tenth Avenue Marine Terminal

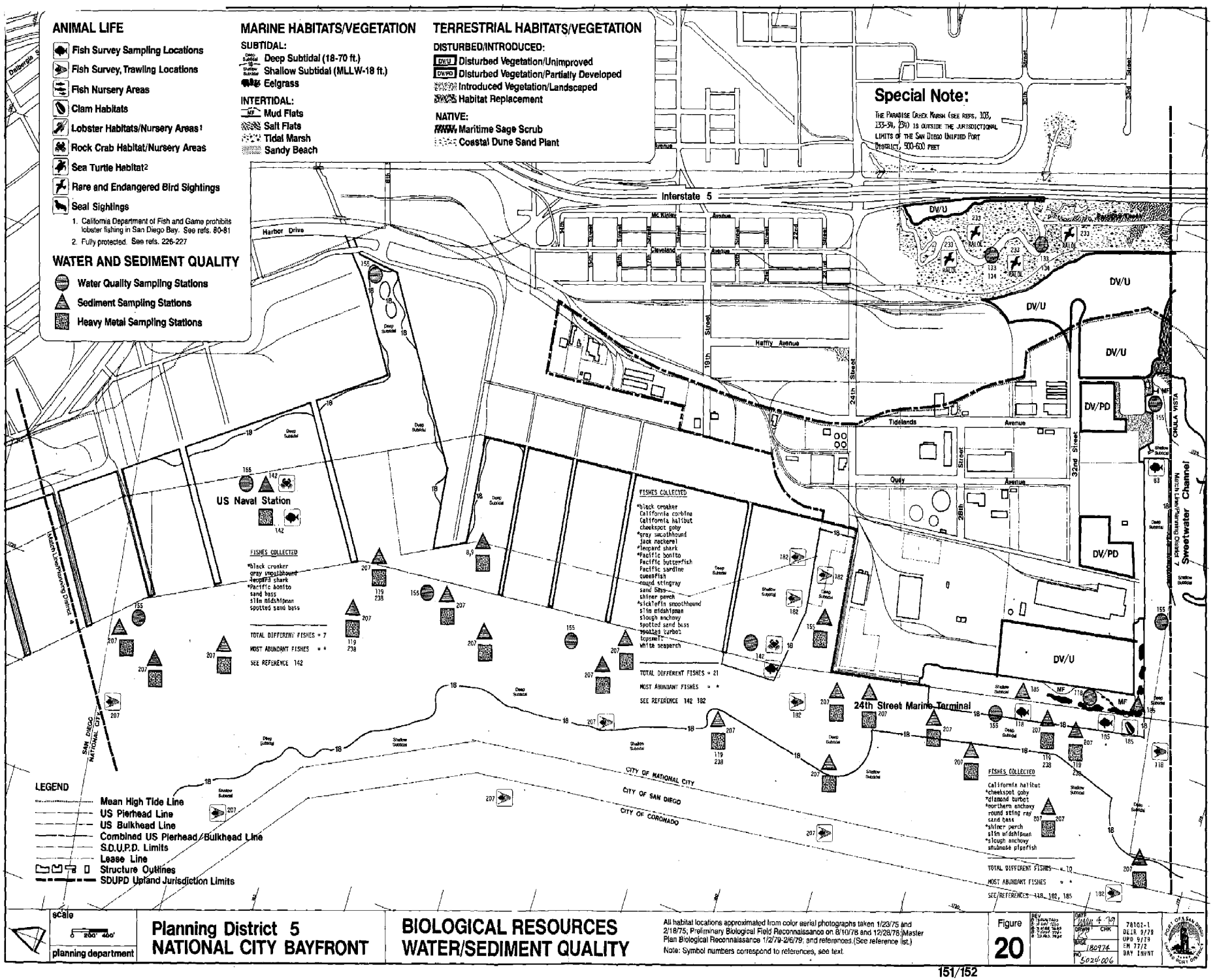
BIOLOGICAL RESOURCES
WATER/SEDIMENT QUALITY

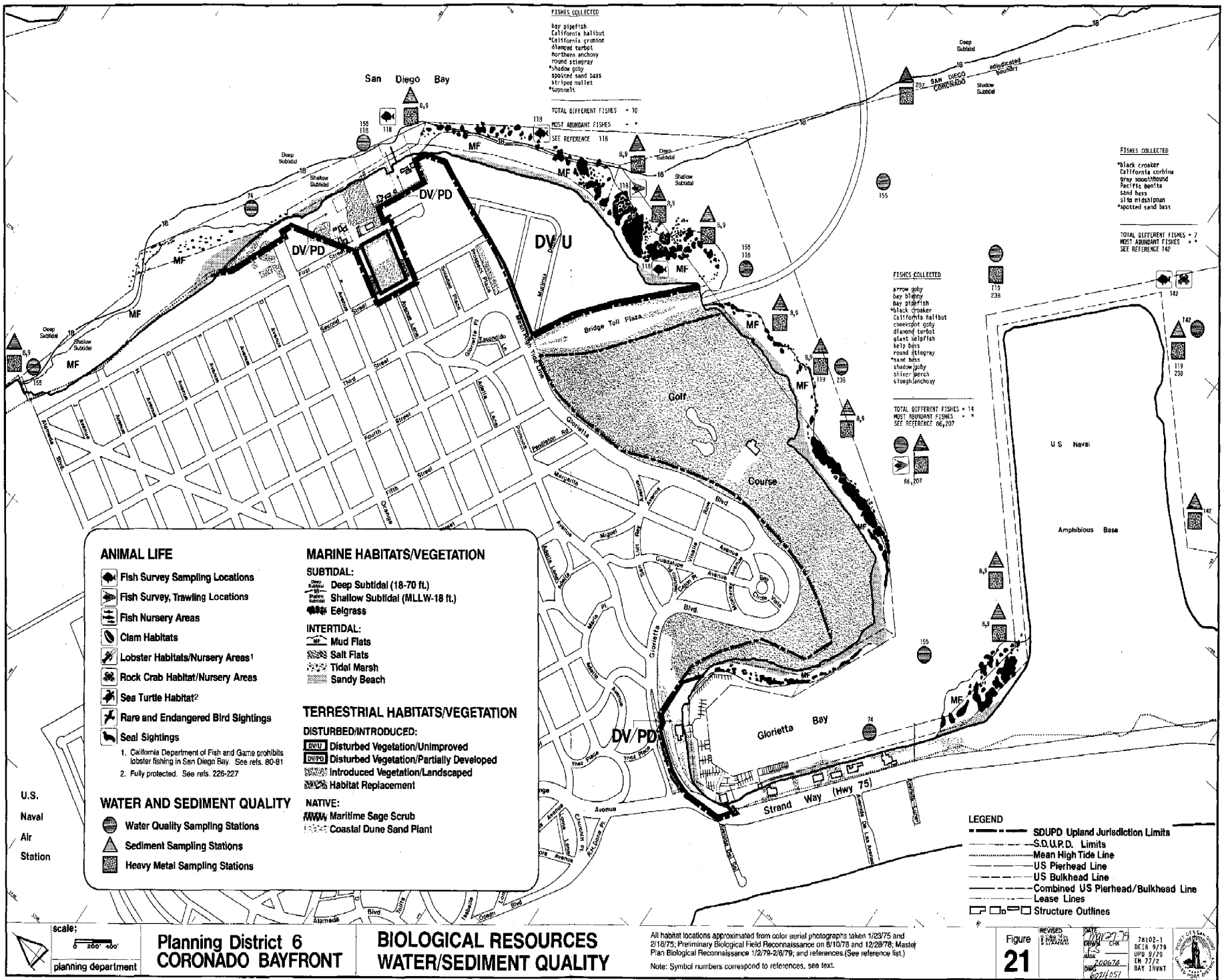
All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/6/79; and references.(See reference list.)

Note: Symbol numbers correspond to references, see text.

Figure **19**

78102-1
DCIB 5/79
UPD 9/79
EM 77/2
BAY INVNT


ANIMAL LIFE
Fish Survey Sampling Locations
Fish Survey, Trawling Locations
Fish Nursery Areas
Clam Habitats
Lobster Habitats/Nursery Areas1
Rock Crab Habitat/Nursery Areas
Sea Turtle Habitat2
Rare and Endangered Bird Sightings
Seal Sightings
1. California Department of Fish and Game prohibits lobster fishing in San Diego Bay. See refs. 80-81
2. Fully protected. See refs. 226-227
WATER AND SEDIMENT QUALITY
Water Quality Sampling Stations
Sediment Sampling Stations
Heavy Metal Sampling Stations
MARINE HABITATS/VEGETATION
SUBTIDAL:
Deep Subtidal (18-70 ft.)
Shallow Subtidal (MLLW-18 ft.)
Eelgrass
INTERTIDAL:
Mud Flats
Salt Flats
Tidal Marsh
Sandy Beach
TERRESTRIAL HABITATS/VEGETATION
DISTURBED/INTRODUCED:
DV/U Disturbed Vegetation/Unimproved
DV/PD Disturbed Vegetation/Partially Developed
Introduced Vegetation/Landscaped
Habitat Replacement
NATIVE:
Maritime Sage Scrub
Coastal Dune Sand Plant
Special Note:
The Paradise Creek Marsh (see refs. 103, 133-34, 234) is outside the jurisdictional limits of the San Diego Unified Port District, 500-600 feet
Interstate 5
Harbor Drive
Mc Kinley Avenue
Cleveland Avenue
Haffly Avenue
Tidelands Avenue
Quay Avenue
19th Street
24th Street
28th Street
32nd Street
Sweetwater Channel
CHULA VISTA
US Naval Station
24th Street Marine Terminal
CITY OF NATIONAL CITY
CITY OF SAN DIEGO
CITY OF CORONADO
SAN DIEGO NATIONAL CITY
Match Line/Planning District 4
Match Line/Planning District 7
FISHES COLLECTED
*black croaker
gray smoothhound
leopard shark
*Pacific bonito
sand bass
slim midshipman
spotted sand bass
TOTAL DIFFERENT FISHES = 7
MOST ABUNDANT FISHES = *
SEE REFERENCE 142
FISHES COLLECTED
*black croaker
California corbina
California halibut
cheekspot goby
*gray smoothhound
jack mackerel
*leopard shark
*Pacific bonito
Pacific butterfish
Pacific sardine
queenfish
round stingray
sand bass
shiner perch
*sicklefin smoothhound
slim midshipman
slough anchovy
spotted sand bass
*spotted turbot
topsmelt
white seaperch
TOTAL DIFFERENT FISHES = 21
MOST ABUNDANT FISHES = *
SEE REFERENCE 142 182
FISHES COLLECTED
California halibut
*cheekspot goby
*diamond turbot
*northern anchovy
round sting ray
sand bass
*shiner perch
slim midshipman
*slough anchovy
snubnose pipefish
TOTAL DIFFERENT FISHES = 10
MOST ABUNDANT FISHES = *
SEE REFERENCES 118, 182, 185
LEGEND
Mean High Tide Line
US Pierhead Line
US Bulkhead Line
Combined US Pierhead/Bulkhead Line
S.D.U.P.D. Limits
Lease Line
Structure Outlines
SDUPD Upland Jurisdiction Limits
scale
0 200' 400'
planning department
Planning District 5
NATIONAL CITY BAYFRONT
BIOLOGICAL RESOURCES
WATER/SEDIMENT QUALITY
All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/6/79; and references.(See reference list.)
Note: Symbol numbers correspond to references, see text.
Figure
20
DATE
DRWN
CHK
BASE
180974
NO
5024006
78102-1
DEIR 9/79
OPD 9/79
EM 77/2
BAY INVNT
PORT OF SAN DIEGO UNIFIED PORT DISTRICT



scale: 0 200' 400'

planning department

Planning District 6
CORONADO BAYFRONT

BIOLOGICAL RESOURCES
WATER/SEDIMENT QUALITY

All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/6/79; and references.(See reference list.)

Note: Symbol numbers correspond to references, see text.

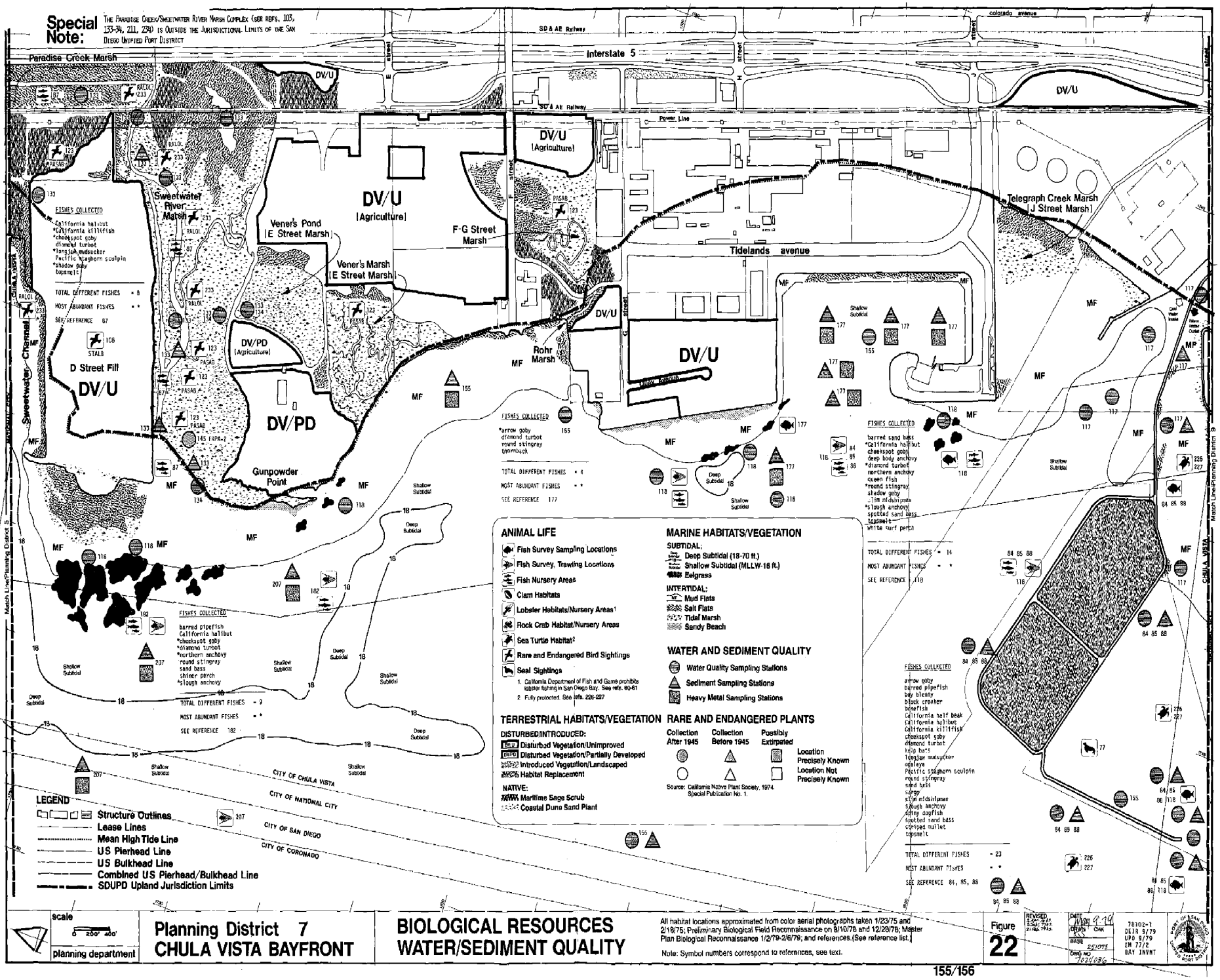
Figure **21**

REVISED

DATE 7/27/79
DRWN CHK
BASE 200674
DWG 6024051

78102-1
DEIR 9/79
UPD 9/79
EM 77/2
BAY INVNT

PORT OF SAN DIEGO UNIFIED PORT DISTRICT



scale 0 200' 400'

planning department

Planning District 7 CHULA VISTA BAYFRONT

BIOLOGICAL RESOURCES WATER/SEDIMENT QUALITY

All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/6/79; and references.(See reference list.)

Note: Symbol numbers correspond to references, see text.

Figure 22

REVISED: 2 Dec 1981, 21 May 1982

DATE May 9 79

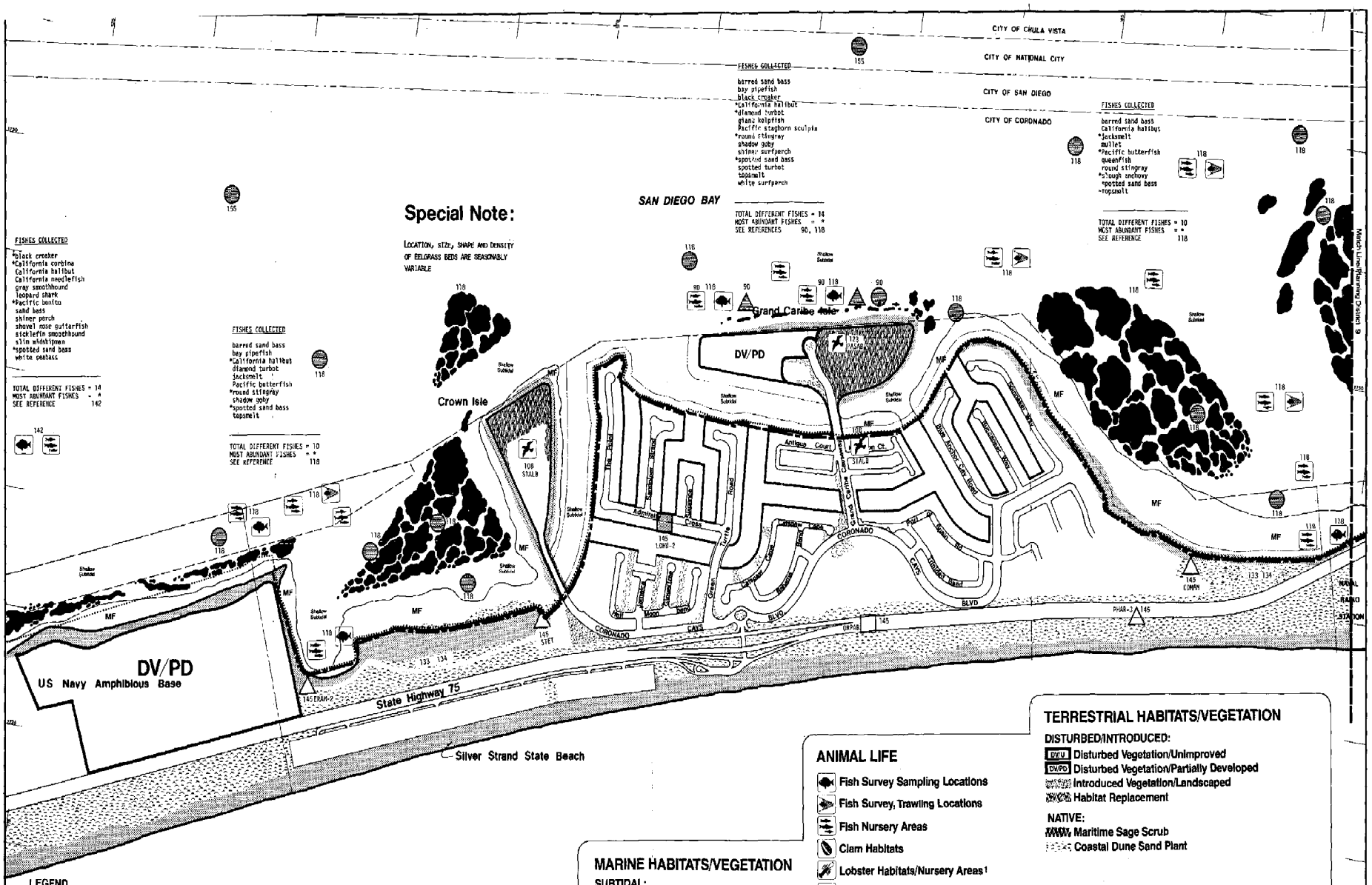
DRWN CHK

BASE 851075

DWG NO 7624086

76102-1 DEIR 9/79 UPD 9/79 EM 77/2 BAY INVNT

CITY OF SAN DIEGO PLANNING DEPARTMENT



LEGEND

- S.D.U.P.D. Limits
- Mean High Tide Line
- US Pierhead Line
- US Bulkhead Line
- Combined US Pierhead/Bulkhead Line
- Property Boundary Line
- Lease Lines
- SDUPD Upland Jurisdiction Limits

WATER AND SEDIMENT QUALITY

- Water Quality Sampling Stations
- Sediment Sampling Stations
- Heavy Metal Sampling Stations

MARINE HABITATS/VEGETATION

SUBTIDAL:

- Deep Subtidal (18-70 ft.)
- Shallow Subtidal (MLLW-18 ft.)
- Eelgrass

INTERTIDAL:

- Mud Flats
- Salt Flats
- Tidal Marsh
- Sandy Beach

ANIMAL LIFE

- Fish Survey Sampling Locations
- Fish Survey, Trawling Locations
- Fish Nursery Areas
- Clam Habitats
- Lobster Habitats/Nursery Areas[1]
- Rock Crab Habitat/Nursery Areas
- Sea Turtle Habitat[2]
- Rare and Endangered Bird Sightings
- Seal Sightings

1. California Department of Fish and Game prohibits lobster fishing in San Diego Bay. See refs. 80-81
2. Fully protected. See refs. 226-227

TERRESTRIAL HABITATS/VEGETATION

DISTURBED/INTRODUCED:

- DV/U Disturbed Vegetation/Unimproved
- DV/PD Disturbed Vegetation/Partially Developed
- Introduced Vegetation/Landscaped
- Habitat Replacement

NATIVE:

- Maritime Sage Scrub
- Coastal Dune Sand Plant

RARE AND ENDANGERED PLANTS

Collection After 1945	Collection Before 1945	Possibly Extirpated	
●	▲	■	Location Precisely Known
○	△	□	Location Not Precisely Known

Source: California Native Plant Society, 1974. Special Publication No. 1

scale 0 200' 400'

planning department

Planning District 8
SILVER STRAND SOUTH

BIOLOGICAL RESOURCES
WATER/SEDIMENT QUALITY

All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/8/79; and references. (See reference list.)

Note: Symbol numbers correspond to references, see text.

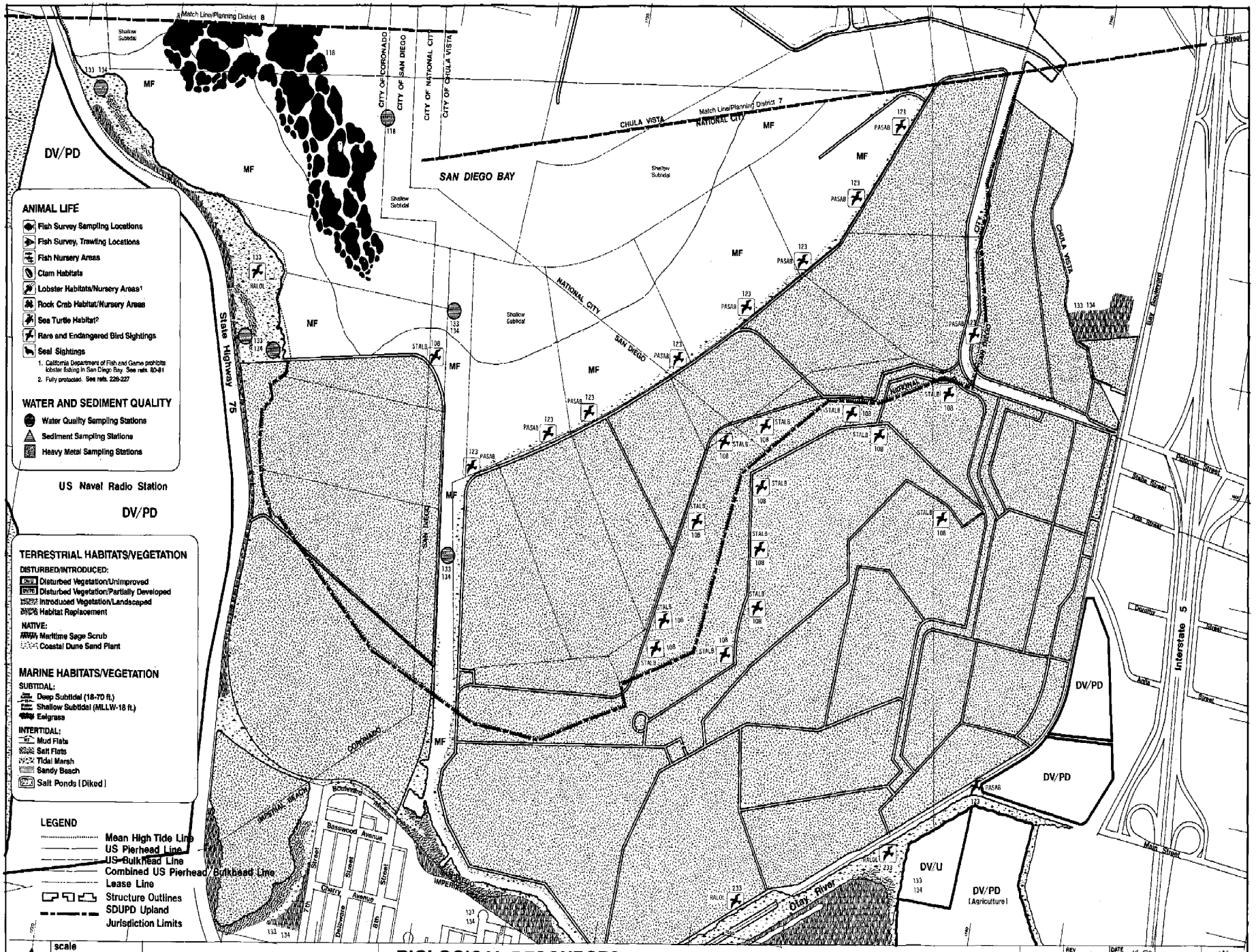
Figure 23

REV

DATE May 11-79
DRWN CHK
BASE 270874
NO 8024 006

78102-1
DEIR 9/79
UPD 9/79
EM 77/2
BAY INVNT

PORT OF SAN DIEGO UNITED PORT DISTRICT



Planning District 9
SOUTH BAY SALTLANDS

BIOLOGICAL RESOURCES
WATER/SEDIMENT QUALITY

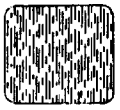
All habitat locations approximated from color aerial photographs taken 1/23/75 and 2/18/75; Preliminary Biological Field Reconnaissance on 8/10/78 and 12/28/78; Master Plan Biological Reconnaissance 1/2/79-2/6/79; and references.(See reference list.)

Note: Symbol numbers correspond to references, see text.

Figure **24**

78102-1
DEIR 9/79
UPD 9/79
EM 77/2
BAY INVNT

Introduced Vegetation/Landscaped: These areas include landscaped traffic interchange and median strips, landscaped isolated narrow irregular shorelines, and grassy or forested landscaped parks. These areas have value as a biological habitat, primarily for animals well adapted to an urban setting.

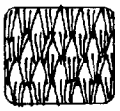


Habitat Replacement: This category is not a native, naturally occurring habitat, but one in which, artificial habitat replacement and/or enhancement has been, or will be, provided in a variety of settings. These areas include physical modifications which enhance the biological habitat value.

- Native -

Habitats in this category include those naturally occurring terrestrial plant communities which exist throughout the Port's jurisdiction and surrounding areas.

This category includes native plants which, when found in the same area, are scientifically classified as a plant community. A plant community constitutes an aggregation of a specific grouping of individual plant species and is said to be floristically determined. This is contrasted with a habitat, which is simply an area wherein plants and animals abide and may or may not include a given aggregate or indicator species.



Maritime Sage Scrub: This plant community includes sagebrush and low shrubs along coastal areas. The Maritime Sage Scrub community was formerly designated as Coastal Sage Scrub by Munz (1974) and was said to be found in:

> "...Dry, rocky, or gravelly slopes, south coast ranges ... mostly below 3,000 feet and below chaparral ... plants are half shrubs, 1 to 5 feet tall and somewhat woodier or larger forming a more open entity than chaparral."

The Maritime Sage Scrub community is further defined by Thorne (1976) as:

> "immediate coast covering hilltop slope ... on rocky or gravelly slope ..."

Individual plant species, among others, which occur in the Maritime Sage Scrub plant community would typically include the following:

Common Name	Scientific Name
Coastal Sage Brush	Artimesia californica
White Sage	Salvia apiana
California Buckwheat	Erigonum fasiculatum f.
Lemonadeberry	Rhus integrifolia
Brittle Bush	Encelia californica

Maritime Sage Scrub plant community is found within the Port's Master Plan area in the Chula Vista Bayfront, Silver Strand South and South Bay Saltlands Planning Districts.

Coastal Dune Sand Plant: This plant community includes the strand or sand dune vegetation formerly defined by Munz (1974) as Coastal Strand and described as found on:

> "Sandy beaches and dunes scattered along the entire coast ... vegetation low or prostrate ... often succulent ..."

The Coastal Strand community has been renamed Coastal Dune Sand Plant community by Thorne (1976) and is described as found on:

> "Dunes and upper sandy beaches along the entire coast ... loose sand, sea salt, fog, strong winds, extreme isolation, moderate temperatures."

Individual plant species, among others, which occur in the Coastal Dune Sand Plant community would typically include the following:

Common Name	Scientific Name
Lupine	Lupinus chamissonis
Sand-verbena	Abronia maritima
Saltbush	Atriplex leucophylla
Iceplant	Gasoul crystallinum
Beach Morning-glory	Convovulus soldanella

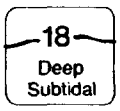
No Coastal Dune Sand Plant community is present within the Port's Master Plan area.

Marine Habitats/Vegetation

This general category of biological resources includes only those major marine habitats and vegetation in the intertidal areas (between high and low tides) and in the subtidal areas (permanently submerged) of San Diego Bay.

- Subtidal -

This category includes all habitats distinguished by elevation within the subtidal range, between the average of the lowest tides, Mean Lower Low Water (MLLW), to a maximum depth of 70 feet.



Deep Subtidal: This habitat includes permanently submerged areas between 18 and 70 feet deep. Deep subtidal areas are mainly found in North and Central San Diego Bay and are primarily the result of dredged ship or boat channels within major navigational corridors. Deep subtidal habitat commonly includes muddy bottom, but coarse sand bottom may be present also, especially in the deep shipping channels in North Bay and near the Bay entrance where current velocities are high.

Shallow Subtidal: This habitat includes bay bottom, permanently submerged from MLLW to a depth of 18 feet. Shallow subtidal habitat is located adjacent to North and Central San Diego Bay shorelines and within the marina basins formed by Shelter Island and Harbor Island. Shallow subtidal habitat is also present in some areas along the Central San Diego Bay and Glorietta Bay shorelines. The remainder of Central San Diego Bay and South Bay is entirely shallow subtidal habitat with the exception of main ship channels adjacent to the eastern margin of the Bay and leading down to the Port's National City Marine Terminal and Chula Vista Boat Basin. Shallow subtidal habitat most often is found with a mud or fine sand bottom.

Eelgrass: This habitat is categorized based upon the marine plant, eelgrass (Zostera marina) which usually occurs in relatively sheltered, calm shallow waters from the MLLW line to about 18 feet deep. Eelgrass habitat is usually associated with shallow subtidal habitat, but in some areas overlaps onto intertidal habitats as well. As illustrated in Figures 16-24, eelgrass in North San Diego Bay is located at the North and south ends of the Shelter Island Peninsula, along the western shoreline of North Island, and within the Navy estuary area along the shoreline (US Navy Training Center). In Central San Diego Bay eelgrass is located along the Coronado Bayfront and along the shoreline of Silver Strand south to Crown Cove (US Naval Amphibious Base). In South Bay, eelgrass is located adjacent to the mouth of the Sweetwater River, along the Coronado Cays shoreline, North Island and East Island, and offshore in the shallow subtidal waters of the South Bay Saltlands Planning District.

- Intertidal -

This category of marine habitats/vegetation includes areas between the high and low tides, along San Diego Bay shorelines. Four major intertidal habitats are present in San Diego Bay. They are described as follows, beginning with those habitats which are exposed only during the lowest tides and ending with those which are covered only during the highest tides.

Mud Flats: This habitat includes intertidal areas with very fine sand or mud bottom, relatively gentle bottom slope, and located in areas of low-velocity tidal currents. Mud flats form extensive bottom coverage in South Bay adjacent to the Sweetwater River mouth, along the Chula Vista Bayfront, within the South Bay Saltland shoreline areas, and in areas along the Silver Strand adjacent to the Naval Amphibious Base. Smaller mud flats are present elsewhere to a limited extent in North and Central Bay, see Figures 16-24. Mud flats typically contain a wide assortment and great abundance of marine invertebrates (clams, crabs, shrimp, worms, etc.) which live either on top of, or within the bottom sediment. These animals constitute a major food source for a large variety of resident and migrant shore birds.

Salt Flats: This plant community includes vegetation which is tolerant of alkaline areas. Formerly defined by Munz (1974) as Coastal Salt Marsh, and described in part as follows:

> "Salt marshes along the coast, from sea level to 10 feet ... most extensive on tidelands."

The Coastal Salt Marsh community has been divided into the Tidal Marsh and Salt-Flat Succulent communities by Thorne (1976), who defined the location of the Salt Flat community (also called Salt Flat Succulent community) as follows:

> "Above normal tidal action but inundated by Spring or storm tides and with an even higher salt content in the substrate..."

Individual plant species among others, which occur in the Salt Flat Succulent community would typically include the following:

Common Name	Scientific Name
Salt Marsh Bird's Beak	Cordylanthus maritimus maritimus
Palmer's Frankenia	Frankenia palmeri
Saltgrass	Distichlis spicata spicata
Saltbush	Atriplex sp.
Sea-Blite	Suaeda sp.

Tidal Marsh: This plant community includes the marshy wetlands vegetation originally combined with Salt Flat vegetation by Munz (1974) into the Coastal Salt Marsh designation. The location of this community was described in part as follows:

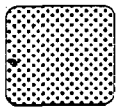
> "Salt marshes along the coast, from sea level to 10 feet ... most extensive on tidelands."

The Coastal Salt Marsh community has been renamed into Salt-Flat Succulent and Tidal Marsh by Thorne (1976). Tidal Marsh is described in part as follows:

> " ... Littoral ... inundated with salt water regularly."

Individual plant species among others, which occur in the Tidal Marsh community, would typically include the following:

Common Name	Scientific Name
Pickleweed	Salicornia virginica
Cordgrass	Spartina foliosa
Sea-Lavender	Limonium californicum
Arrow-Grass	Triglochin maritinum
Glasswort	Salicornia subterminalis

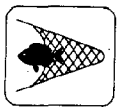


Sandy Beach: This habitat includes intertidal sandy beaches that occur naturally or have been constructed artificially. The habitat itself is usually devoid of any noticeable vegetation. Marine plant foliage and debris wash up along the sandy beach habitat. These materials provide temporary shelter, and in some cases food for various shore birds and small marine invertebrates such as sand crabs, marine worms, and amphipods (beach hoppers), which live within the sand. Sandy beaches are located in many places in North San Diego Bay, including Shelter Island, Harbor Island, and the Naval Air Station. Sandy beaches are present in Central San Diego Bay along the Coronado Bayfront and the Silver Strand adjacent to the US Naval Amphibious Base. Other small sandy beaches are located in South San Diego Bay adjacent to the Chula Vista Bayfront, the Coronado Bayfront and to a limited extent, the South Bay Saltlands Planning District.

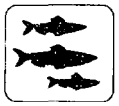
Animal Life

This general category of biological resources utilizes a series of map symbols to indicate the approximate location of marine and terrestrial animals as determined by a variety of sampling programs and studies.

Fish Survey Sampling Locations: This symbol indicates the location of fish survey sampling stations. The method of sampling at these locations usually included a static technique such as fish traps, gill nets, or beach seines. Individual fish species collected at these locations are listed next to this symbol, see Figures 16-24. The reference for additional information is indicated by a number, which corresponds to the EIR's reference list, next to the symbol.



Fish Survey Trawling Locations: This symbol represents locations where fish surveys have been conducted using trawl nets, usually towed behind a small boat. The symbols are placed on Figures 16-24 in locations to represent a continuous line corresponding to the area covered by the trawl. The fish species collected during the trawling surveys are also listed adjacent to the symbols. The source references are keyed as described above.



Fish Nursery Areas: The designation of fish nursery areas is based upon literature references to juvenile fish surveys conducted in particular locations, and upon habitat characteristics of areas, which are conducive to their use by fishes as a natural hatchery area. Such characteristics include shallow quiet waters, such as embayments or small basins, and areas located closely adjacent to river mouths, such as the Sweetwater River or the Otay River in South San Diego Bay.

Clam Habitats: This symbol designates areas which are known to contain a variety of bivalves commonly taken by recreational clammers, or by commercial fishermen. Most often, clams present in these habitats would include little neck clams, cockles, Washington clams, jackknife clams, and razor clams, Browning et al (1973).

Lobster Habitats/Nursery Areas: This symbol designates known locations of California spiny lobster habitats and/or nursery areas. The California spiny lobster (Panulirus interruptus) exists primarily in shoreline locations in North and Central San Diego Bay. The California Department of Fish and Game prohibits any lobster fishing in San Diego Bay, Edgerton (1975, 1976). Lobster habitats and nursery areas are known to be closely associated with the presence of eelgrass and submerged structures such as pier pilings, particularly in the North Bay areas, Peeling (1975).

Rock Crab Habitat/Nursery Areas: This symbol indicates the location of rock crab habitats and nursery areas primarily within North and Central San Diego Bay. Rock crabs of the genus Cancer are known to frequent the same habitats and utilize the same nursery areas as do the California spiny lobsters, Peeling (1975). There are no prohibitions on crab fishing in San Diego Bay.

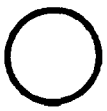
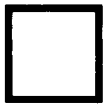
Sea Turtle Habitat: Habitat for the green sea turtle (Chelonia mydas) is limited to South San Diego Bay adjacent to the cooling water discharge outlet of the San Diego Gas and Electric Company. The green sea turtle is a fully protected species, US Fish and Wildlife Service (1977, 1979), and at the present time the population in South San Diego Bay appears to be a migrant group which winter in the South San Diego Bay area, Stinson (personal communication).

Rare and Endangered Bird Sightings: This map symbol refers to the visual sightings of any of three rare and endangered birds known to utilize the San Diego Bay area during all or part of the year. The reference number adjacent to the map symbols on Figures 16-24 correspond to the source of the sighting or a general reference which describes the nature of the resource management plan currently being followed to protect these rare and endangered species. Three rare and endangered birds, including the California least tern (Sterna albifrons browni), map symbol STALB,the lightfooted clapper rail (Rallus longirostris levipes), map symbol RALOL,and the Belding's Savannah sparrow (Passerculus sanwichensis beldingi), map symbol PASAB,reside in and/or utilize areas within the surrounding Port jurisdiction.

Seals: This symbol refers to some areas where regular sightings of harbor seals (Phoca ditulina geronimensis) and California sea lions (Zalophus californianus) have been sighted within San Diego Bay, Doughterty (1966). Sightings of sea lions and harbor seals have most often been made in the main channel areas of North and Central San Diego Bay, particularly adjacent to the main channel navigation buoys. Harbor seals have also been sighted well into South Bay, adjacent to the SDG&E power plant cooling water channels.

Rare and Endangered Plants

This general category includes information from the California Native Plant Society (CNPS) designations of officially recognized rare and endangered terrestrial vascular plants. Symbols and classification systems follow that officially adopted by the CNPS, after Powell (1974). The capital letters which appear adjacent to the map symbols represent the Plant Code from the CNPS list. The Plant Code is keyed to the scientific and common name of the rare and endangered plant on the CNPS list. The location of each rare and endangered plant collected or observed is marked on Figures 22-24 with one of the six symbols according to the following scheme:

	Collection After 1945	Collection Before 1945	Possibly Extirpated
Location Precisely Known			
Location Not Precisely Known			

A listing of the rare and endangered terrestrial vascular plants occurring within the San Diego Bay area is provided in the following section, see Table 6. Two rare and endangered plant species are recorded on Port jurisdiction.

TERRESTRIAL BIOLOGICAL RESOURCES

Habitats/Vegetation Types

The majority of the Master Plan area in the North and Central San Diego Bay exists on artificial fill which is either developed or includes disturbed habitat/vegetation. The three North San Diego Bay Planning Districts are nearly completely developed with commercial, recreational, and industrial uses. The biological environment in these Planning Districts includes primarily introduced plants and animals typically associated with such disturbed urban settings. Landscaped areas are the result of improvements by the Port District and its tenants.

In some areas, introduced vegetation is mixed with vacant unimproved or partially developed areas. The terrestrial habitats and vegetation within the three Central Bay Planning Districts are similar to those in North Bay. The areas of introduced vegetation/landscaped are somewhat less extensive in these three planning districts, with the exception of the landscaped portions along the Coronado Bayfront (the existing Golf Course on Port tidelands and the proposed Tidelands Park). No native habitats or vegetation exist within the six planning districts in North Bay or Central Bay within the Port's Master Plan area.

Native vegetation exists within the South Bay Planning Districts, including the Chula Vista Bayfront, the Silver Strand South and the South Bay Saltlands Both native terrestrial plant communities which occur within the San Diego Bay region are found in the three South Bay Planning Districts. Only one, however,

the Maritime Sage Scrub Community, occurs on Port tidelands. The Maritime Sage Scrub plant community and the Coastal Dune Sand plant community are both found in the Silver Strand South and the South Bay Saltlands Planning Districts, see Figures 23 and 24. The Maritime Sage Scrub community is adjacent to the marsh vegetation within the area sometimes designated as the Sweetwater River-Paradise Creek marsh complex in the Chula Vista Bayfront Planning District, see Figure 22.

A total of seven species of rare and endangered terrestrial vascular plants are found in the greater San Diego Bay area and vicinity. These seven species of plants together with their California Native Plant Society (CNPS) designations, and their plant community associations are described in Table 6. Only two rare and endangered plant species are recorded on Port Tidelands. One species, the Salt Marsh Bird's Beak (Cordylanthus maritimus), is located within the Port's jurisdiction on the Chula Vista Bayfront, see Figure 22. The other, Palmer's Frankenia (Frankenia palmeri), is located within the Port's jurisdiction within the Silver Strand South Planning District, see Figure 23.

Animal Life

The North and Central Bay portions of the Master Plan area include various mammals, birds, reptiles and perhaps some amphibians, which are characteristic of upland, urban developed areas, such as landscaped and disturbed vegetation. Finches, starlings, sparrows, mockingbirds, mourning doves, and other birds typical of urbanized settings are known to nest in and adjacent to the Plan area.

Terrestrial mammals within the Master Plan area include various mice, rats, ground squirrels, and occasional rabbits. Domestic and feral dogs and cats are also present. Reptiles, primarily small snakes and lizards, are present in most of the vacant areas of the Master Plan area, particularly on the larger unimproved areas with disturbed vegetation. Amphibians, if present, would be expected in areas where surface water drains and could support small localized patches of vegetation, such as adjacent to minor drainage swales and near shoreline storm drain culverts.

South San Diego Bay Planning Districts generally support large populations of a wide variety of different species of shorebirds or seabirds. In particular, gulls, sandpipers, terns (other species of terns, not the California least tern), grebes, coots, plovers, herons and egrets are common throughout the three South Bay Planning Districts. The National Audubon Society annually sponsors a winter bird count in South San Diego Bay. The results of the 1978 December count indicated a total of 191 different species of birds and a total number of 74,892 birds present.

Unique Habitat Associations

Specific habitat requirements for feeding, shelter, and breeding activities are characteristic of the three rare and endangered bird species which utilize the San Diego Bay area.

The California least tern (Sterna albifrons browni), is a late spring and summer migrant which utilizes some barren sandy, or otherwise vacant areas adjacent to San Diego Bay as nesting habitat. Specific requirements for

Table 6

San Diego Bay Area Rare and Endangered Terrestrial Vascular Plants

Plant Code	Plant Name Scientific/Common	R-E-V-D* Code	Flower Period	Family Association	Community Association
ASTET	Astragalus tener titi (Coastal dunes rattle-weed)	3-3-2-3	Apr.-May	Fabaceae (Pea Family)	Coastal Dune Sand Plant
COMAM-3	Cordylanthus maritimus maritimus** (Salt marsh bird's beak)	3-2-2-2	May-Oct.	Scrophulariaceae (Figwort Family)	Salt Flat Succulent
ERAM-2	Erysimum ammophilum (Coast wallflower)	1-2-1-3	Feb.-May	Brassicaceae (Mustard Family)	Coastal Dune Sand Plant
FRPA-2	Frankenia palmeri** (Palmer's frankenia)	P.E.--1	May-Jul.	Frankeniaceae	Salt Flat Succulent
LONU-2	Lotus nuttallianus (Prostrate hosackia)	1-2-2-2	Mar.-Jun.	Fabaceae (Pea Family)	Coastal Dune Sand Plant
ORPAB	Orobanche parishii brachyloba (Short-lobed broomrape)	2-2-2-2	Apr.-Aug.	Orobanchaceae (Broomrape Family)	Coastal Dune Sand Plant
PHAR-3	Pholisma arenarium (Pholisma)	2-2-2-2	Apr.-Jul., Oct.	Lennoaceae (Lennoa Family)	Coastal Dune Sand Plant

*California Native Plant Society R-E-V-D Code Interpretation

Rarity (R)
1. Rare, of limited distribution, but distributed widely enough that potential for extinction or extirpation is apparently low at present.
2. Occurrence confined to several populations or one extended population.
3. Occurs in such small numbers that it is seldom reported; or occurs in one or very few highly restricted populations.

P.E. Possibly extinct or extirpated.

Endangerment (E)
1. Not endangered.
2. Endangered in part.
3. Totally endangered.

Vigor (V)
1. Stable or increasing.
2. Declining.
3. Approaching extinction or extirpation.

General Distribution (D)
1. Not rare outside California.
2. Rare outside California.
3. Endemic to California.

** Located in small areas on Port tidelands.

nesting substrate and other conditions, optimum to survival of the newly-hatched young have not been completely isolated, Swickard (1974). Young are very susceptible to predation from terrestrial mammals and raptors (birds of prey). Between 100-150 California least terns are estimated to nest in the San Diego Bay area. Breeding colonies have been steadily increasing in numbers over the last four years, according to the monitoring results of the California Least Tern Recovery Team, Jurek et al (1977). Nesting colonies have been observed at locations indicated on Figures 16-24, map symbol STALB.

The light-footed clapper rail (Rallus longirostris levipes) is a full-time resident of the Tidal Marsh and Salt Flat areas in the Chula Vista Bayfront and the South Bay Saltlands Planning Districts, see Figures 22-24, map symbol RALOL. Specific habitat requirements include the presence of cordgrass (Spartina foliosa) and an abundance of intertidal marine invertebrates as food supply. About 15-20 light-footed clapper rails are estimated to be in the San Diego Bay area, Wilbur, et al (1976). This bird is not a good flier and is susceptible to predation from terrestrial mammals (including dogs) that inhabit tidal marsh peripheral areas.

The Belding's Savannah sparrow (Passerculus sandwichensis beldingi), uses habitat found within the Tidal Marsh plant communities of the Chula Vista Bayfront, Silver Strand South, and South Bay Saltlands Planning Districts. About 150 Belding's Savannah sparrows are estimated to be in the San Diego Bay area, Massey (1977). Locations of the sightings of Belding's Savannah sparrow are indicated on the Biological Resources, Water/Sediment Quality maps, see Figures 22-24, map symbol PASAB.

Ecological Relationships

In general, interactions among terrestrial plants and animals, and their physical environment in the terrestrial portions of the Master Plan area, particularly in the North and Central Bay Planning Districts, do not evidence the kind of interdependence which is characteristic of undisturbed natural systems. Since North and Central Bay Planning Ditricts include primarily disturbed habitats, major utilization of these areas is most likely by resident and transient animals from surrounding urbanized areas. Because of the sparse distribution of introduced plants (mainly weeds and low-lying shrubs) within the disturbed land areas of the North and Central Bay Planning Districts, critical and unique relationships between resident animals and introduced plants have not likely been established.

MARINE BIOLOGICAL RESOURCES

Seagrasses, Algae and Marsh Habitats

Marine vegetation exists within San Diego Bay in forms of various species of algae (non-flowering plants), and one species of seagrass, commonly called eelgrass (Zostera marina). Eelgrass is an attached, marine flowering plant which grows on the Bay bottom in clear, calm water near-shore in intertidal and shallow subtidal areas between the MLLW line and about 18 feet deep, Boone and Hoeppel (1976). About 400 acres of eelgrass exist in San Diego Bay. Approximately 130 acres are within the Port's jurisdiction. Eelgrass grows in very sparse patches in some areas, and in dense "beds" in other areas. Both the location and the density of eelgrass vary from year to year.

Marine algae are representated by large, more obvious filamentous or bushy forms of green and red algae, such as witch's hair or mermaid's hair (Enteromorpha sp.), usually as a film covering the bottom of shallow water

areas in a thick, green or red mat, particularly in spring or summer seasons, Ricketts and Calvin (1968). In addition, larger forms of green algae, such as sea lettuce (Ulva sp.), are attached to rocks, pebbles or seashells. Two large forms of algae, including the brown alga, sargassum (Sargassum muticum) and a red alga (Gelidium sp.), are abundant in some areas attached to quarry rock revetment within the intertidal zone.

It should be noted that algae are also found throughout the waters within and adjacent to the Master Plan area in the form of tiny, single-celled plants (phytoplankton) floating in the water. Although not as visible or as obvious as the larger forms of marine plants, phytoplankton is present in far greater amounts than are the more noticeable plants, Lackey and Clendenning (1965).

Native marine intertidal vegetation exists within the South Bay Planning Districts, including the Chula Vista Bayfront, the Silver Strand South and the South Bay Saltlands. Two native marine intertidal plant communities are found in the three South Bay Planning Districts. Both communities occur on Port Tidelands. These plant communities are the Salt Flats (or Salt Flat Succulent) and Tidal Marsh, see Figures 22-24.

Marine Invertebrates

Over 200 species of marine invertebrates live in San Diego Bay, Ford (1968, 1971a), US Army Corps of Engineers (1975), Peeling (1975). Sediment samples taken by the San Diego Regional Water Quality Control Board (SDWQCB, 1978) and by Barry (1972) in several areas throughout San Diego Bay, see Figures 16-24, indicate that infaunal organisms (marine animals living within the sediment) include many species of marine worms known as polychaetes, small crustaceans, and various bivalves, such as clams and cockles.

Marine invertebrates on pier pilings, rocks, marine floats and other structures include lobster, crabs, worms, mussels, barnacles, echinoderms (starfish, sea urchins), sponges, sea anemones and tunicates (sea squirts) present in varying numbers from place to place, Flittner et al (1971), and Ford, Chambers and Chambers (1975). Near-shore marine invertebrates seem to be most abundant and diverse in the area of wharf pilings and marine floats than in other areas, Parrish and Mackenthun (1968). Shoreline revetment structures, such as riprap, concrete or steel bulkheads, etc., provide artificial habitat for many attached forms of marine invertebrates, including mussels, barnacles, sponges and tunicates, Allen (1969).

Among the more well known invertebrates is the California spiny lobster (Panulirus interruptus) which has an estimated breeding population size of about 300-400 in San Diego Bay, Peeling (1975).

Fishes

The Naval Undersea Center Proximate Survey of San Diego Bay collected about 60 different fish species in San Diego Bay. Other studies indicate 80-90 different fish species inhabit San Diego Bay, Miller and Lea (1972), SDUPD (1977a), Lockheed Center for Marine Research (1977-1979). The most abundant and widely distributed fishes in the Bay include Pacific bonito, black croaker, spotted sand bass, sand bass, California halibut, and opaleye.

Although most marine plants and animals are generally uniformly distributed throughout the Bay, a greater number of different fish species, and these in greater abundance have been found in North and South Bay than in Central Bay. Fishes which are commonly found as adults in the open ocean, such as white sea bass, Pacific barracuda, Pacific bonito, and jack mackerel are more plentiful in North Bay than in Central or South Bay. Fishes found in greatest abundance in South Bay include those with higher tolerances to warm, brackish waters, such as slough anchovies, blennies, California killfish, long jaw mudsucker, gobies, striped mullet, pipefish, and Pacific staghorn sculpin.

The most abundant fishes in Central Bay include the Pacific bonito, black croaker, spotted sand bass, sand bass, opaleye, and two species of small dogfish shark, the gray smoothhound and the sicklefin smoothhound. Common names follow the nomenclature of the American Fisheries Society (1970).

Recreational sportfishing and clamming are permitted throughout most of San Diego Bay excepting some individually regulated species and some specially designated areas, Edgerton (1975-1976). Commercial bait fishing, primarily seining, is permitted in the deeper waters (deep subtidal habitat) of North and Central Bay for northern anchovies and jack mackerel, and occasionally gill netting for mullet occurs in the shallow subtidal habitat of South Bay. Commercial bait harvesting of jackknife clams, purple clams, and ghost shrimp is also permitted in the shallow intertidal areas, primarily in South Bay, Maxwell (1969). Commercial fishing for California spiny lobster and the various species of abalone is not permitted in the Bay.

Unique Habitat Associations

Of the marine habitats in San Diego Bay, the most notable in terms of potential value and biological productivity is eelgrass. Eelgrass (Zostera marina) is located in several areas in North and South Bay, see Figures 16-24.

Eelgrass constitutes a unique habitat association in that many species of marine invertebrates and fishes utilize this area for food, shelter, and as a nursery ground. It is supportive of juvenile fishes and crustaceans, particulary crabs and lobster, which find shelter between the grass blades and roots. Eelgrass also serves as a place of attachment for the eggs of many different marine invertebrates and fishes. Migratory geese, particularly the black brant (Branta bernicla nigricans), rely heavily on eelgrass as a food source. Although no rare and/or endangered species of marine invertebrates, fishes or marine plants are known to occur within or adjacent to the waters of the Master Plan area, eelgrass beds constitute a productive habitat for many important species of fish and marine invertebrates. The most notable species present are those of potential commercial and/or recreational importance such as the California spiny lobster, rock crabs, littleneck clams, cockles, Washington clams, jackknife and razor clams, mussels, and ghost (mud) shrimp.

Marine invertebrates are more directly dependent upon bottom habitat conditions than are fishes. Consequently, the intertidal mudflats and eelgrass beds in shallow, protected subtidal areas support the greatest abundance and variety of marine invertebrates and fishes in San Diego Bay.

Other habitat is also provided by artificial structures such as shoreline revetment, including riprap and concrete or steel bulkheads, pier floats, pilings and wave attenuators. These structures provide supportive habitat for attached marine invertebrates, and additional shelter and feeding areas for several different fish species including perches, basses, dogfish, opaleye and croaker.

Tidal Marsh and Salt Flats constitute unique habitat associations for fishes, marine invertebrates, and birds. These habitats include plants and animals which are well adapted to a wide range of salinities and are able to withstand alternate wetting and drying caused by tidal action. The nutrient rich sediments, the active materials recycling, and the very high rate of photosynthesis combine to make the marsh areas among the most biologically productive of all habitats. Biological productivity is usually expressed as the amount of plant material produced in a given area per day. The ultimate importance of a biologically productive area, such as the Sweetwater River Marsh Complex, lies in its ability to support a wide diversity and high abundance of marine invertebrates, fishes, and birds. Because the marsh areas provide shelter, food, and quiet waters, they are important breeding and hatching grounds for birds, fishes, and marine invertebrates, many with considerable commercial and/or recreational importance. Some species which have been officially designated as rare and endangered, reside in or utilize these areas as discussed above.

In the sense that eelgrass serves as the most biologically important marine subtidal habitat, Tidal Marsh constitutes the most important marine intertidal habitat in San Diego Bay. For some animals, such as the light-footed clapper rail, which nests only in the cordgrass of the Tidal Marsh, this type of habitat is essential to survival.

Ecological Relationships

The ecological relationships which exist among marine organisms, as indicated by the presence of a large variety of marine plants, invertebrates and fishes indicate a condition of stability and interdependence among the various marine habitats within and surrounding the Port's Master Plan area. The interactions among marine organisms which utilize the mudflat areas and eelgrass beds as feeding and breeding areas are most important. These areas support other marine invertebrates and fishes which primarily inhabit the adjacent deeper waters of San Diego Bay (and ultimately in the case of some species) assist in the replenishment of marine plants and animals in the open ocean.

San Diego Bay has direct and indirect importance as a nursery to many marine organisms which are of commercial and recreational value. Some marine invertebrates and fishes which hatch and develop in the Bay, particularly in South Bay shallows, remain permanent residents of the original nursery ground. Many others migrate to adjacent deeper Bay waters where they remain as residents; still others move out of the Bay to assist in the replenishment of open ocean fish species.

Water and Sediment Quality

As described in extensive water quality sampling and analyses in the US Army Corps of Engineers' Environmental Impact Statement for San Diego Harbor, San Diego County, California, Los Angeles District (USACE, 1975), water quality in San Diego Bay is generally acceptable for most human activities, including water contact recreation in most areas. Water quality is dependent to a greater or lesser degree upon the type and quantity of material discharged into all portions of San Diego Bay. In general, however, the concentrations of most contaminants tend to decrease significantly with increased distance from the sources. Contaminants which reach San Diego Bay waters are further diluted and dispersed by tidal action and local water circulation patterns, which are to some extent determined by existing shoreline topography and, in particular, by small embayments such as the Shelter Island Yacht Harbor and Commercial Basin areas; Harbor Island East and West Basins; the 5th Avenue Marina in the Centre City/Embarcadero Planning District; the Chula Vista Boat Basin in the Chula Vista Bayfront Planning District, and Glorietta Bay in the Coronado Bayfront Planning District. Water circulation patterns in San Diego Bay are discussed in the section on hyrdology.

Sediment quality in San Diego Bay is linked to water quality. In most cases water quality sampling and subsequent analyses have been conducted simultaneously with sediment sampling and analyses.

Up to 1963, sewage disposal directly into San Diego Bay resulted in adverse impacts to water quality and sediment quality. The implementation of the San Diego Metropolitan Sewerage System for areawide sewage treatment and disposal resulted in an extremely successful water pollution control program which has provided San Diego Bay with some of the cleanest waters and sediments of any bay in the world. San Diego Bay water quality before and after the implementation of the San Diego Metropolitan Sewerage System have been described in many reports including Newman (1958); Parrish and McKenthon (1968); SDUPD (1972a); and Browning, et al (1973). The before and after circumstance for water and sediment quality in San Diego Bay is described in SDUPD (1972a), in part as follows:

> "...the dissolved oxygen concentration was less than 4 mg/l - an accepted minimum for marine life is 5 mg/l out of a possible 8 or 9 mg/l; coliform counts were in excess of 10 per milliliter - past the danger point for life sustenance; turbidity was such that visibility was less than 4 feet; plankton blooms proliferated and sludge deposits stifled bottom marine life. Since 1963, ... dissolved oxygen has risen to an average in excess of 5 mg/l; coliform counts are down to a safe level except in areas within 100 feet of Naval ships at North Island; turbidity has improved with an average visibility factor of 8 feet, which is in excess of the minimum required for most activities; plankton blooms are virtually nonexistent since the nutrient rich sewage discharges have been diverted; and sludge is gradually dissipated through tidal action and fresh silting."

More recently, water and sediment quality have improved even more due largely to the implementation of the Federal Water Pollution Control Act of 1972 as amended (FWPCA) and the implementation of the provisions of the National Pollutant Discharge Elimination System (NPDES) permit process as regulated and enforced by the San Diego Regional Water Quality Control Board.

MONITORING STATIONS

Measurements by the San Diego Regional Water Quality Control Board (SDRWQCB, 1978), Peeling (1974) of the Naval Ocean Systems Center (NOSC), as well as many other individuals and agencies listed in the reference section have provided data on the physical and chemical characteristics of the waters and sediments of San Diego Bay within and adjacent to the Port of San Diego's Master Plan area.

The locations of monitoring stations in and surrounding the Master Plan area are indicated for each of the Port's nine Planning Districts on separate Planning District maps entitled Biological Resources, Water/Sediment Quality, see Figures 16-24. The map symbols and a brief explanation of the meaning of the symbols, the references which apply to them, and their specific locations are provided as follows:

Water Quality Sampling Stations: This symbol located on the Port's nine Planning District maps indicates the approximate location of one or more water quality sampling stations which have been sampled at least once, and usually on a repetitive basis by either individuals, private consulting firms, or public agencies. The parameters sampled at these locations vary from study to study, however, they generally include water quality characteristics such as temperature, salinity, dissolved oxygen, turbidity, coliform bacteria, nitrate-nitrogen, total kjeldahl nitrogen, and total phosphate-phosphorous. Other data have been gathered at these water quality sampling stations in some cases. The specific reference to the individual private firm or public agency which has sampled the water quality at these locations and which maintains the specific results of the sampling is indicated by a small number on the map immediately adjacent to the symbol. This small number is keyed to the listed references of this EIR.

Sediment Sampling Stations: Sediment Sampling Stations throughout the Port's nine Planning Districts also come from a variety of studies and from a variety of sources. Although the parameters sampled vary from year to year and from station to station, in general, sediment sampling stations include information on overall sediment grain size as a result of test borings and subsequent grain size analyses, a general description of sediment composition and the depths of the various layers, and in some cases an indication of biological organisms used as contaminated sediments indicators. The location and source referencing system is identical to that used for Water Quality map symbols.

Heavy Metal Sampling Stations: In addition to sediment sampling for physical characteristics, many studies in San Diego Bay have included sampling and subsequent analyses specifically designed to detect the presence of heavy metals within the sediments. In some cases heavy metals were sampled and analyzed simultaneously with sediment physical characteristics. In other cases sampling stations for the sole purpose of monitoring heavy metals in bay sediments have been established. The same location and referencing system exists for these symbols as does for Water Quality and Sediment Quality.

The WQCB monitors surface water temperature, salinity, turbidity, dissolved oxygen, coliform bacteria, nitrate-nitrogen, total kjeldahl nitrogen, and total phosphate-phosphorous at 30 permanent water sampling stations throughout San Diego Bay, see Figures 16-24. Considerable differences in water quality are often detected at similar locations. The standard indicators of water quality such as dissolved oxygen, temperature, salinity and turbidity, are often affected by the season and time of sampling; by localized short-term disturbances of both the water column and bottom sediments shifts; by changes in the abundance of phytoplankton (microscopic marine plants) which can alter localized oxygen levels over the short term; and by intermittant local discharges of sediment-laden storm drain runoff, and discharge from Las Chollas Creek and either or both of the two rivers (Sweetwater River and Otay River) which drain into San Diego Bay. In addition, different sampling and analytical techniques are from time to time used to monitor water quality parameters.

WATER QUALITY

Dissolved oxygen (DO) concentrations of about 6.5 to 7 milligrams per liter (mg/liter); and coliform bacteria counts of between 43 to 460 maximum probable number per 100 milliliters (MPN/100ml) are routinely recorded for the 30 WQCB sampling stations within the Port's Master Plan area in San Diego Bay. During holiday weekends, particularly during times of increased boating activity, the potential exists for a short-term increase in coliform counts within those portions of San Diego Bay immediately adjacent to boating and recreational facilities, and in embayments or marinas which are more confined than open bay waters. Water quality in the North Bay entrance and the Central Bay adjacent to the San Diego-Coronado Bay Bridge is in some cases somewhat better than other areas within San Diego Bay. In particular, water quality adjacent to industrial areas, boat building and repair facilities, and shipyards tends to be somewhat lower than in other areas of San Diego Bay where such industries are absent.

Available nutrients including total phosphate-phosphorous concentrations average 0.16 milligrams per liter; total nitrate-nitrogen averages 0.03 milligrams per liter and total kjeldahl nitrogen averages 0.47 milligrams per liter. Average surface water temperature for areas within San Diego Bay is 65.7°F (18.7°C), and salinity averages 34.3 parts per thousand (o/oo). Turbidity (water clarity) data for the waters surrounding the Master Plan area average 6.6 feet (2 meters). Turbidity is quite variable throughout San Diego Bay and is generally higher in areas of more rapid circulation and areas which receive heavier disturbance. The variation in turbidity is also due to seasonal storm drain discharge and from surface runoff transport of sediments during and following heavy rainfall. These data describing the existing water quality setting in San Diego Bay represent a composite of the findings of Peeling (1974); Smith (1972); and USACE (1975).

SEDIMENT QUALITY

The San Diego Bay bottom sediment in several areas within and adjacent to the Master Plan area has been sampled and analyzed, primarily for the presence of heavy metals, see Figures 16-24. Heavy metals analyzed for have included:

arsenic, chromium, copper, lead, mercury, nickel, cobalt, and zinc. At most of the sampling locations the elements which had been found to be present in the sediment which occasionally exceeded Federal Water Pollution Control Standards have been zinc and copper. Some data exist regarding the concentration of soluble forms of heavy metals which may be present in the water column in areas within and around the Port's jurisdiction in San Diego Bay.

Monitoring on a relatively limited scale for heavy metals in the water column has been reported for some areas, particularly adjacent to marinas in Shelter Island and shipbuilding facilities adjacent to the marine industrial area south of the Port's Tenth Avenue Marine Terminal for copper, lead, zinc, and cadmium according to Kenis et al (1978) and Zirino et al (1978). The results of these studies indicate that soluble forms of copper and zinc are present in higher concentrations adjacent to the aforementioned areas than are present in other areas throughout San Diego Bay and in open ocean conditions. It should be pointed out, however, that the concentrations that have been found are still far beneath the Federal Pollution Control Standards for the elements monitored and summarized in the La Playa Beach Restoration, Shelter Island Draft EIR (SDUPD, 1979) in part as follows:

> "Recent studies have shown that the bay waters contain abnormally high concentrations of heavy metals (Zirino et al (1978); Kenis et al (1978). Near the bay entrance copper and zinc concentrations in sea water have been found to increase markedly with the falling tide, and to decrease with the incoming tide. During one tidal cycle, copper values varied from 0.7 to 3.5 parts per billion (ppb). Copper concentrations observed during one survey of heavy metals in the harbor waters increased in a northerly direction (i.e. with increasing distance from the main bay channel) from 0.5 to 1.3 ppb. Another survey found that copper concentrations in the Municipal Yacht Harbor waters ranged up to 7 ppb, a value higher than that found anywhere else in San Diego Bay (unpublished data from H.W. Goforth and M. Salizar; and Zirino et al, 1978). Zinc concentrations in the Municipal Yacht Harbor waters have been found to be 5 times greater than in open ocean waters."

As with water quality contamination the presence of pollutants in bottom sediments is a function of many different variables. Generally speaking, heavy metal contamination is most often detected in areas immediately adjacent to heavy industrial activities such as shipbuilding and repair facilities as reported by Barry (1972) and Barry (unpublished data 1971 to 1973).

Samples of bottom sediments of some areas within San Diego Bay have indicated that some areas included a thin covering layer of sludge-like material which contained species of polychaetes (marine worms) which are typically used as indicators of moderately polluted sediment. Due to the variables in time over which such data have been gathered, and due to the wide variety of sampling conditions and investigators conducting such sampling programs, the presence or absence of such biological indicators of moderately contaminated sediments must be interpreted with caution.

CONTAMINATION SOURCES

There are currently no known, major uncontrollable sources of water pollution within or adjacent to the Master Plan area, which are not specifically regulated under the existing NPDES permit process. A potential uncontrolled source of minor amounts of contamination, which could include fertilizers and plant control chemicals associated with landscaping maintenance activities, exists whenever rainfall (sometimes laden with these materials) is conveyed to San Diego Bay from adjacent upland areas via the large number of city owned storm drains in many locations throughout San Diego Bay. These storm drains discharge directly into San Diego Bay and compared to other upland areas adjacent to Port tidelands throughout San Diego Bay, the discharge volume is quite small. The discharge of surface runoff at times may increase turbidity and may introduce minor amounts of fertilizer salts, and small amounts of petroleum-related materials from roads, highways, and parking lots.

There are 12 fuel docks within the Master Plan area, located adjacent to marinas at Shelter Island, Harbor Island, and Glorietta Bay; and along the Embarcadero and the marine industrial area.

Sewage discharge from the cities surrounding San Diego Bay primarily from the City of San Diego ceased as of 1964 when all industrial and municipal sewage discharges were required to flow into the San Diego Metropolitan Sewerage System. All existing effluent discharges related to industrial and commercial or other activities are subject to the National Pollutant Discharge Elimination System (NPDES) permit process as provided for in the Federal Water Pollution Control Act of 1972 as amended (FWPCA), implemented locally by the San Diego Regional Water Quality Control Board (SDWQCB).

The North Island Naval Air Station Sewage Treatment Plant for Onshore Wastes is presently connected to the San Diego Metropolitan Sewerage System and except for direct sewage and oil discharge from Navy ships, all naval industrial pollution of the bay is being controlled. About 400,000 gallons of raw sewage is discharged into San Diego Bay each day from ships berthed at North Island and the 32nd Street Naval Station (US Navy, 1977a). The North Island piers along the Central Bay area now have complete sewage collection facilities for those ships which have holding tanks. Some ships, however, such as some aircraft carriers, do not have holding tanks and pump-out facilities and, therefore, continue to contribute sewage discharge to San Diego Bay waters. Similar facilities for sewage collection are currently being installed at the Naval Amphibious Base adjacent to the Port's Coronado Bayfront Planning District as well as in other areas adjacent to Navy facilities throughout San Diego Bay.

There are six pump-out facilities within the Master Plan area, located adjacent to marinas at Shelter Island, Harbor Island, and Coronado Cays. All are operated under NPDES permits.

Sewage discharge contributions from individual privately owned recreational pleasure craft and commercial vessels as well as maritime shipping are regulated by the Environmental Protection Agency through the Federal Water Pollution Control Act as enforced by the US Coast Guard through the Federal Marine Sanitation Device Regulations. The Environmental Protection Agency (EPA) issued regulations on January 29, 1976 which revised the Federal Standards of Performance for Marine Sanitation Devices (MSD's). The regulations apply to

all vessels on which toilet facilities have been installed, but do not require the installation of toilet facilities on a vessel which does not already have an installed toilet. The Coast Guard issued regulations which implement these standards on April 12, 1976. The term MSD includes any equipment for installation on board a vessel which is designed to recieve, retain, treat, or discharge sewage and any process which treats such sewage. It does not include "portable devices" which can be carried on and off the vessel. These regulations are in effect now (July, 1979) for new vessels, and will apply to existing vessels after January 30, 1980, see US Coast Guard pamphlet CG-485, Federal Marine Sanitation Device Regulations (USCG, 1978). After the effective date of the regulations (or the date of compliance for those vessels which comply early), vessels are exempt from state and local regulation of MSD's with one exception. A state may completely prohibit discharge from all vessels of any sewage whether treated or not into some or all of the water within such state by making a written application to the Administrator, EPA, and by receiving the Administrator's affirmative determination that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for such waters to which the prohibition would apply. San Diego Bay has been designated as a non-discharge bay and discharge of sewage from vessels is specifically prohibited. In San Diego Bay flow-through devices must be closed to prevent any discharge to the receiving waters. The standards of performance, definitions of new and existing vessels, and the time table for early and regular compliance are elaborated in greater detail in the Coast Guard pamphlet CG-485, Federal Marine Sanitation Device Regulations (USCG, 1978).

Floating debris in San Diego Bay waters, particularly in those areas which have narrow restrictions to basins or poorer circulation than other areas, seldom accumulate in any significant amount, particularly when compared to other harbors. Discarded paper, styrofoam, wood, and other materials are at times windblown from various locations along areas adjacent to the Master Plan area and tend to accumulate along the shoreline in such confined embayments and basins. Such accumulated debris is then at times conveyed into other areas of San Diego Bay via wind or water action. The Port periodically and as necessary operates a special boat to collect and dispose of flotsam.

GROUND WATER

The ground water table beneath the Master Plan area and immediately adjacent areas varies with tidal action and local rainfall, but generally is found at depths between 10 and 20 feet beneath the existing topography (generally 5 to 10 feet above sea level). Ground water that exists beneath the Master Plan area may be subject to saline intrusion and, therefore, it is unlikely that available ground water in most areas immediately adjacent to or within the Master Plan area constitutes potable water resources. No known authorized water wells are in operation in the Master Plan area or in the immediately adjacent surrounding area.

LANDFORM

Topography

The topography of the Master Plan area is characterized by occasionally very gently sloping ground at an average elevation of about 10 feet above mean sea level. The nearly level land slopes toward the bay at a grade of one to five percent, see Figure 25. Well-defined natural stream courses exist at the Paradise Creek-Sweetwater River complex in the National City Bayfront/Chula Vista Bayfront Planning Districts and at the Otay River and Palomar Street Creek complexes in the South Bay Saltlands Planning District.

Unique topographical features are not present on Port tidelands. To the northwest, outside the Master Plan area, the Point Loma Peninsula rises abruptly from the bay proper to an elevation of 300-400 feet above sea level. To the northeast the Old Town and Hillcrest areas (City of San Diego) are on a mesa at an elevation of 200-300 feet. In some areas the land-water interface is separated by small 5-10 foot high bluff-like areas where artificial fill forms steep slopes down to unprotected shorelines. In some areas unprotected shorelines include sandy beaches or mudflat areas, see Figure 7. Sandy beaches or mudflats often are the end points of natural drainage swales where surface runoff moves in sheetflow to the bay.

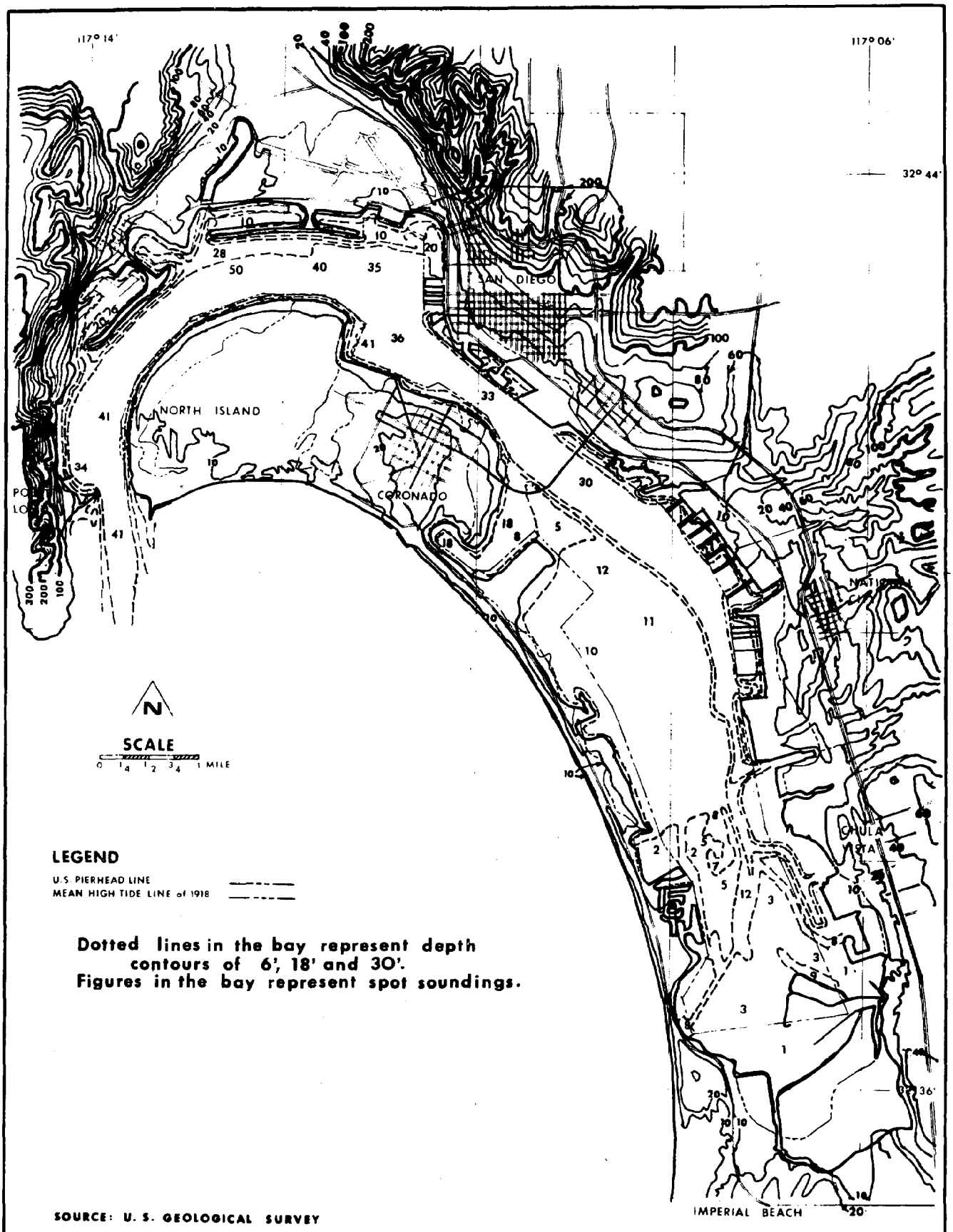
Nearly-leval topography without unique features throughout the Master Plan area inherently provides for lower development costs and reduced disturbance to natural landforms. This topography, however, reduces the operational efficiency of gravity flow storm drains and sewer mains. Conversely, the extreme elevation difference between the Point Loma Peninsula and the North Bay area, requires a sewage pump station (San Diego Metropolitan Sewerage System) and force main to convey sewage up over the Point Loma Peninsula and subsequently to the treatment plant and ocean outfall.

The nearly-level topography limits available views in some areas. Near the shoreline the appearance of vertical structures, particularly those higher than one story, is intensified.

Topography of the submerged land portions (bathymetry) of the Master Plan area, see Figure 25, is separated into three geographical sections.

North Bay includes the deepest waters. From Ballast Point to the Fifth Avenue Marina area, depth averages about 30 feet, except for the Municipal Yacht Harbor and Commercial Basin, of Shelter Island, the Navy estuary, and the two Harbor Island basins. The main ship channel is in North Bay, (42 feet deep and 600-800 feet wide) continuous from the Harbor entrance to the North Island aircraft carrier berthing area with turning basin.

Central Bay includes a dredged deepwater area (32 feet deep) which extends from the Fifth Avenue Marina, along the eastern edge of the Bay, adjacent to the US Naval Station. It continues down to the Port's National City Marine Terminal. From the east side of the curve in the San Diego-Coronado Bay Bridge a boat channel proceeds across to Glorietta Bay in Coronado. The



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Topography and Bathymetry

San Diego Bay Area—1979

Figure 25

78102-1
DEIR 9/79
UPD 9/79
NAT PHYS FACTORS

remaining bathymetry of Central Bay is very shallow (average depth less than 12 feet). The water depth in South Bay is also shallow (average depth less than 5 feet) except for three locations: The boat channel extension along the eastern Bay shoreline, from the National City Marine Terminal, averages about 20 feet; the boat channel adjacent to the Coronado Cays on the western Bay shoreline is 10-15 feet deep; Emory Channel, south of Coronado Cays is 8-12 feet deep.

Soils

The soils of the Master Plan area exist as a result of biogeochemical weathering of Late Pleistocene Terrace sands, silts, and clays and loose sands of the "Recent Deposits" geochronological period. Most soils within the Master Plan area and surrounding area do not possess sufficient fertility or appropriate texture to offer a potential for commercial agricultural uses, see Figure 27. Within adjacent city areas, established residential and commercial land uses preclude major agricultural use.

In South Bay near the Sweetwater River mouth and the Otay River backwaters, soils with good fertility and texture for agricultural uses are present. These soils, particularly the Salinas Group, have potential for tomatoes, bell peppers and other coastal crops. Such crops are being grown adjacent to the Chula Vista Bayfront Planning District. Four main soil groups are within the Master Plan area, according to the US Department of Agriculture Soil Conservation Service (USDA, 1973). A description of these soil types and their corresponding characteristics are provided in Figure 27.

Generally, soil erosion potential in the Master Plan area is negligible due to essentially level topography, small adjacent drainage basins, and relatively sparse rainfall (about 10 inches annual). Soil erosion does occur, however, in some areas along unprotected shorelines, see Figure 7. After heavy rainfall or wave disturbance from ship activity or seasonal storms, erosion of shoreline features occurs. It occurs most often where artificial fill is exposed to a large expanse of open bay water allowing for a long, unobstructed fetch. Examples are found at the outer shoreline of the Chula Vista Boat Basin; the outer shoreline of Grand Caribe Isle (East Island) in the Silver Strand South Planning District; and the inner shoreline of Harbor Island's East Basin in the Harbor Island/Lindbergh Field Planning District. Shoreline protection projects are currently under way for these areas (1979).

Physical properties of soils in the Master Plan area are generally adequate for structural foundations. Artificial fill areas, however, do have special properties such as a potential for liquefaction, which are described in the Seismicity and Ground Response sections.

GEOLOGY

Prehistory

The earlier geological history of the San Diego Bay region was summarized by the US Army Corps of Engineers in the Final EIS on the San Diego Harbor Channel Dredging project (USACE, 1975), in part as follows:

"San Diego Bay owes its origin to (a) the uplift of one or more fault blocks, which include Point Loma and possibly North Island and Coronado; (b) alluvial erosion (which occurred during the last period of lowered sea level) of channels through the present bay area by the San Diego, Sweetwater and Otay Rivers; and (c) the construction by lateral currents of a tombolo-like beach ridge (the Silver Strand) connecting North Island with Imperial Beach."

The Southern California coast experienced extensive tilting and slippage during the Pleistocene epoch (100,000 to 1,000,000 years ago). During that time, the area which is now San Diego Bay began receiving drainage from the San Diego, Sweetwater, Otay, and Tijuana rivers. During a much wetter climate, these rivers transported large sediment loads, including sands and gravels, to the Pacific Ocean shoreline. The northward littoral drift (caused by combined wave action and shoreline currents) transported sediments of the Otay and Sweetwater Rivers to form what is now the Silver Strand. When these transported sediments encountered the San Diego River and the Point Loma Peninsula, the littoral drift was slowed, and the combined sediments from the three rivers began accumulating to form the barrier beaches of the Silver Strand and the wave-built terraces of the Coronado Peninsula, Moore and Kennedy (1970).

The more recent geological history of the San Diego Bay area was also summarized in the Final EIS referenced above, in part as follows:

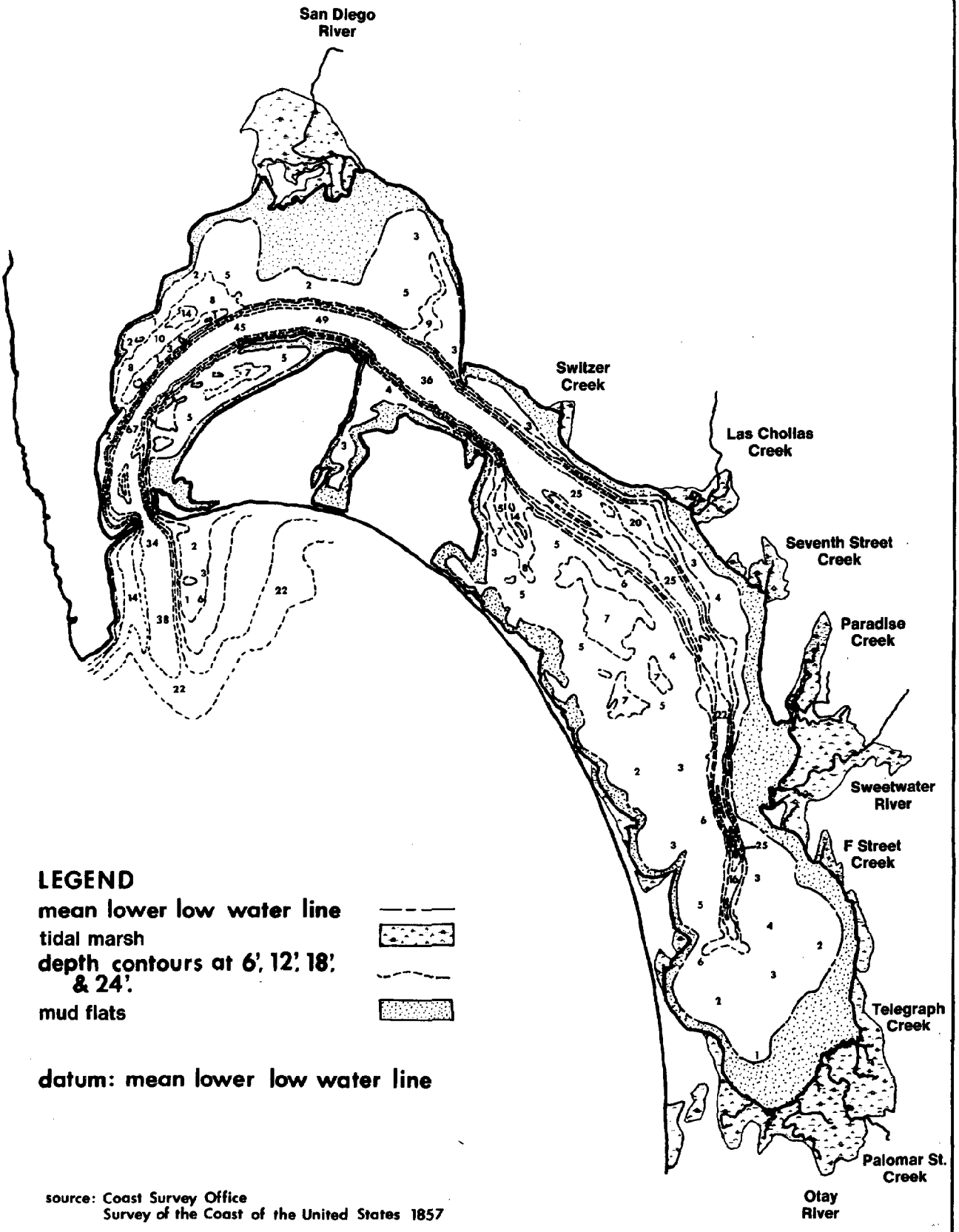
"Historically, the bay floor and bay margins were characterized by sand, silt, clay, and mud deposits. Sands were most common near the mouth and along the western margins, while finer mud deposits were characteristic on the eastern margins and the southern end of the bay. Recent studies suggest that in South San Diego Bay, the bay floor muds average about 10 to 12 feet in thickness. The bay muds rest on a 40 to 60 foot section of unconsolidated sand and silty sand layers, which, in turn, rest upon ancient consolidated sedimentary deposits. Extensive dredging since 1940 has somewhat altered the character of the bay floor. As a result of this dredging, an estimated 15 to 26 million cubic yards of sediment have been added to the Silver Strand. In areas that have been dredged, the bay floor mud layer has been removed exposing the underlying sandy strata."

Stratigraphy

Six geologic strata underlay, with some discontinuity, the Master Plan area, see Figures 28 and 29. In addition, three more recent geologic strata exist over most of the Port's tidelands, deposited during the Quaternary period, according to: Hertlein and Grant (1944); Lockheed Corporation (1967); and California Division of Mines and Geology (1975). These strata, including those listed by name and symbol, are in geochronological order as follows:

Rosario Group (Kr): Firm sandstone (bedrock); Cretaceous period, Upper Cretaceous, 70 to 100,000,000 years old; located to 150 feet deep, thickness unknown.

La Jolla formation (Tij): Firm sandstone (bedrock); Tertiary period, Eocene epoch, 40 to 60,000,000 years old; located 50 to 150 feet deep, thickness unknown.



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scale: STATUTE MILES 0 1 planning dept.

Topography and Bathymetry

San Diego Bay Area—1857

Figure 26

DATE: 6/71 DRWN: R G CHECK: DWG. NO.

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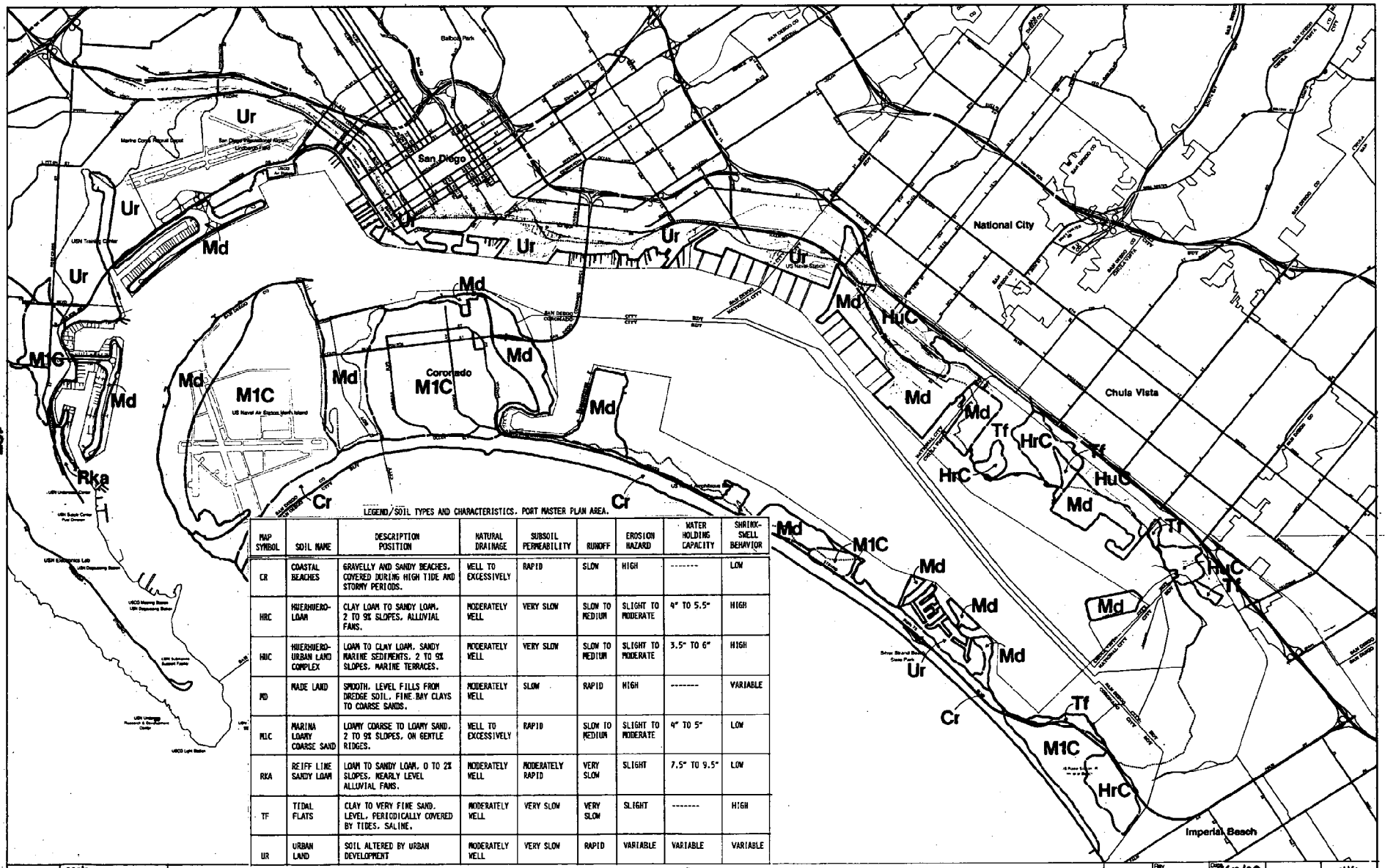
PORT OF SAN DIEGO UNITED PORT DISTRICT



LEGEND/SOIL TYPES AND CHARACTERISTICS. PORT MASTER PLAN AREA.

MAP SYMBOL	SOIL NAME	DESCRIPTION POSITION	NATURAL DRAINAGE	SUBSOIL PERMEABILITY	RUNOFF	EROSION HAZARD	WATER HOLDING CAPACITY	SHRINK-SWELL BEHAVIOR
CR	COASTAL BEACHES	GRAVELLY AND SANDY BEACHES. COVERED DURING HIGH TIDE AND STORMY PERIODS.	WELL TO EXCESSIVELY	RAPID	SLOW	HIGH	-------	LOW
HRC	HUERHUERO-LOAM	CLAY LOAM TO SANDY LOAM. 2 TO 9% SLOPES. ALLUVIAL FANS.	MODERATELY WELL	VERY SLOW	SLOW TO MEDIUM	SLIGHT TO MODERATE	4" TO 5.5"	HIGH
HUC	HUERHUERO-URBAN LAND COMPLEX	LOAM TO CLAY LOAM. SANDY MARINE SEDIMENTS. 2 TO 9% SLOPES. MARINE TERRACES.	MODERATELY WELL	VERY SLOW	SLOW TO MEDIUM	SLIGHT TO MODERATE	3.5" TO 6"	HIGH
MD	MADE LAND	SMOOTH. LEVEL FILLS FROM DREDGE SOIL. FINE BAY CLAYS TO COARSE SANDS.	MODERATELY WELL	SLOW	RAPID	HIGH	-------	VARIABLE
M1C	MARINA LOAMY COARSE SAND	LOAMY COARSE TO LOAMY SAND. 2 TO 9% SLOPES. ON GENTLE RIDGES.	WELL TO EXCESSIVELY	RAPID	SLOW TO MEDIUM	SLIGHT TO MODERATE	4" TO 5"	LOW
RKA	REIFF LINE SANDY LOAM	LOAM TO SANDY LOAM. 0 TO 2% SLOPES. NEARLY LEVEL ALLUVIAL FANS.	MODERATELY WELL	MODERATELY RAPID	VERY SLOW	SLIGHT	7.5" TO 9.5"	LOW
TF	TIDAL FLATS	CLAY TO VERY FINE SAND. LEVEL. PERIODICALLY COVERED BY TIDES. SALINE.	MODERATELY WELL	VERY SLOW	VERY SLOW	SLIGHT	-------	HIGH
UR	URBAN LAND	SOIL ALTERED BY URBAN DEVELOPMENT	MODERATELY WELL	VERY SLOW	RAPID	VARIABLE	VARIABLE	VARIABLE

scale 0 2000 feet 0 600 m 1 km

Planning Department

Soil Types San Diego Bay Area

SOURCE: U.S. DEPARTMENT OF AGRICULTURE. SOIL CONSERVATION SERVICE. 1973 SOIL SURVEY. SAN DIEGO AREA. CALIFORNIA. PARTS I AND II.

Figure 27

Date 9/19/79
Dwn RS Chk
Base 030779
No 0124204

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SOIL SERV
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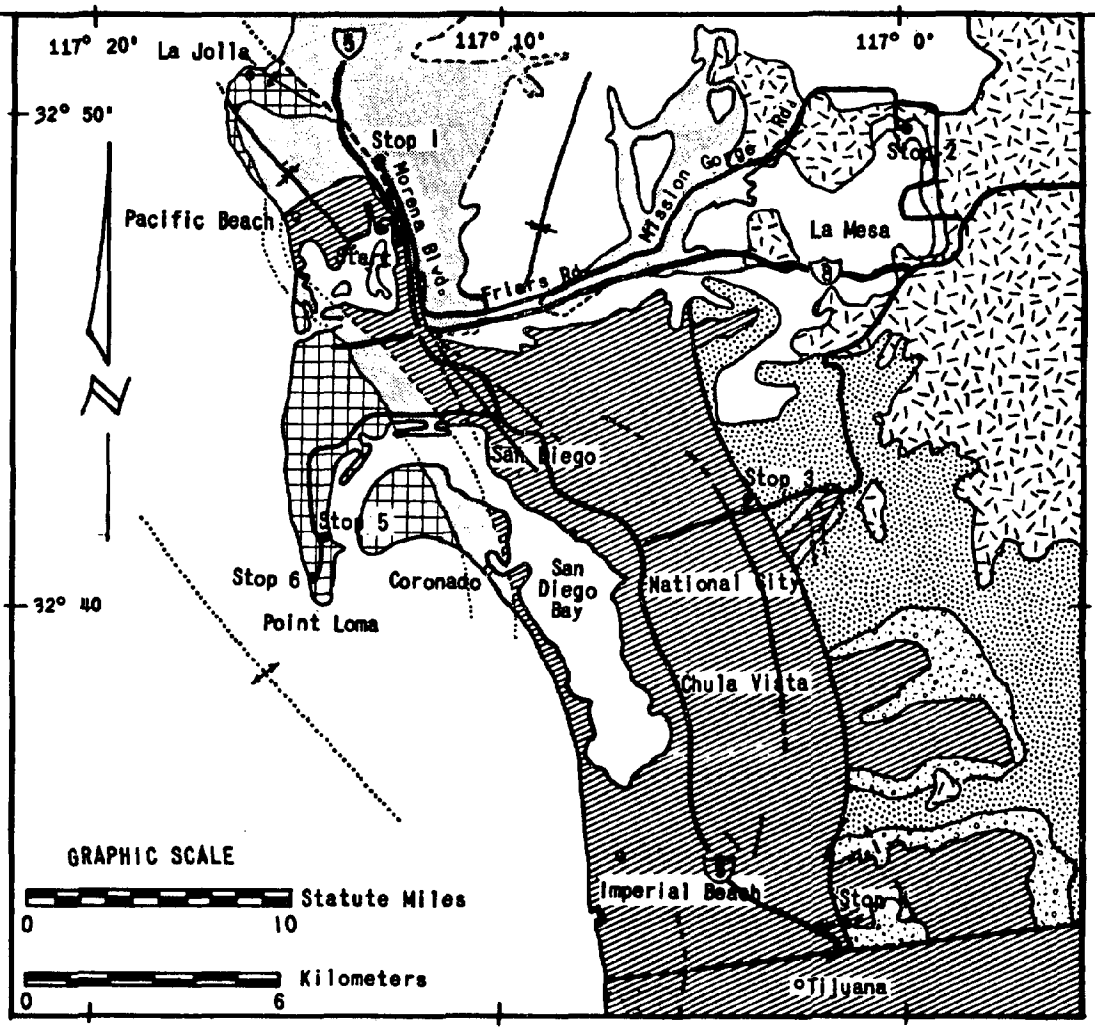
PORT OF SAN DIEGO UNIFIED PORT DISTRICT



EXPLANATION

Tertiary	Miocene Pliocene	Tsd	San Diego Formation
		To	Otay Formation
	Eocene	Tsw	Sweetwater Formation
		Tp	Poway Group
		Tlj	La Jolla Group
Cretaceous	Upper Cretaceous	Kr	Rosario Group
Jurassic and Cretaceous		Kjgm	Metamorphic and granitic rocks

SOURCE: Geology after Kennedy, 1967-1969; Artim and Pinckney, 1973. Quaternary deposits not shown.

MAP SYMBOLS

Dashed where inferred
Dotted where concealed

Contact

Fault

Anticline

Syncline

Route of field trip

Major Road

Bedrock Geology
San Diego Bay Area

Figure 28

Date
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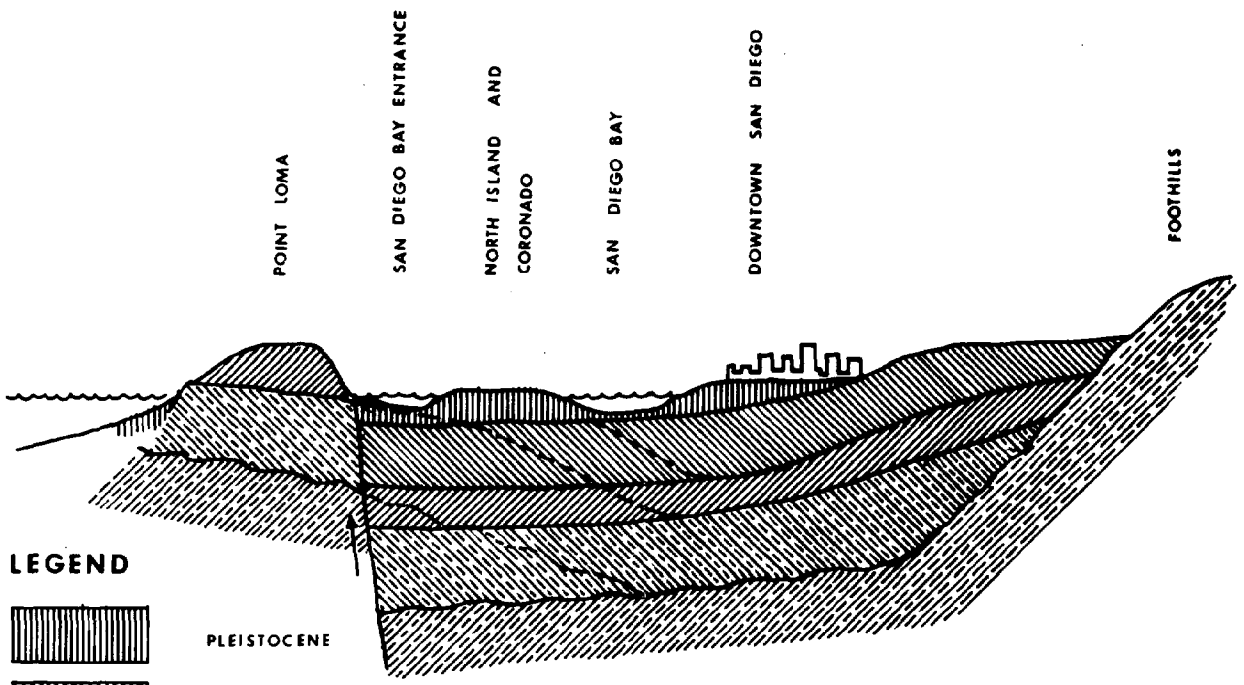
KENNEDY
1967-69

PORT OF SAN DIEGO UNIFIED PORT DISTRICT

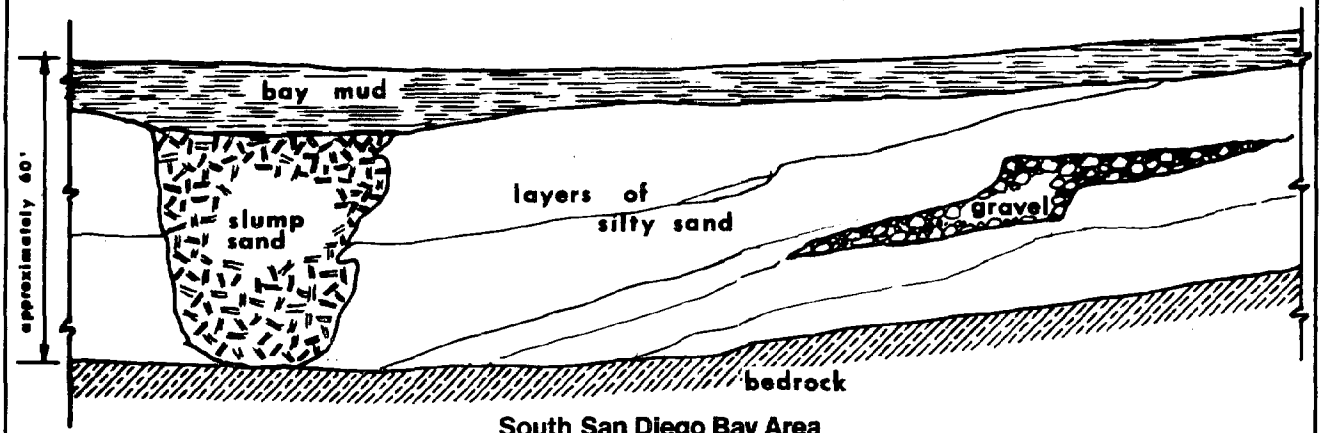


South & Central San Diego Bay
View Looking North
VERTICAL SCALE EXAGGERATED

LEGEND

- PLEISTOCENE
- PLIOCENE
- EOCENE
- CRETACEOUS
- MESOZOIC CRYSTALLINE ROCK

SECTION AS SHOWN IS ADAPTED FROM THE SAN DIEGO NATURAL HISTORY MUSEUM'S ILLUSTRATED LECTURE SERIES ON "THE NATURAL HISTORY AND ECOLOGY OF SAN DIEGO COUNTY" SUMMER 1971. THE INTERPRETATION IS SUGGESTED BY HERTLEIN AND GRANT (1944). DOTTED LINE ALTERNATE REPRESENTS INFERRED EXTRAPOLATED SYNCLINIC INTERPRETATION AFTER MOORE AND KENNEDY (1970)



South San Diego Bay Area
View Looking North
VERTICAL SCALE EXAGGERATED

SOURCE: Lockheed Report no. 20867, Geological Survey of South San Diego Bay, August 1967

scale planning department	**Geologic Cross Sections** San Diego Bay	Figure 29	Date Drn Chk Base No	78102-1 DEIR 9/79 UPD 9/79 LOCKHEED 20867	

San Diego formation (Tsd): Firm sandstone (bedrock); Tertiary period, Pliocene epoch, 1 to 13,000,000 years old; located 25 to 150 feet deep, thickness unknown.

Bay Point formation (Qbp): Loose, unconsolidated sands, silts and gravels; Quaternary period, Pleistocene epoch, 100,000 years old; located 10 to 75 feet deep, thickness varies to at least 18 feet.

Late Pleistocene Terrace (--): Loose unconsolidated sands, with discontinuous layers of cohesive silts and clays; Quaternary period, Pleistocene epoch, 50 to 100,000 years old; located 10 to 50 feet deep, thickness varies to at least 10 feet.

Recent Deposits (--): Loose unconsolidated sands; Quaternary period, Holocene epoch, present to 50,000 years old; located at the surface to 14 feet deep, thickness varies from two feet beneath tidelands to 14 feet beneath submerged lands.

Many portions of the Master Plan area have subsequently been covered by artificial fill at various times between 1914 and 1979, Smith (1975a), see Figure 5. The compaction properties of all fills have not been determined, but adjacent to some areas, such as the San Diego-Coronado Bay Bridge, the depth and compaction are known. In this area the fill is 12 to 13 feet thick and is composed of fairly dense clean sand, California Division of Toll Crossings (1968).

Paleontological Resources

No unique or potentially scientifically valuable paleontological resources are known to exist on the tidelands or submerged lands of the Master Plan area, Stephens (1929); Valentine (1961); Dostert (1974). One recorded fossil locality exists off-tidelands approximately 450 feet north of the Pomona Avenue and State Highway 75 intersection, near the Coronado Yacht Club, Kern (1978).

Mineral Resources

No commercial mining operations exist on the Port tidelands or in the immediate surrounding area, (Weber (1963). Sands and silts from surrounding areas have been used in the past for beach erosion control but in general the high organic content of most bay sands decreases their commercial value as building material, particularly as compared to river sands. Gravel deposits, which are not being mined, are known to exist adjacent to the Chula Vista Boat Basin area in South Bay, see Figure 30. The extent of the deposit and the feasibility of mining have not been investigated. The gravel deposit is covered by a layer of bay mud several feet thick. Clay deposits from surrounding areas have at times been used for brick manufacturing, but the depth (10 to 50 feet) of the clays in the Late Pleistocene Terrace deposits beneath the Master Plan area precludes feasible mining operations.

Salt is commercially produced by passive solar evaporation of sea water in the South San Diego Bay area, see Figure 30. Existing deepwater areas and established recreational, commercial and industrial land uses in most other areas within the Port's jurisdiction would preclude such an operation elsewhere.

SEISMICITY

The Port's Master Plan area, San Diego as well as the entire State of California, is within an active seismic region, the Circum-Pacific Seismic Belt. The San Diego Bay area has experienced mild earthquakes in recorded history, but none have been catastrophic. In 1964, three earthquakes of magnitude 3.5 on the Richter Scale had epicenter locations in San Diego Bay east of the Naval Amphibious Base (City of Coronado, 1974a). Earthquake faults and epicenters recorded for California, Grantz and Bartow (1971) and Real, et al (1978), are illustrated in Figure 31. Earthquake faults and epicenters within the San Diego region are illustrated in Figure 32. Earthquake faults and epicenters within the San Diego Bay area are illustrated in Figure 33. The risk or hazard associated wtih seismic events, however, is a function of the underlying soils and rock strata, the quality and type of structures built, and the probable magnitude of an earthquake, as well as the proximity to an epicenter or fault system, Von Hake and Cloud (1966).

Fault Systems

Six fault systems exist within the San Diego region which could potentially affect existing and future developments within the Master Plan area, Richter, et al (1967); McEuen and Pinckney (1972); Kennedy, et al (1975; and Leighton and Associates (1978). These fault systems are described with recorded earthquake magnitudes on the Richter Scale in order of increasing distance from the Master Plan area as follows:

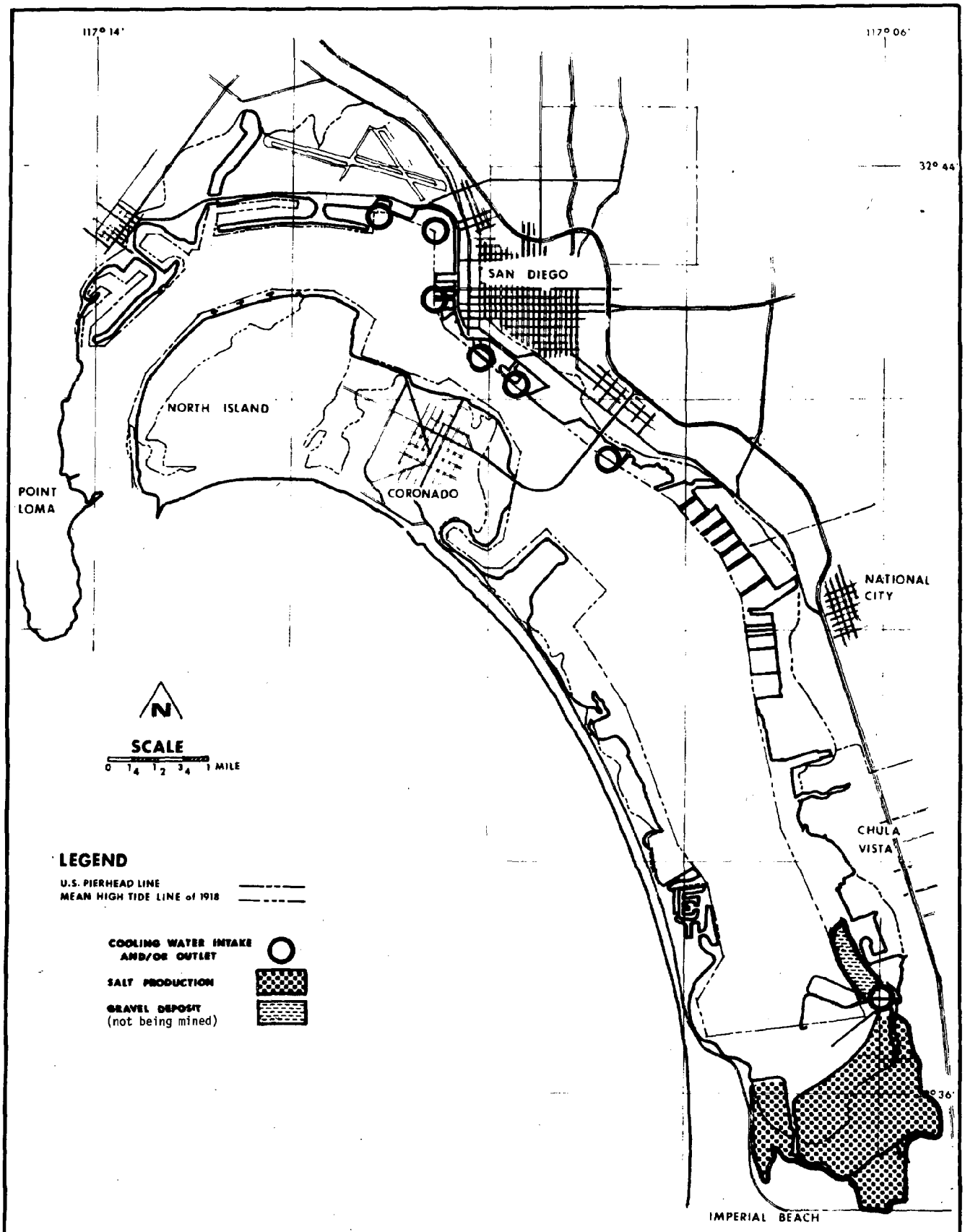
Rose Canyon Fault: System may be associated with the Newport-Inglewood system in the Long Beach area, the San Diego Bay-Tijuana system within San Diego Bay, and the Vallecito and San Miguel system in Baja California; if associated with other systems, it is approximately 140 miles long and is within the Master Plan area, about 1,500-2,000 feet northeast of the old Coronado Ferry landing; maximum probable magnitude unknown; coastal damage potential unknown; maximum recorded magnitude, if associated with Newport-Inglewood System, 6.3.

LaNacion Fault : System includes the Sweetwater fault; neither fault appears to have been active during recent time (within the last 11,000 years); approximately 14 miles long; parallel to the Rose Canyon System and 4-5 miles distant; maximum probable magnitude unknown; maximum recorded magnitude, 3.0.

Elsinore Fault: System includes the related Agua Calienta and Earthquake Valley faults; largest known active fault in region; approximately 135 miles long and 50 miles distant; maximum probable magnitude, 7.6; could cause moderate damage to coastal areas; maximum recorded magnitude, 6.0.

San Clemente Fault: System is offshore and may include extensive associated faults; approximately 110 miles long and 50 miles distant; maximum probable magnitude, 7.7; coastal damage potential unknown; maximum recorded magnitude, 5.9.

San Jacinto Fault: System includes the related Coyote Creek fault; most active known fault in region; approximately 125 miles long and 75 miles



planning dept.

Mineral and Water Resources

San Diego Bay

Figure 30

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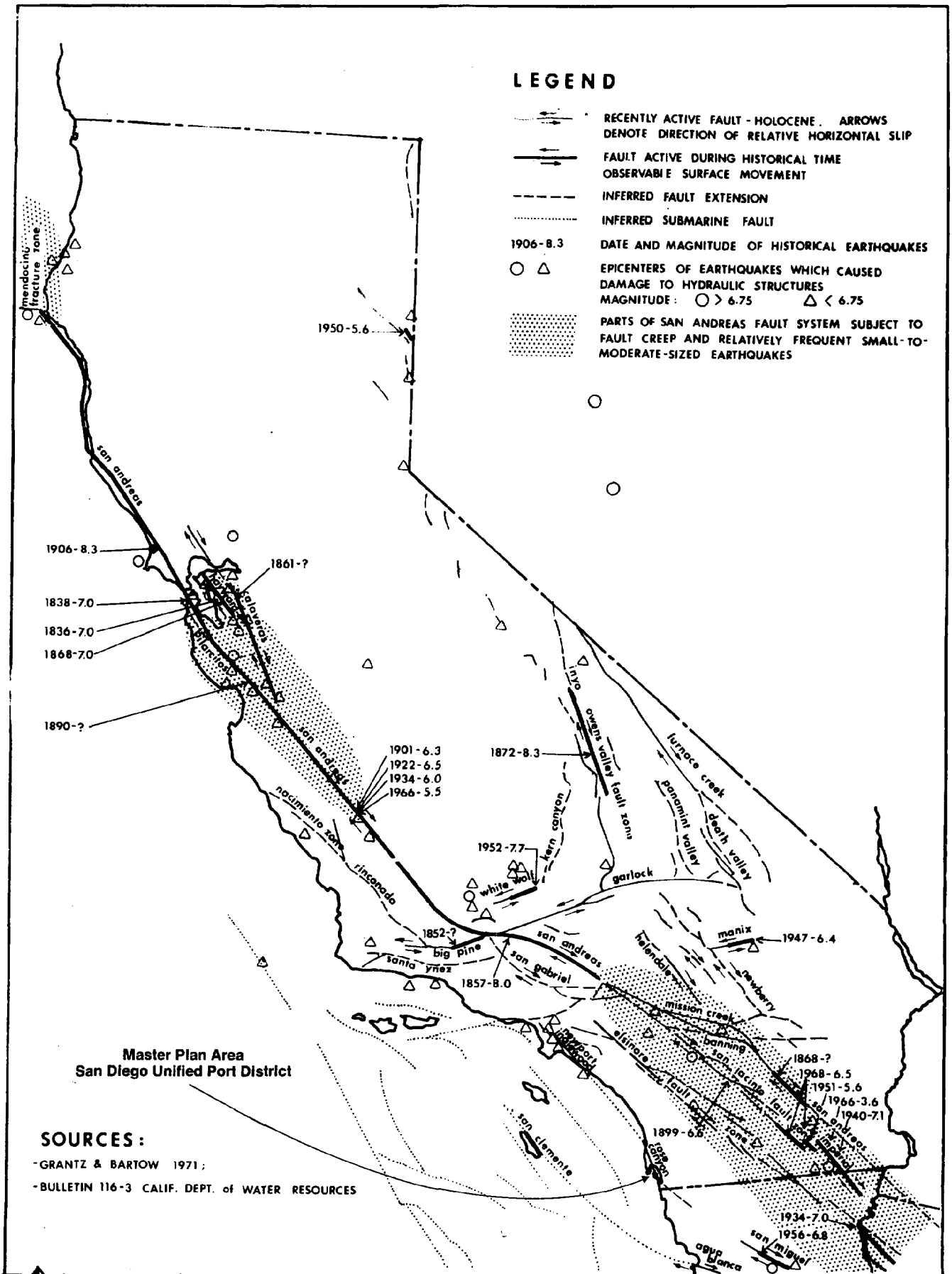
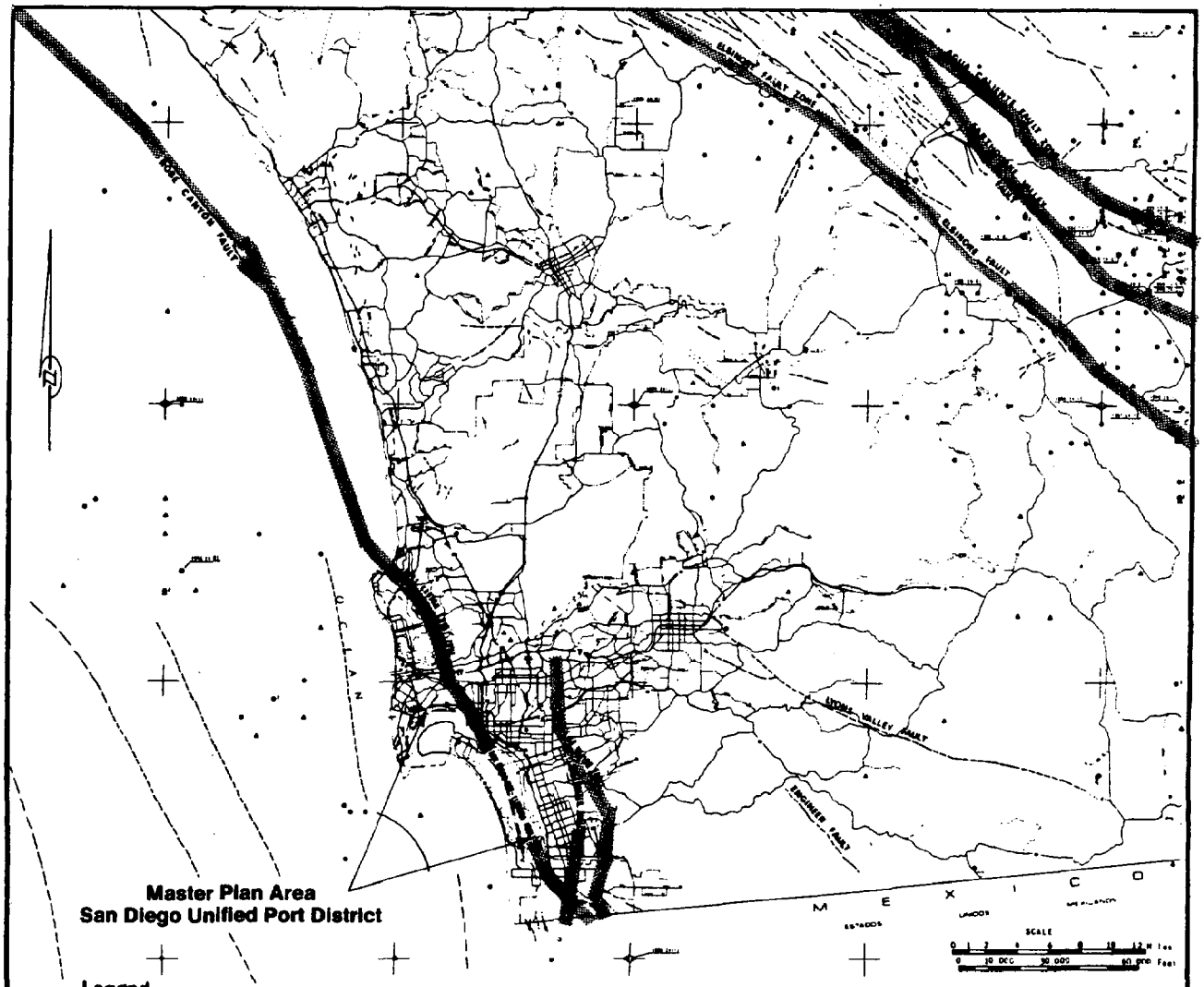

LEGEND
RECENTLY ACTIVE FAULT - HOLOCENE. ARROWS DENOTE DIRECTION OF RELATIVE HORIZONTAL SLIP
FAULT ACTIVE DURING HISTORICAL TIME OBSERVABLE SURFACE MOVEMENT
INFERRED FAULT EXTENSION
INFERRED SUBMARINE FAULT
1906-8.3 DATE AND MAGNITUDE OF HISTORICAL EARTHQUAKES
EPICENTERS OF EARTHQUAKES WHICH CAUSED DAMAGE TO HYDRAULIC STRUCTURES
MAGNITUDE: ○ > 6.75 △ < 6.75
PARTS OF SAN ANDREAS FAULT SYSTEM SUBJECT TO FAULT CREEP AND RELATIVELY FREQUENT SMALL-TO-MODERATE-SIZED EARTHQUAKES
mendocino fracture zone
1950-5.6
san andreas
1906-8.3
1861-?
1838-7.0
1836-7.0
1868-7.0
calaveras
hayward
bilarcitos
1890-?
san andreas
1901-6.3
1922-6.5
1934-6.0
1966-5.5
nacimiento zone
rinconada
1872-8.3
inyo
owens valley fault zone
furnace creek
panamint valley
death valley
kern canyon
1952-7.7
white wolf
garlock
1852-?
big pine
santa ynez
1857-8.0
san andreas
san gabriel
helendale
manix
1947-6.4
newberry
mission creek
banning
elsinore fault zone
san jacinto fault zone
1868-?
1968-6.5
1951-5.6
1966-3.6
1940-7.1
san andreas
1899-6.6
rose canyon
san clemente
1934-7.0
1956-6.8
agua blanca
san miguel
Master Plan Area
San Diego Unified Port District
SOURCES:
-GRANTZ & BARTOW 1971;
-BULLETIN 116-3 CALIF. DEPT. of WATER RESOURCES
scale:
0 25 50 MI.
planning dept.
Earthquake Faults and Epicenters
California
Figure
31
DATE: OCT 71
DRWN: RG
CHECK:
DWG. NO.
78102-1
DEIR 9/79
UPD 9/79
NAT PHYS
FACTORS



Legend

Faults: ———— (Solid where well defined, dashed where approximate or inferred, dotted where concealed).
Epicenter Magnitude Ranges: ▲ 2.0-2.9, ● 3.0-3.9, ■ 4.0-4.9, ◆ 5.0-5.9.
Epicenter Intensity Ranges: ◇ VI-VII.
Other: 4 - number of epicenters recorded at that location.
1943(4.0) - Date and magnitude or intensity of earthquake (4.0 and greater).

SOURCE · City of SD Seismic Safety Element May 74

Earthquake Faults & Epicenters
San Diego Region

FIGURE 32

Date May 18 76
Drn RS Chk
Base
No 2014101

78102-1
DEIR 9/79
UPD 9/79
7563-25
FEIR 8/76

Earthquake Faults & Epicenters
San Diego Bay Area
Figure
33
LEGEND
Accurately Located Fault
Approximately Located Fault
Possible Fault
Fault Concealed Beneath Younger Deposits
Fault Showing Relative Vertical Movement
Epicenters 3.0-3.9 on Richter Scale
(● Data taken 1934-61 ■ Data taken 1962-68)
SOURCE: FAULTS AND SPECIAL STUDIES ZONES MAP, SEPTEMBER 1975
FAULTS AND EPICENTERS MAP, COUNTY OF SAN DIEGO
Scale
Planning Department
78102-1
DEIR 9/79
UPD 9/79
COUNTY FAULT MAPS
La Nacion Fault
Sweetwater Fault
National City
Chula Vista
Imperial Beach
Coronado
San Diego
Old Town Fault
Mission Bay Fault
Rosecrans Fault
U
D

distant; maximum probable magnitude, 7.8; could cause moderate damage to coastal area; maximum recorded magnitude, 6.8 (Coyote Creek fault).

San Andreas Fault: System includes numerous other related faults; largest known active fault in California; approximately 650 miles long and 85 miles distant; maximum probable magnitude, 8.3; could cause moderate damage to coastal area; maximum recorded magnitude, 8.3.

Ground Response

Of the various types of ground movement responses experienced during earthquakes, those most applicable to the Master Plan area are ground shaking and ground failures, including liquefaction and lateral spreading, which are results of ground shaking, Ross and Dowlen (1973).

Ground shaking causes by far the most damage experienced during earthquakes. Structures built upon loose, unconsolidated, water-saturated materials, such as the Late Pleistocene Terrace, Recent Deposits, and artificial fill underlying the Master Plan area, are susceptible to vibrations or oscillations which result from an earthquake.

Ground failure from liquefaction, i.e., the situation wherein water-saturated soil, which, because of ground shaking, changes to a liquid-like state and loses its shear strength, Youd (1973), could occur on artificial fill areas in the Master Plan area. Damage to existing and future structures because of liquefaction could result from tilting, floating, or settling. Lateral spreading, i.e., the movement of soils towards an unsupported surface, could result in damage to existing and future structures along shoreline areas, particularly if soft saturated clays are present.

Tsunamis and Seiches

Tsunamis (seismic sea waves) are very long, shallow, high-velocity ocean waves that are usually generated by earthquakes. Most locally experienced seismic sea waves have been within the normal tidal range and have had few noticable effects. The greatest recorded height of a tsunami in San Diego Bay was 4.6 feet in 1960, Joy (1968). The potential for damage from seismic sea waves to land areas adjacent to San Diego Bay exists but has not been quantified. Tsunamis generated by very distant offshore earthquakes have been dampened by the wide continental shelf extending offshore from San Diego. The San Clemente Fault, however, shows evidence of vertical separation which is parallel to the coastline and could generate a tidal wave at the coast, Inman and Nordstrom (1973). Even if an extensive runup did not occur, associated currents could be strong enough to result in damage to existing and future structures located in the water or along primarily the coastal shoreline. In the absence of detailed theoretical model studies to predict tsunami runups within the Bay, using land elevation contours to delineate potential runup damage zones is conjecture.

Seiches are water surges which sometimes occur within confined areas, such as San Diego Bay, and are often initiated by earthquakes. No sieches have been recorded within San Diego Bay. An offshore localized seismic event, or one within San Diego Bay, could generate seiches which could affect the Master Plan area particularly along the shoreline. No predictions have been made.

HYDROLOGY

The hydrologic setting of the Master Plan area includes surface and ground water from rainfall and surface watering operations such as maintenance of recreational landscaping and adjacent off-tidelands residential areas. The hydrologic setting also includes the tidal circulation and current patterns of San Diego Bay.

Groundwater Resources

Ground water stored within the soil and loosely compacted rock strata beneath the Plan area and surrounding area exists as the result of surface percolation of rainfall and is periodically recharged by urban activities in those areas where impermeable surfaces such as streets, pavement, and structures do not exist. There has not been an established link between ground water beneath the Coronado peninsula and ground water beneath the San Diego mainland area.

The existing water table is located about two to five feet above sea level. It serves to prevent the complete intrusion of sea water into otherwise unsaturated soils and rock strata. The prevention of complete intrusion of saline and brackish waters from the surrounding waters, both of the open ocean and of San Diego Bay, reduces the potential for salt water damage to most species of vegetation which are typically used in urban landscaped areas. The Natural Physical Factors Report (SDUPD, 1972a), describes subsurface water within and surrounding the Master Plan area as follows:

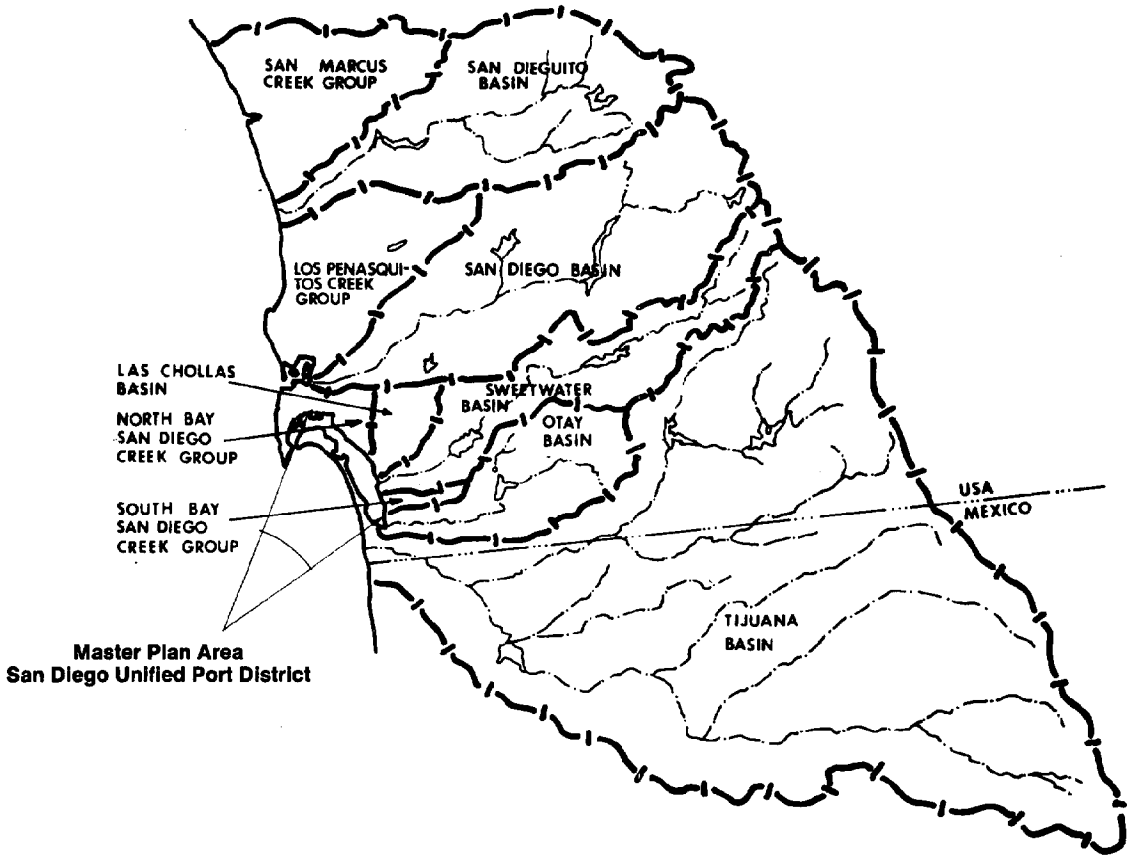
> "The water table on tidelands property varies in level approximately from a depth of two feet down to mean sea level. Salt intrusion extends inland for about one-third of a mile in the South Bay area.
>
> The ground water upland of the tidelands is not potable and is of limited use in irrigation. It has a high concentration of sulfates and chlorides. The pH level is as for sea water: approximately 8.0.
>
> Any intrusion in reverse of so-called ground fresh water into the salt water-intruded area on tidelands would obviously carry these ingredients. The closest natural source of softer water is in an aquifer at a depth of 600 feet in the South Bay region."

Surface Water

There are no permanent, large bodies of surface water either stored artificially or which exist as a result of natural processes in the Master Plan area or in the immediately surrounding area. In addition, the essentially level topography of the Plan area and surrounding area includes no natural streambeds or features which would facilitate the storage of potable water.

Watershed Drainage

Watershed drainage and river basins in the San Diego Bay area are illustrated in Figure 34. The Master Plan area includes two major river basins: the Sweetwater River basin, which drains into San Diego Bay via the Sweetwater River in the Chula Vista Bayfront Planning District, and the Otay River basin, which drains the Otay River into South San Diego Bay in the South Bay Saltlands Planning District. Three other minor localized basins provide watershed into



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Watershed Drainage/River Basins

San Diego Bay Area

Figure 34

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San Diego Bay as well. In North and Central San Diego Bay, watershed drainage is via sheet overflow. In some cases, surface runoff is conveyed to San Diego Bay via flood control channels in the North Bay San Diego Creek area and in the Las Chollas Creek drainage area. Surface runoff during and following heavy rainfall in the Master Plan areas travels at relatively low velocities via storm drains from adjacent cities due to the essentially level topography. In some areas the result of inadequately drained upland areas is that occasional nuisance situations of small localized ponding and moderate saltation of both upland and tideland areas typically follow periods of heavy rainfall. Watersheds within and adjacent to the Master Plan area are inadequate in size and too heavily urbanized to serve as dependable sources of potable water.

Flood Plain Areas

Flood plain areas within and surrounding the Master Plan area are illustrated in Figure 35. Areas subject to overflow according to the US Army Corps of Engineers (USACE, 1975) exist near the Sweetwater River, Otay River, and Las Chollas Creek.

Flood potential on tidelands at the mouth of Las Chollas Creek is estimated to cover about 4,000 feet of waterfront. Under major flood conditions, the ground could be covered with creek overflow, 1-2 feet deep. Such conditions could effect the northern portion of the Naval Repair Base and a portion of the industrial tidelands to the north.

The Sweetwater flood plain surrounding the Sweetwater River is about one mile wide near the railroad and freeway overpasses. The projected overflow area on undeveloped tideland is about 1,000 feet wide on the east and about 4,000 feet wide on the west. Under major flood conditions water could cover the area 1-2 feet deep.

The Otay River flood plain exists in the South Bay Saltlands Planning District. Concurrent with the Otay flood plain is an overflow channel from the Tijuana River. According to the Natural Physical Factors Report (SDUPC, 1972a), the potential for flood damage in this area is as follows:

> "In 1895 severe flooding caused contours to be radically changed and extensive damage to be inflicted in the lower valley. The Tijuana watershed is stopped up by reservoir dams under the present circumstances but the quality of the engineering is uncertain to land users near the estuary."

The report also indicates minor flooding potential along the Chula Vista Bayfront Planning District as follows:

> "The Chula Vista waterfront is subject to minor flooding even during the one year flood. The surface runoff is too rapid as a result of urban paving and the existing storm sewers are seriously inadequate. The one year flood, occuring simultaneously with a spring tide, would cause considerable backup flooding."

Portions of the Master Plan area have been given preliminary designations as special flood areas by the Federal Department of Housing and Urban Development (HUD) thereby establishing eligibility for participation in the National Flood Insurance Program. The preliminary designations of these areas are based upon

the simultaneous occurence of a one hundred year frequency storm; the highest anticipated extreme high tide level; together with additional special water movement phenomena, such as a seismic seawave, windblown storm waves, or seismically or otherwise induces water movement within the bay. The National Flood Insurance Program was established by the Flood Insurance Act of 1968 to make available under Federal auspices, specified amounts of flood insurance, previously unavailable from privately owned insurance companies. This insurance is available where the local government will adopt and enforce land use and control measures which will guide land development in flood prone areas in order to avoid or reduce future flood damage. The Act further requires the purchase of flood insurance as a condition of eligibility for the receipt of Federal financial assistance to be used for acquisition or construction in areas designated as special flood hazard areas.

Ocean and Bay Circulation

Water circulation in the Master Plan area is primarily the result of tidal flow of ocean waters into San Diego Bay, which is permanently open to the Pacific Ocean by a one-half mile wide, 40 to 70 foot deep, entrance channel located south of the Point Loma peninsula. This entrance is protected along the outer coast from shoaling, by the Zuniga Jetty, and by periodic maintenance dredging. Tidal circulation supplies the San Diego Bay environment with vital concentration of salts, dissolved nutrients and oxygen.

Wind currents and thermal discharges at various locations, see Figure 30, also assist in Bay water circulation. Recreational, commercial, and military vessels have a small scale effect on localized water circulation while underway.

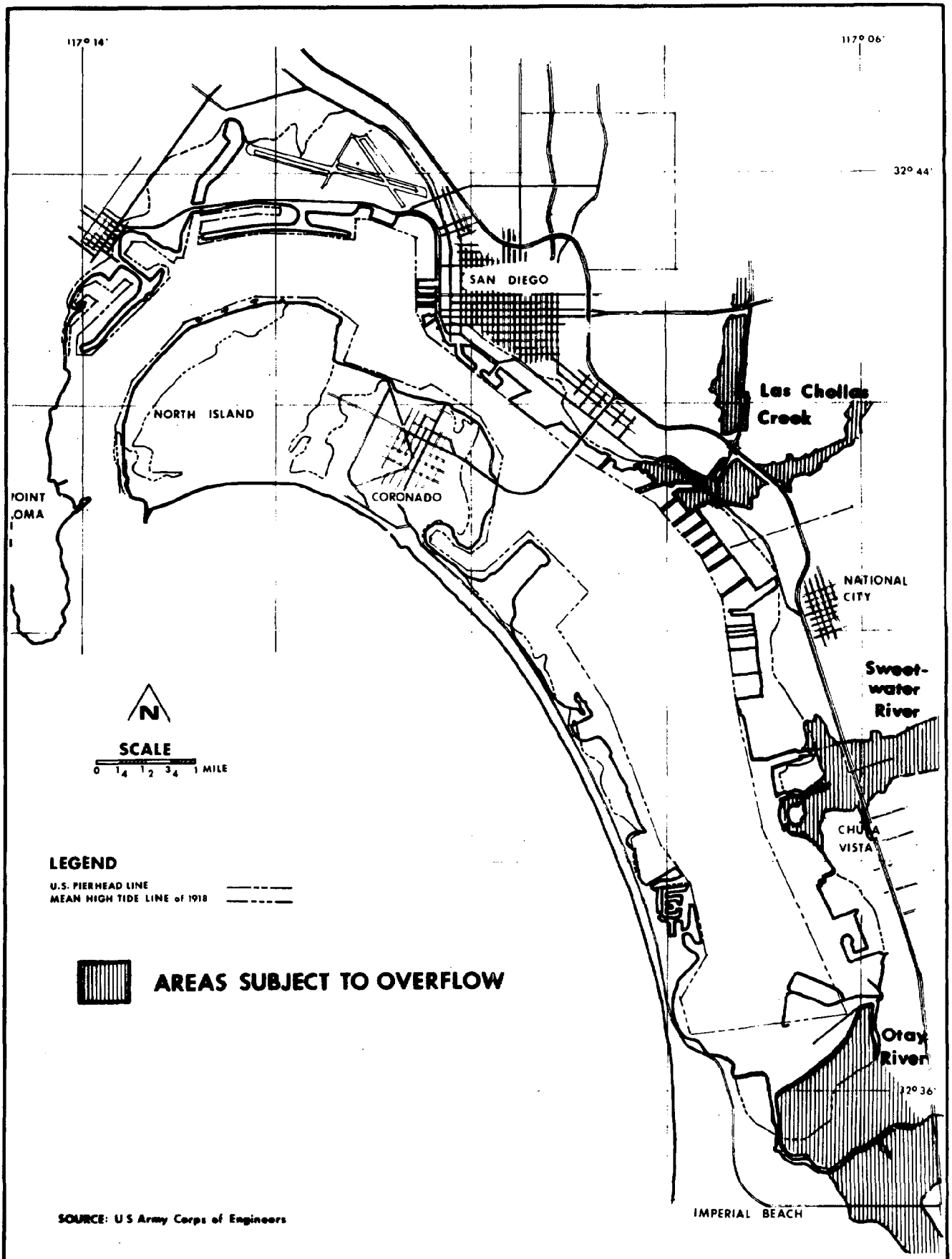
Bay Currents

Currents in San Diego Bay and in Glorietta Bay are primarily the result of tidal flows, which in San Diego Bay are defined as mixed diurnal (twice daily), with an average tidal range of 5.3 feet and an extreme range of 9.5 feet. The US Coast and Geodetic Survey has reported maximum flood tide velocities of 2.9 feet per second (1.72 knots) and maximum ebb tide velocities of 2.2 feet per second (1.30 knots) in 1970, see Figure 36.

Tidal current surface velocities along the northeast shoreline of the Plan area adjacent to the main channel reach a maximum velocity of 1.5 feet per second (0.89 knots), see Figure 36. Tidal current velocity decreases shoreward. Along the shoreline, water movement slows to less than 0.2 feet per second (0.12 knots).

The Army Corps of Engineers hydraulic model of San Diego Bay (now abandoned) describes eddy currents near the entrance to Glorietta Bay and in South Bay. Within Glorietta Bay and South Bay random water movements are present with velocities of 0.1 feet per second (0.06 knots) and less (USACE, 1970). This slow water circulation constitutes a situation which is conducive to the retention of contaminants which may be discharged into the area or which may arrive from outside sources. Such contaminants would tend to remain within these areas for long periods of time.

At peak flood tide, the eddy which forms between the Naval Amphibious Base and the Coronado Golf Course is characterized by a clockwise rotation, circu-



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Flood Plains

San Diego Bay Area

Figure 35

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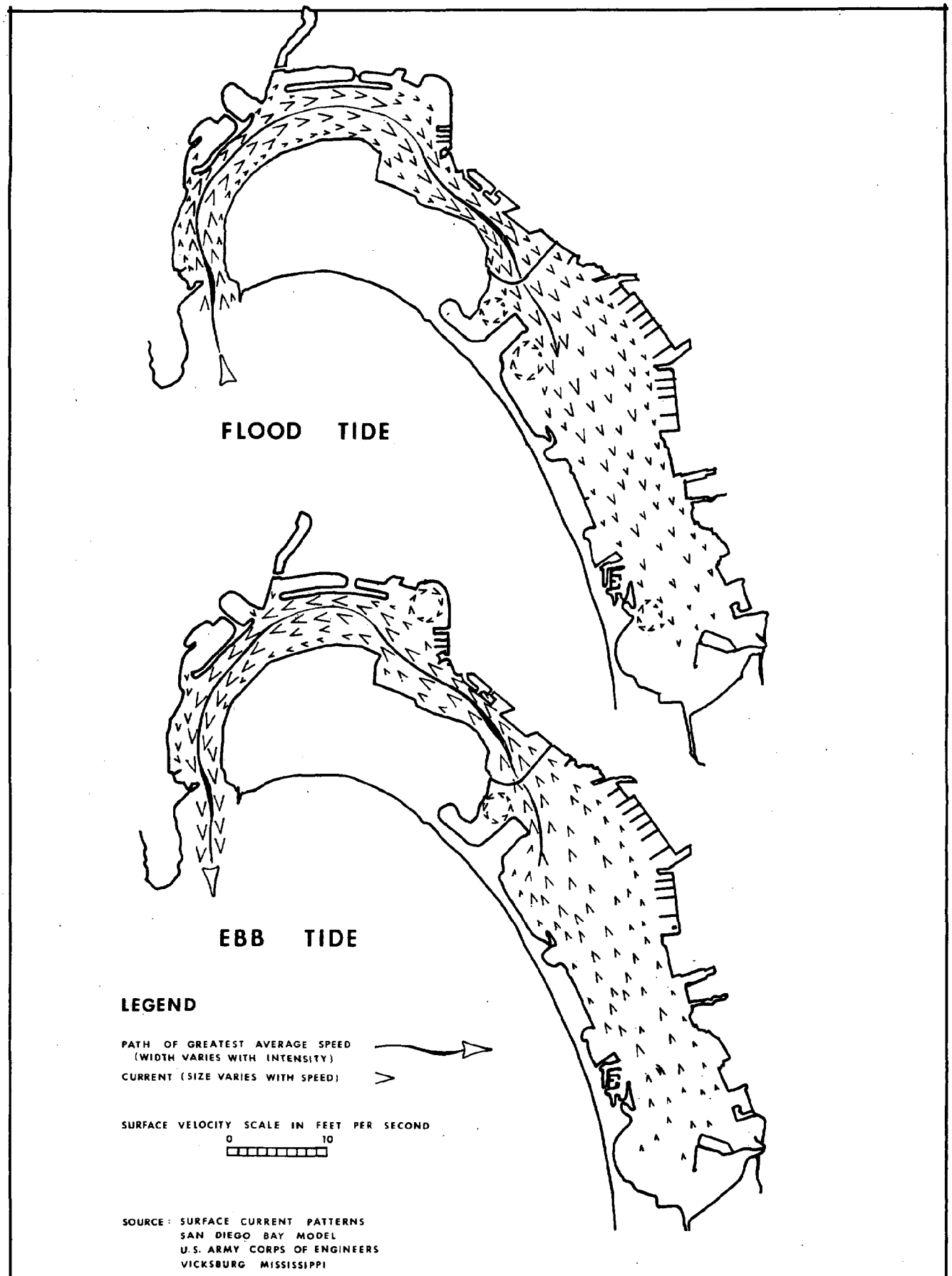
FLOOD TIDE
EBB TIDE
LEGEND
PATH OF GREATEST AVERAGE SPEED
(WIDTH VARIES WITH INTENSITY)
CURRENT (SIZE VARIES WITH SPEED)
SURFACE VELOCITY SCALE IN FEET PER SECOND
0
10
SOURCE: SURFACE CURRENT PATTERNS
SAN DIEGO BAY MODEL
U.S. ARMY CORPS OF ENGINEERS
VICKSBURG MISSISSIPPI
scale
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planning department
Tidal Currents
San Diego Bay
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lating surface bay water at about 0.14 feet per second (0.08 knots). Between peak flood tide and peak ebb tide, the eddy disburses into random movements. At peak ebb tide, the eddy reoccurs with approximately the same velocity, but with a counter-clockwise rotation. Movements in South Bay are less well defined.

Tidal Flushing

Average tidal flushing for San Diego Bay is about 30% of the entire Bay water volume, sometimes referred to as the tidal prism, exchanged per tidal cycle (12.5 hours). Extreme variation, however, exists between tidal flushing rates for the South Bay area as compared to the Bay entrance area. Complete tidal flushing for the South Bay may require 7 to 14 days, but may be only 1 to 2 days for areas near the Bay entrance.

Tidal flushing rates for the Master Plan area Bay waters is similar to rates typical of the Bay entrance. The exception would be areas around the US Naval Amphibious Base, wherein rates would be somewhat reduced. At the extremes of Glorietta Bay and South Bay tidal flushing rates would be reduced further.

Sediment Transport

Current velocities in the Master Plan area are sufficient for sediment transport along the shoreline. Sediment transport contributes to beach sand movement and to some localized shoaling, particularly in areas where artificial structures intervene along an otherwise smooth shoreline, (SDUPD, 1979). Although sediment transport is responsible for displacement of sands along areas that are or may be used for recreational purposes, the rate of transport is very slow. Existing shoreline features in most areas within the Plan area have not changed appreciably during the last 10 years.

Shoreline Erosion

The shoreline within the Master Plan area is subjected to moderate to low velocity tidal currents that tend to replenish the sands they erode with each cycle of ebb and flood tide. This erosion appears to be caused more by wave action from winds and from the wakes of passing vessles than by tidal action. The 33.1 mile shoreline within the Master Plan area is partially protected by riprap, rubble and bulkheads in most areas. The remaining shoreline includes unprotected sandy beach areas, see Figure 36.

Localized shoreline erosion does occur, particularly along the main channel where wave action is the greatest. The shoreline adjacent to the several areas, such as the Chula Vista Boat Basin peninsula, has receded. Gradual erosion between rubble and riprap has caused some undercutting and minor shoreline slope or bluff failures along shorelines in nearly all Planning Districts.

HISTORICAL AND ARCHAEOLOGICAL RESOURCES

Historical Sites

Both Federal and State registers exist for designated historic sites in the San Diego Bay area. In addition, each of the member cities and many individual societies refer to varied areas and structures as historic sites.

The National Register of Historic Places cites the Star of India and Cabrillo National Monument as officially designated historic sites. The local San Diego City Historical Site Board identifies four sites in the Port's Centre City Embarcadero Planning District as having special historical interest. These are: The Spirit of St. Louis Construction Site; the Barracks site; the Old Ferry Landing site (Dead Man's Point); and the Santa Fe Depot (off tidelands), see Figure 37.

A total of 26 historical sites exists within the Port's Master Plan area and surrounding vicinity. Descriptions of the recorded historical sites are provided in Appendix F. Sites have been recorded according to the County of San Diego Inventory (County, 1972) and the California State Inventory of Historic Resources (California Department of Parks and Recreation, 1976). Port tidelands on the Coronado Bayfront Planning District include additional historical sites listed by the Coronado Historical Society and the San Diego Chapter of the American Institute of Architects. The majority of these sites do not have Federal or State official designation or registration; however, they are included and described in detail in the City of Coronado Master EIR, Coronado -- 1990 The General Plan (Ultrasystems, 1977).

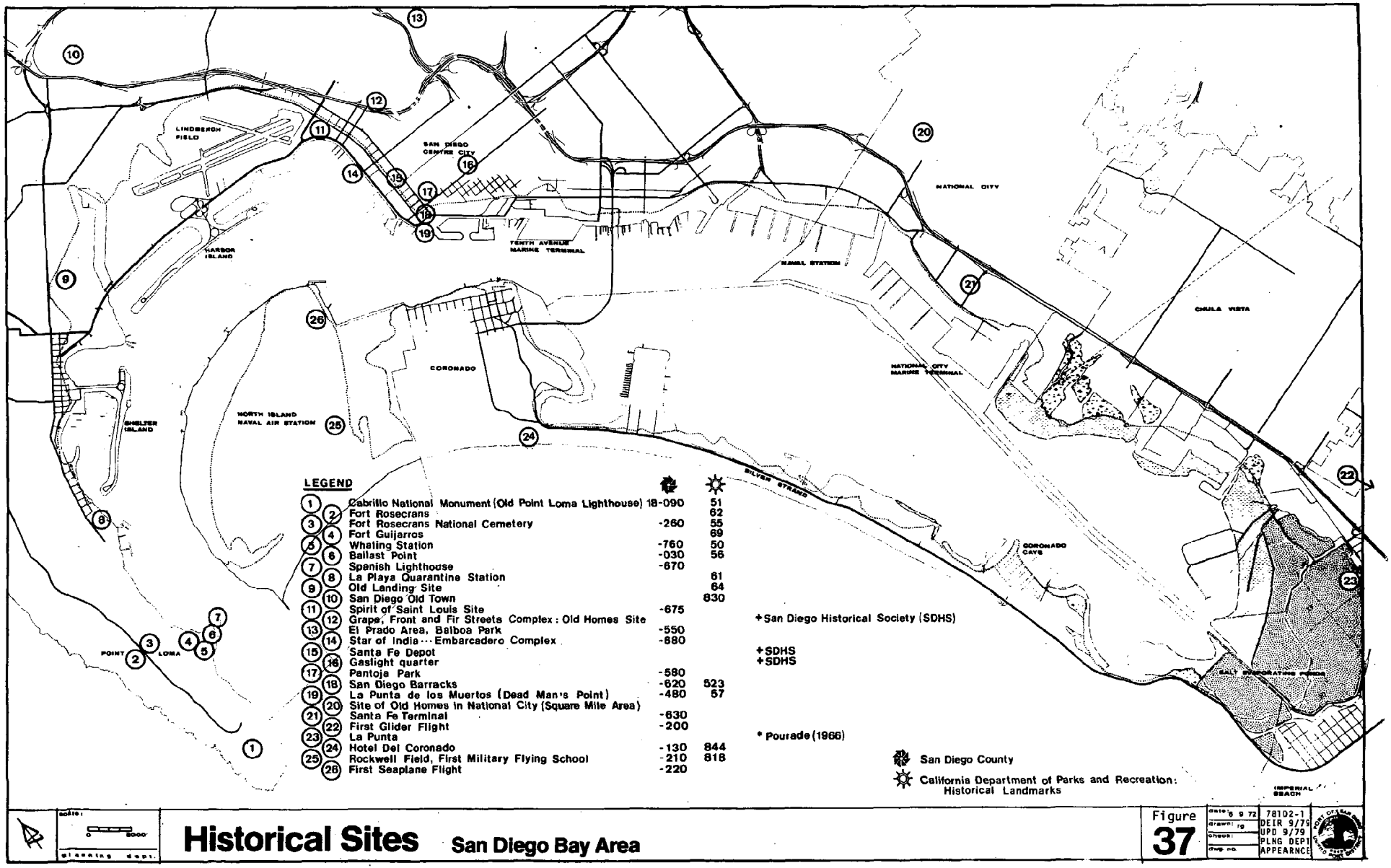
No known historical sites, derelicts, wrecks, or other objects of historical significance have been recorded on the submerged lands within the Master Plan area or in the surrounding vicinity.

Archaeological Sites

Information regarding archaeological (prehistoric) resources in and around San Diego Bay exist in the form of site records (both written and mapped) maintained in local institutions including the San Diego Museum of Man (SDMM) and the San Diego State University Anthropology Department (SDSU).

Site record searches were requested of and have been received from these two institutions in January of 1979, (Hedges, 1979, and Johnson, 1979). Archaeological sites located within the Master Plan area and surrounding vicinity are illustrated on Figure 38. SDMM sites are designated with a "W"; SDSI sites are designated with an "SDI". A total of 25 archaeological sites have been recorded by SDMM within the San Diego Bay area. The presence of even very minor prehistoric resources consitutes a "site". As indicated in Figure 38, most recorded archaeological sites are in areas which have been destroyed or nearly so.

Archaeological site records from both SDMM and SDSU are included in Appendix G. Table G-1 provides a detailed summary of archaeological site records and site information within the Port's Master Plan area and vicinity.



Historical Sites San Diego Bay Area

Figure 37

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lating surface bay water at about 0.14 feet per second (0.08 knots). Between peak flood tide and peak ebb tide, the eddy disburses into random movements. At peak ebb tide, the eddy reoccurs with approximately the same velocity, but with a counter-clockwise rotation. Movements in South Bay are less well defined.

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The SDSU Anthropology Department record search showed 16 sites located within and in the vicinity of San Diego Bay, but eight of those have no recordation date. These undated sites were likely recorded between 1920 and 1950. Several archaeological sites have been recorded by both SDSU and SDMM, see Figure 38 and Appendices F and G.

The eight sites above may be associated with aboriginal peoples from as early as 12,000 years ago, or they may be more recent. The Silver Strand area was used repeatedly by prehistoric peoples, and native Americans continued to use the area until the early part of the century, Johnson, 1979). The majority of the remaining sites identified by SDSU are located in highly impacted residential zones off Port tidelands. Most of them were shell middens (refuse mounds) with no other artifactual remains which might aid in the identification of cultural or chronological affiliation. Pottery is mentioned in the descriptions of three of these sites, all off tidelands. This indicates that these sites may be more recent. Further study of these areas could place the materials in a chronological frame. Neither SDSU or SDMM have records of offshore sites or submerged sites in the Master Plan area or vicinity. It is, however, possible that archaeological resources exist on submerged lands, since the sea level has probably risen 10 to 12 feet within the last 10,000 years, and human use of these areas as formerly dry lands may have occurred (R. May, County of San Diego, Personal Communication).

Prehistoric peoples may have been present in the San Diego Bay area and immediate vicinity for as much as the last fifteen thousand years, Rogers (1966), and Kroeber (1970). San Diego prehistoric peoples have probably existed over time in three functionally distinct and geographically separate complexes, each of which has separate identifiable characteristics with regard to the archaeological resources discovered. The three most often recognized cultural complexes are San Dieguito, La Jollan, and Diegueno (Kumeyaay).

As described by Kaldenberg and May (1975), and Hatley (1979), the San Dieguito people (12-14,000 years ago) were primarily hunting tribes, somewhat nomadic and, at least in the first two stages of their historical complex, did not appear to have permanent encampments, since no shell middens have been located in connection with these complexes. The first two identified levels of these complexes, i.e., San Dieguito I and San Dieguito II, have not yet been found west of the Laguna Mountains in San Diego County, However, the last phase of the San Dieguito complex, San Dieguito III, has been associated with shell midden in areas west of the Laguna Mountains and may, in fact, have been associated with the next complex known as La Jollan.

The La Jollan complexes (7-9,000 years ago) are most often associated with very large shell middens, large, permanent coastal populations in permanent encampments, particularly along the bays, lagoons and estuaries within San Diego County, and a functional existence based upon shellfish harvesting and deep water fishing. Following the identified La Jollan complexes, geological records indicate that substantial changes in sea level and climate began which may have led to the establishment of the next complexes of what are often called the late milling stages, the Diegueno.

The Diegueno peoples (1-7,000 years ago) are most often identified as being smaller coastal units with smaller scattered shell middens, typically represented by temporary coastal encampments but primarily represented by inland settlement patterns along well water drainage courses. These people primarily had a floral subsistence; they were widely distributed and are typified most by resource gathering functions, the construction of storage graineries and, most importantly, pottery.

As can be seen from the archaeological site record descriptions, see Table G-1, peoples who may have occupied the San Diego Bay vicinity in prehistoric times were most likely associated with the La Jollan, and to some extent with late milling, the Diegueno complexes.

IV. ENVIRONMENTAL IMPACTS AND MITIGATING MEASURES

Land and Water Use

The Master Plan proposes individual projects for the Port's nine Planning Districts, listed in tables in the Master Plan document. This environmental impact analysis applies to those project lists. In those instances where a potential for a significant adverse environmental impact may exist, environmental review subsequent to this analysis will be required. In some cases, it is conceivable that such environmental review could result in the requirement for an additional EIR to cover specific details. Consequently, this analysis is limited to only general issues at a level of specificity appropriate for a master plan, see EIR Guidelines.

The Port's Master Plan designates land and water uses to ultimately include development which will change existing undeveloped and partially developed areas to various uses within the nine Planning Districts.

IMPACTS

A number of improvement projects have been under consideration by the Port and some have been carried to various stages of detail, including environmental processing, preparation of permit applications, etc. The Coronado Tidelands Park and the Embarcadero Marina Park are two such examples of projects which are in stages of extensive discussion or construction within two of the Port's Planning Districts. In each Planning District wherein improvement projects are contemplated, the Master Plan emphasizes the compatibility of the proposed land and water uses with those adjacent existing uses on Port tidelands and within the surrounding communities.

North Bay Planning Districts

Proposed improvements in the North Bay Planning Districts are described in the Master Plan projects list. Two North Bay Planning Districts, Shelter Island and Centre City/Embarcadero, have received detailed environmental analysis in the EIR's prepared for their Precise Plans, (SDUPD, 1976a, 1976c). The Shelter Island area is almost completely developed except for implementation of the Commercial Basin mooring facility, a small boat landing, and the possible future development of a marine services building in the Shelter Island Drive commercial area.

The Harbor Island/Lindbergh Field Planning District includes upgrading of the existing East Terminal without enplanement gate additions, minor facilities repair, and work such as the aircraft holding apron and blast fence construction. Harbor Island improvements would include development of the Harbor Island east area for a hotel complex/marina, and a small aquatic center adjacent to the Coast Guard station. These proposals appear compatible with designated and existing land and water uses. Again, as appropriate, individual projects would be subject to subsequent environmental review and processing.

The Centre City/Embarcadero Planning District includes project proposals, some of which have received early environmental analysis in the Embarcadero Development Plan EIR, and others which are in various stages of detail, including en-

vironmental processing, preparation of permit application, planning, etc. Included among these are the future consideration of a hotel complex from Ash to Broadway Streets; the reconstruction of Harbor Drive; the construction of a Port Plaza complex adjacent to the Embarcadero Star of India area; modifications to the B Street pier area to accommodate cruise ship berthing, including shopping/restaurant facilities and maritime commerce support areas; and the renovation of the G Street mole area for various commercial and marine-related uses. The construction of the Embarcadero Marina Park, the future development of the Embarcadero Marina, the adjacent hotel complex at Navy Field, and other projects are identified on the project list. These were or would be subject to supplemental environmental review at such times as the project planning stages come closer to reality. At this Master Plan stage of analysis, however, those improvements currently underway and anticipated for the future, appear to be compatible with both designated and existing surrounding land and water uses in the area.

Project proposals, and reconstruction and replacement of existing facilities within North Bay Planning Districts, appear to conform with Plan designations and no environmentally significant land or water use impacts are anticipated to result from their implementation within these areas.

Central Bay Planning Districts

Proposed Master Plan improvements for the three Central Bay Planning Districts have been tabulated in three project lists in the Master Plan. Planning Districts 4 and 5, the Tenth Avenue Marine Terminal and the National City Bayfront, differ substantially in the nature of their existing and proposed land and water uses from Planning District 6, the Coronado Bayfront. Planning Districts 4 and 5 include marine-industrial and marine-related uses, whereas Planning District 6 includes undeveloped lands as well as existing commercial and recreational uses.

Proposals for the Tenth Avenue Marine Terminal Planning District include a boat-building and repair facility adjacent to the Terminal, and reconstruction and additions to other existing Terminal facilities. The National City Bayfront proposals include modifications and additions to the National City Marine Terminal and container wharf, the Sweetwater Wharf dredge and fill, and possible construction of shipyard facilities for the Rohr Surface Effect Ship (SDUPD, 1978a), and the extension of Tidelands Avenue (CVRA, 1978).

Illustrative projects proposed for the Coronado Bayfront have received environmental analysis in the Coronado Bayfront Development Plan EIR (SDUPD, 1978d). The City of Coronado's Land Use Committee is considering proposals addressed in the EIR, as well as modifications and alternate committee proposals.

Certain City of San Diego planning concepts for the Port's area that is located outside the City's planning jurisdiction (e.g. San Diego's Barrio Logan Community Plan) do not conform with the marine related industrial use proposed such as boat building and repair facilities. This is particularly so for an area south of the Tenth Avenue Marine Terminal for which the marine industrial uses, which have been established since before 1949, are to continue.

Plan concepts of the City of Coronado for the Port's North Bayfront area outside Coronado's planning jurisdiction do not conform with the proposed commercial and recreational projects. The Port's proposed projects as indicated, are presently (September, 1979) under joint review concerning revision. It is anticipated that the environmental impacts would be less severe than the case chosen for analysis.

Proposed Master Plan projects are however, compatible with existing and designated uses, for both of above areas, within and adjacent to the Port's jurisdiction.

National City Bayfront proposals, including Tidelands Avenue Extension, are compatible land uses with the surrounding area and with plan proposals of the Cities of National City and Chula Vista. Because proposed land uses are in conformance with those land uses existing and surrounding tidelands, the implementation of the Master Plan is not anticipated to result in environmentally significant land or water use impact.

South Bay Planning Districts

Master Plan implementation for the Chula Vista Bayfront Planning District would include expansion of industrial and commercial development by Port tenants. Hotels and other commercial or recreational facilities would also be included. The existing surrounding land and water uses in the Chula Vista Bayfront are similar to those proposed in the Master Plan. Specifically, development of a recreational vehicle park and hotel complex is compatible with the surrounding land uses and with those designations of the City of Chula Vista General Plan and the City of Chula Vista Bayfront Development Plan. An additional boat basin peninsula from J Street is under consideration as is the complete build-out of recreational marinas within the basin.

The Silver Strand South Planning District would include only the addition of a marina and shore protection within the Coronado Cays south area. The addition would be compatible with surrounding land and water uses.

No specific Master Plan project proposals are listed for the South Bay Saltlands, although a small portion would be added to the County of San Diego's wildlife preserve. The Western Salt Company salt ponds would revert to State control in 1984, and at such time the California Department of Fish and Game could be given management of the area for the creation of a wildlife preserve, (Bauer and Speth, 1974). Until that time, the Master Plan proposes no change from the continuation of the current land/water uses.

Expansion of existing industrial, commercial, and recreational uses within the Chula Vista Bayfront; the addition of a marina and other recreational boat-related facilities in the Silver Strand South area; and the retention of the South Bay Saltlands land and water uses in their current state are not anticipated to result in significant environmental impacts upon land and water use.

MITIGATING MEASURES

As there appear to be no environmentally significant impacts associated with land and water use designations of the Port of San Diego's Master Plan, which are incompatible with existing conditions, with the Port's 1972 Master Plan, or with the land or water use designation of surrounding jurisdictions, no mitigating measures are proposed.

Open Space

IMPACTS

Master Plan open space proposals are consistent with the 1972 Master Plan Open Space Element. Existing open space would be retained in most areas. Extensive improvements are proposed for public recreational uses which would enhance and create additional improved public access to San Diego Bay. Proposals would provide shoreline parks with pedestrian/bike pathways, beach sitting areas, and public fishing piers. Landscaped public parks along the waterfront would serve as connecting links between adjacent land uses and surrounding jurisdictions. Public recreational uses including fishing, swimming, picnicking, strolling and bicycling would be increased. Existing sandy beach areas would be enhanced in many locations. Master Plan implementation would add and increase utilization of the present acreage of improved landscaped and permanent open space.

No environmentally significant impacts on open space are anticipated to result from implementation of the Port's Master Plan.

MITIGATING MEASURES

Proposed uses within existing commercially designated areas would be designed to minimize the uses of existing vacant land for new structures. As an example, the boat building and repair facility being considered in the Tenth Avenue Marine Terminal area proposes to include landscaped improved waterfront access peripheral to the boat building and repair facility. Utilization of dredge spoil deposit sites for development into public recreational areas and landscaped parks, such as the Embarcadero Marina Park, provide an overall increase of the amount of landscaped permanent open space on Port tidelands.

Since no environmentally significant open space impacts have been identified, no specific mitigation measures are proposed.

Air Transportation

IMPACTS

The Master Plan proposes no major changes in land or water use activities that would significantly impact the availability, quality, or ultimate capacity of existing commercial air carrier transportation facilities serving the San Diego region. Master Plan proposals do not include major improvements to the present runway system or to the air operations capacity of Lindbergh Field. Intensification of existing Port tidelands development and new construction on presently undeveloped areas within the Master Plan area may slightly increase the service demand on Lindbergh Field.

Operations forecasts for Lindbergh Field (SCI, 1978), are not significantly affected by the Master Plan's land or water use project proposals. The operations forecasts contain, in general, the various demand increases brought about as the result of implementation of individual project proposals of the Port's Master Plan. An example would be the addition of hotel facilities on Harbor Island East Peninsula, which would increase the potential for visitor oriented use of existing air transportation facilities at Lindbergh Field.

No significant adverse environmental impacts on air transportation systems as a result of Master Plan implementation have been identified.

MITIGATING MEASURES

No specific mitigating measures are proposed. The objectives and findings of the San Diego Plan for Air Transportation (SANPAT), as described in the first Executive Summary, San Diego Plan for Air Transportation, Final Report (CPO, 1976a) with the Regional Transportation Plan (RTP) 1978 Update, recommended that an Air/Space Management Element be prepared for the San Diego Region. This is to be based upon the findings of the National Transportation Safety Board (NTSB) and Federal Aviation Administration (FAA) recommendations, resulting from the September 1978 crash, as well as the SANPAT studies. The RTP update calls for a vote of the people to determine the continued future use of Lindbergh Field as a commercial aviation facility. The plan delineates Aviation Policies, particularly related to Lindbergh Field, which would be further elaborated on under the Air/Space Management Element for the San Diego Region, to be prepared by CPO.

The findings of the Air/Space Management Element, as well as revised FAA procedures and plans for all San Diego air navigational facilities, would constitute additional mitigating measures primarily as related to the most desirable location for commercial aviation facilities and air transportation as a safe mode of travel, as opposed to additional growth demands upon regional air transportation facilities in general. Further, the Port of San Diego, as identified in SANPAT, is to prepare a Master Plan identifying the Lindbergh Field facility requirements through the year 1995, for incorporation into CPO's Regional Transportation Plan Update.

As to general aircraft noise considerations, beyond those discussed under the individual items of the Port's Noise Control Plan earlier, the report concluded (SDUPD, 1978f and Appendix K):

"Under the existing institutional scheme of airport noise regulation, the authority of an airport proprietor to directly regulate airport and aircraft operations is limited. Much of the authority to take regulatory action which would have the effect of reducing noise belongs to other government agencies. The Federal Aviation Administration has sole authority and responsibility for actions affecting aircraft operation. In San Diego, the City of San Diego has the primary authority and responsibility to make and effect land use decisions designed to improve, rather than aggravate, the existing noise situation. Therefore, this noise control plan cannot, and does not, constitute a promise for substantial future noise reduction.

To the extent that the Port District does have authority to strike the delicate balance between adequate air transportation service and noise reduction, it has in the past, and will continue in the future to exercise that authority. This noise plan, however, is intended also as an invitation to other government agencies which have authority to take meaningful noise reduction action to accept their responsibility for the consequences of their actions or inactions, and with that understanding, then to work together in a determined effort to improve the existing situation."

Circulation

IMPACTS

North Bay Planning Districts

Shelter Island, Harbor Island/Lindbergh Field, and Centre City/Embarcadero Planning Districts are anticipated to experience an increase in average daily traffic in some areas as a result of Master Plan implementation.

The Shelter Island Planning District should experience some improvement of vehicle circulation through the main corridor, Shelter Island Drive, as a result of coordinated landscaping and parking space improvements. The proposed Marine Services Building and a low-cost food restaurant would add additional traffic, but the level is not anticipated to be significant. Parking near Anchorage Lane and Shelter Island Drive would be impacted by the removal of on-street and off-street parking at this location. However, additional parking would be made available at the Starkist Pier. Overall, vehicle traffic and parking space demand along Shelter Island Drive would increase near Anchorage Lane, Berryman and Stephenson (1979).

Harbor Island/Lindbergh would receive increased traffic as a result of increased passenger use of Lindbergh Field, particularly across the Harbor Island Drive Bridge and on Harbor Drive. Additional traffic would be generated by hotel and marina proposals on Harbor Island's East Peninsula. Additional congestion during peak hours would continue to occur at critical places, but it is not anticipated that Master Plan implementation would significantly worsen this circumstance.

Centre City/Embarcadero would also experience a traffic increase following Master Plan implementation. Circulation speed may be decreased and some congestion may result in critical areas. Traffic along Pacific Highway between Grape and Market Streets may increase by 50% or greater. Additional traffic generated by Centre City proposals adjacent to the Master Plan area would also be directed to Pacific Highway and South Harbor Drive. Traffic generated by Master Plan proposals would be moderately heavy at Navy Field, Seaport Village and Land Field. Traffic increases would be lighter at the G Street Mole, Embarcadero Marina Park, and B Street Pier areas. Parking demand would increase adjacent to these developing areas.

Central Bay Planning Districts

The Tenth Avenue Marine Terminal, National City Bayfront, and Chula Vista Bayfront Planning Districts would experience traffic increases, but less than those anticipated for the North Bay Planning Districts.

The Tenth Avenue Marine Terminal area would not experience significant additional traffic from Master Plan implementation. The Bay Route Bikeway, City of San Diego (1978e), would retain most existing curb parking and delineate a bicycle path along Harbor Drive. This may have an effect on the circulation pattern near the National Steel and Shipbuilding Company (NASSCO), but would at the same time improve bicycle facilities. No significant vehicle traffic impacts relating to circulation are anticipated to result in the Tenth Avenue Marine Terminal Planning District.

The National City Bayfront would receive only minor changes in vehicle traffic circulation patterns and flow volumes. Master Plan proposals consist primarily of improvements and expansion to the existing National City Marine Terminal, expansion of the existing public park, and some street improvements. Traffic increases (including trucks) would be anticipated following completion of the Rohr Marine Industries' Surface Effect Ship (SES) Boatyard on the southwestern corner of the National City Marine Terminal, (SDUPD, 1978a). Circulation changes would accompany the extension of Tidelands Avenue and the connection to the State 54 Freeway. New traffic along the Tidelands Avenue extension would consist of recreational travelers to and from National City and Chula Vista, tourists from outside the area driving from Chula Vista to the freeway, and commercial traffic transiting between National City and Chula Vista. To the north, 32nd Street could become the main gateway for truck traffic from the east to the National City Bayfront. Traffic increases may occur following completion of the proposed MTDB Light Rail Transit System, since passenger stations would be constructed at 8th and 24th Streets adjacent to the Master Plan area.

The Coronado Bayfront would receive traffic increase as a result of Master Plan implementation. Additional traffic would be generated by Port developments north of the San Diego/Coronado Bay Bridge. These increases are described in greater detail in the Coronado Bayfront Development Plan EIR (SDUPD, 1978d). City of Coronado streets may be impacted to some extent by increased traffic, although the net effect would not likely result in additional congestion. The congested Third and Fourth Street intersection would not be significantly affected. Existing commuter traffic is heaviest primarily during the morning and afternoon, CALTRANS (1975). Plan proposals would generate additional traffic primarily during the evenings, weekends and holidays. It is expected that ultimate plans for this area will be less environmentally severe than those evaluated for this EIR.

South Bay Planning Districts

Additional traffic would be generated by Master Plan implementation in the Chula Vista Bayfront Planning District. In addition to Master Plan proposals, the City of Chula Vista Bayfront Plan proposes major land/water use changes adjacent to the Chula Vista Bayfront Planning District. Ongoing LCP review (September, 1979) may substantially change aspects of original Plan proposals. A loss of industrial parking and potential traffic conflicts with employment centers and recreational travelers may occur. Without the proposed extension of Tidelands Avenue connecting State 54 at the D Street landfill, additional traffic generated by Master Plan implementation would have an even greater impact upon localized congestion and higher traffic volume.

The Silver Strand South would receive slight increases in vehicle traffic corresponding to the intensity of development of Grand Caribe (East Island) and Crown Island (North Island) in the Coronado Cays. Crown Island would be served by an extension of Coronado Cays Boulevard, and traffic associated with commercial and recreational development would increase. It is not anticipated, however, that significant environmental impacts from vehicle traffic circulation increases would result in the Silver Strand South Planning District.

The South Bay Saltlands includes no improved streets within the Master Plan area and no development proposals are included in Master Plan implementation. Consequently, no significant vehicle traffic circulation impacts are anticipated.

MITIGATING MEASURES

North Bay Planning Districts

The Shelter Island Drive landscaping proposal itself, would result in improved circulation. This would result from a reduction of visual conflict, the addition of coordinated landscaping, and a reduction of curbside parking spaces. Since travel lanes would remain the same width, the project would have no adverse effect and may increase the average speed through corridors. Mitigation of parking space losses along Shelter Island Drive would be accomplished by adding additional parking at the Starkist Pier and by redesigning the public parking lot at Anchorage Lane and Canyon Street. It is anticipated that the proposed fast-food restaurant would encourage rapid turnover of parking spaces so as to increase effective utilization of existing spaces.

The recent completion of the Lindbergh Field West terminal and additional parking lot (July, 1979) mitigates the traffic circulation, congestion, and parking impacts previously associated with the airport. The proposed airport peripheral road would significantly ease congestion associated with both airport use and hotel/marina use on Harbor Drive. Adequate parking would be required for all tenant proposals for commercial developments on the Harbor Island East Peninsula.

The Centre City/Embarcadero Planning District proposes a number of changes for traffic circulation which would substantially mitigate any anticipated increases in vehicle traffic in this area. Through traffic on Harbor Drive between Grape and Market Streets would be diverted onto Pacific Highway. Harbor Drive would then be redesigned to accommodate bicycle and pedestrian traffic. Harbor Drive, between Pacific Highway and 5th Avenue would be relocated from the waterfront to west of the railroad tracks. As a result, traffic on Harbor Drive between Grape and Market Streets would be reduced 50-70%. Vehicle access would be provided to the Embarcadero Marina Park. Pedestrian and bicycle traffic circulation would be greatly improved. The result of Harbor Drive relocation would be to remove heavy traffic from waterfront locations and move it back one block from the waterfront. Many existing traffic congestion areas within adjacent City of San Diego streets would thereby be relieved. Adequate parking would be required to serve all new uses and some of the parking demand would be relieved by joint use of parking facilities when service times do not conflict. The improvement of Pacific Highway and the redesign of the Grape/Hawthorne interchange would further accommodate increased traffic. San Diego transit shuttle trams and the extension of the bus transit system to this area would relieve additional localized traffic congestion by providing a linkage connection with the City of San Diego's Gaslamp District's transit vehicles. The peripheral congestion volume and airport access road proposed by the Master Plan would reduce traffic on Laurel Street. Rerouting of traffic onto Pacific Highway would achieve the greatest mitigation for increased traffic anticipated to result from Master Plan implementation.

Central Bay Planning Districts

The Tenth Avenue Marine Terminal improvements and adjacent boatyard construction are not anticipated to result in significant traffic impacts. Offstreet parking would be provided for the proposed boatyard. Redesign of the Bay Route Bikeway would accommodate both parking and bicycling. The Rapid Transit System would also mitigate to some extent, localized traffic congestion associated with minor employment increases at the boatyard.

National City Bayfront minor traffic increases associated with the National City Marine Terminal improvement projects and proposed Rohr Marine Industry SES Shipyard would be accommodated by existing streets.

Coronado Bayfront vehicle traffic increases would be mitigated by the re-direction of Third Street traffic onto Second Street by a new road on Port jurisdiction. An inherent mitigation measure of the Master Plan proposal is that peak traffic would be spread out over a longer period and would not coincide with commuter traffic using the San Diego/Coronado Bay Bridge. Additional parking would be provided for proposed uses and additional bicycle facilities may reduce vehicle trips taken by Coronado residents to future Master Plan development areas. Modification of B Street into a one-way north, three lane street would relieve localized congestion. A recently developed potential alternative might include a loop road underneath the Bridge on Port tidelands, constructed and maintained by the City of Coronado. Again, it is expected that the joint Port/Coronado reconsideration of this area will result in less intensive use and/or a more favorable traffic flow problem. This mitigation measure is described in the Coronado Bay Development Plan EIR (SDUPD, 1978d).

South Bay Planning Districts

Chula Vista Bayfront may require the installation of new traffic control devices on Tidelands Avenue to control traffic from new access driveways and turning movements. Street extensions would be constructed of sufficient width to accommodate anticipated increases in traffic. In some areas, access driveways onto major streets may also be limited. The Tidelands Avenue extension would mitigate traffic increase impacts associated with development in the G and H Street areas.

No significant environmental impacts have been identified for either the Silver Strand South or the South Bay Saltlands Planning District and no mitigation measures are proposed for these areas.

Navigation

IMPACTS

The Master Plan proposes various water uses which could affect water traffic within San Diego Bay ship or boat channels. Additional recreational and commercial boat berthing facilities, dry boat storage, and anchorage areas are proposed, as well as Shoreline improvements such as public fishing piers.

A total of approximately 1,800 recreational boat slips in new marinas are proposed for Harbor Island East Peninsula, the Embarcadero Marina Park basin, and the Chula Vista Boat Basin. In addition, the Chula Vista J Street Peninsula Extension Marina concept could supply up to 1,500 recreational slips. These added recreational boats, plus vessels from the new commercial fishing berthing facilities at the G Street Mole Fish Harbor, the Commercial Basin Anchorage, and portions of the J Street Peninsula Extension Marina, may add up to an aggregate of 3,500 vessels, excluding military or commercial shipping, using San Diego Bay.

Average daily use of San Diego Bay by recreational vessels is substantially less than the total berthed in marina slips or at anchorage. Even during peak use periods, such as Independence Day, Thanksgiving, and Christmas, many vessels remain berthed. The recent trend in recreational boats has been to larger sailing craft.

It is not anticipated that Master Plan proposals for berthing or navigation facilities would sigificantly interfere with existing or proposed navigational aspects of San Diego Bay.

MITIGATING MEASURES

Improvements proposed under the Port's Master Plan, including recreational marinas and commercial berthing areas are regulated by navigational standards enforced by the US Coast Guard and the Port of San Diego Harbor Police. No additional mitigating measures other than those existing regulations are proposed.

Public Services and Facilities

IMPACTS

The Master Plan proposes no major changes in land or water use activities that would significantly impact the availability, quality, or ultimate capacity of existing public services and facilities including bus service, sewerage systems, water supply, storm drains, electricity, gas and telephone, fire protection, police protection, or refuse collection. Existing utilities and services would not be significantly impacted by the increased demands the Master Plan proposals would ultimately place upon them. Police and fire protection requirements of tidelands developments are the primary responsibility of the Port's Harbor Police Department. The on-going consequences of Master Plan implementation would be related to upgrading existing improvements.

Existing local sewer and water lines in some locations within the Master Plan area, such as the Coronado Bayfront, are in a deteriorated state and may have to be replaced. These activities would constitute an upgrading of existing local distribution systems. Each of the cities surrounding the Master Plan area has an existing allotment of sewerage capacity purchased from the San Diego Metropolitan Sewerage System. Existing main lines and interceptors within adjacent cities appear to have adequate capacity for existing flows from areas presently served, and for future flows, including those which would be generated by Master Plan implementation. Master Plan proposals could ultimately generate an additional 5 to 7 million gallons per day (MGD) of demand for the San Diego Metropolitan Sewerage System as part of the member city allocation.

No significant adverse environmental impacts on urban support systems have been identified.

MITIGATING MEASURES

No specific mitigating measures are proposed. In some areas the potential for water reuse or reclamation facilities does exist and, during environmental review of subsequent project proposals, such alternatives for water conservation methods would be explored. The City of Coronado, for example, is currently investigating the feasibility of using treated sewage water for irrigation of the Coronado Golf Course. If implemented, such a facility could reuse approximately 0.75 MGD and could reduce, to some extent, treatment and conveyance costs and flow demands on the existing sewerage distribution system.

Socio-economic Characteristics/Growth

IMPACTS

Social Characteristics

The Master Plan proposes land uses which are compatible with adjacent areas within the surrounding cities of San Diego, National City, Chula Vista, and Coronado. The Master Plan proposals are not anticipated to significantly alter the characteristics of the communities or population of the surrounding areas. These areas include primarily residential communities with local employment provided mainly by marine-related industry and visitor-related service facilities many of which are, or would be, located on Port tidelands.

Since tidelands cannot be developed for residential purposes, Master Plan proposals include no provisions for permanent residents or "population" in the Plan area. Master Plan proposals are not anticipated to substantially alter the population mix in terms of permanent/transient residents; population density; age; sex; race; marital status; or household composition.

Master Plan implementation would result in the addition of many new employment and leisure opportunities following completion. Employment opportunities in the surroundings of the Master Plan area include visitor-related businesses, the government sector, marine-related industrial, and commercial and recreational support activities. These opportunities would be further expanded and enhanced by Master Plan implementation.

No significant impacts on employment characteristics are anticipated to result from Plan implementation. In like fashion, it is not anticipated to significantly impact the characteristics of education, place of work, occupation, or income of residents in surrounding areas or of employees who commute to places of work within adjacent cities.

Although Master Plan implementation would not have a significant impact on housing units, surrounding housing and land values may change depending upon proximity to San Diego Bay, and other characteristics relative to proposed land improvements within the Master Plan area.

Master Plan implementation would not significantly alter existing community services and facilities such as schools and libraries, cultural/recreational areas, medical facilities, or commercial centers. The proposals do include public recreational facilities which could serve as cultural and recreational centers, particularly for nearby communities. An example of this is the proposed Embarcadero Marina Park and public fishing pier located adjacent to San Diego's Marina Redevelopment area and about one mile from the Barrio Logan community.

Economic Characteristics

Following Master Plan implementation, additional monies would be generated within local economies. Future Port tenants would pay possessory property taxes, and provide other sources of revenue such as sales, gasoline, transient occupancy taxes, and local spending by employers and employees for goods and services. A growth in visitor-related businesses, intensified use of the

marine industrial area, and commercial and recreational facilities, would result in economic growth of the cities surrounding the Port's Master Plan area.*

Growth Inducement

Master Plan proposals include such projects as new commercial centers, marine industrial facilities, public recreational areas, and support facilities for public services which could affect or be affected by population or activity growth in the surrounding areas. Master Plan implementation is not anticipated to result in significant, permanent population growth increases for the surrounding area. Any growth inducement that might be attributed to ultimate Plan implementation would occur as a result of requirements for various services, commercial operations, and new facilities which may, in turn, increase demand for public services and infrastructure within cities surrounding the Master Plan area.

MITIGATING MEASURES

Master Plan implementation is not anticipated to result in significant adverse socio-economic impacts or growth inducement impacts and no specific mitigating measures are proposed.

*See also discussion in Summary Section on page 4 on public works financing from tenant lease revenues rather than from property taxes.

Visual Quality

IMPACTS

Primarily due to the nearly level topography of the majority of the Master Plan area, Bay views are partially or entirely blocked by off-tidelands adjacent residential, commercial, or light industrial structures. Broad views of many of the Port's tideland areas and of San Diego Bay from residences within the adjacent cities are also obstructed by intervening city or shoreline structures in many locations. Numerous existing two-story or higher residential, commercial, industrial or city-owned structures have already eliminated many ground-level, single-story Bay views from inland areas.

Master Plan projects would include structures that in various places may interfere with existing bay views from adjacent areas. Because surrounding topography is essentially as level as the Plan area itself, except for the Mission Hills area and the Pt. Loma Peninsula proper, multi-story structures would not have a significantly greater potential for visual impacts than would single-story structures. As can be seen from Figure 10, major vista points in the San Diego Bay area would not be significantly impacted by proposals of the Port's Master Plan. Individual bay views, as illustrated in Figure 9, may be disrupted or blocked by some Port District proposals.

MITIGATING MEASURES

Master Plan improvements may in some cases constitute a visual barrier. They would also however, transform existing unkempt, unsightly vacant areas into landscaped public recreational facilities. Debris and clutter which collect in some areas would be removed. The result would be a more visually appealing setting following development of these areas with Master Plan proposals.

Master Plan proposals are in conformance with the objectives and criteria of the 1972 Master Plan Open Space Element which emphasizes landscaping and open space amenities within the Port's area. Ultimate Master Plan implementation would result in overall improved visual quality. Other than limited bay view obstruction at some locations, no significant adverse visual impacts are anticipated. Individual structures would, wherever possible, be oriented so as to result in minimal view interference from adjacent areas. The Port of San Diego, by Board policy, also observes strict regulations as to overall appearance requirements both of tenant and Port District proposals. The Port District also applies architectural standards which vary from area to area, but maintain a consistency of architectural theme, design, and overall visual appearance. Other than the inherent mitigation conveyed by extensive landscaping provisions proposed within the various open space and public park projects, no additional general mitigation measures are contemplated.

Noise Quality

IMPACTS

Master Plan implementation would result in minor temporary increases in ambient noise levels during construction activities as individual projects are undertaken. Other fixed noise sources associated with military, industrial, commercial, recreational and institutional land uses may increase slightly during development and operation of proposed facilities within and around the Master Plan area. Contributors to these noise sources located on Port tidelands, for the most part, would include increased operations of existing marine industrial and Port terminal-related facilities. Railroad activities may increase along the AT&SF and SD&AE routes. These may constitute additional temporary noise impacts.

Aircraft Operations

Master Plan proposals include no changes in land use designations or specific projects which would affect noise generated by aircraft operations associated with Lindbergh Field. The Federal Aviation Administration (FAA) and the Civil Aeronautics Board (CAB) have authority over the entrance of new airlines to Lindbergh Field or the addition of new service by existing airlines. Ultimate implementation of Master Plan projects does not appear to have a potential for significant changes in noise impacts associated with aircraft operations from Lindbergh Field.

As can be seen from Figure 11, Lindbergh Field aircraft noise currently affects areas of Port Planning Districts 2 and 3; Harbor Island and Centre City/Embarcadero. Additional surrounding areas within the City of San Diego are also within the various CNEL aircraft noise contours. Master Plan implementation, however, will have no effect on these existing contours. New users of areas within Planning Districts 2 and 3 may be impacted by Lindbergh Field aircraft operations noise in the future.

MITIGATING MEASURES

Significant increases in aircraft operations noise are not anticipated to result from Master Plan implementation and no specific mitigating measures are proposed. Subsequent project proposals, however, would be subject to individual environmental review. Consideration of the potential for significant adverse noise impacts upon future land uses in Planning Districts 2 and 3 would receive appropriate analysis.

Motor Vehicle Traffic

Master Plan implementation would result in increased vehicle traffic noise adjacent to areas wherein additional development is contemplated. Project proposals for example within the Port's Centre City/Embarcadero Planning District may generate additional vehicle traffic noise which has the potential to impact both adjacent residential and commercial areas as well as future residential areas within the City of San Diego.

Similarily, additional commercial/recreational development in the Chula Vista Bayfront Planning District has the potential to generate increased vehicle traffic noise which could impact adjacent properties. Surrounding areas in the Chula Vista Bayfront Planning District are, however, largely vacant, and Chula Vista Bayfront Development Plan future plans for adjacent land uses would not include densely developed residential areas.

Additional traffic noise which may be generated by Master Plan implementation in the Coronado Bayfront has been covered in detail in the Coronado Bayfront Development Plan EIR (SDUPD, 1978d). In Coronado, as is the case for other Port Planning Districts which include commercial and marine industrial uses, many streets which are currently identified as having existing vehicle traffic noise problems are those which serve as routes for heavy morning and evening commuter traffic to other off-tidelands areas. These high peak traffic commuter flows are normally associated with weekday activities. Master Plan commercial/recreational proposals for the Coronado Bayfront and other Planning Districts, would tend to generate traffic during the off-peak hours of weekdays and during the non-commuter hours of Saturdays, Sundays and holidays.

MITIGATING MEASURES

Noise controls will be implemented on several governmental levels to decrease short-term noise impacts created by trucks and other equipment during construction activities. Significant noise impacts as a result of vehicle traffic increases are not anticipated to result from Master Plan implementation. However, subsequent project and site specific noise analyses may be required on a case-by-case basis during the sequential and on-going construction of individual development within the scope of the overall Master Plan proposals. No specific mitigating measures are herein proposed.

Climate/Air Quality

IMPACTS

Master Plan implementation is not anticipated to significantly impact climate or to introduce significant levels of new source air pollutant emissions into the San Diego Air Basin. Due largely to the existing flat topography, open ocean exposure to prevailing westerly winds, and the absence of major air pollutant sources to the west, the Master Plan area would not experience additional air quality impacts following Plan implementation.

Primary pollutants introduced as a result of increased motor vehicle traffic associated with ultimate development of Master Plan proposals would increase. Local emissions would be substantially dispersed within a few thousand feet of emission sources and would be, as they are currently, transported rapidly by predominantly westerly winds from the Master Plan area further to the east.

It is unlikely that ambient air quality within and adjacent to the Plan area would become any worse than that monitored at the San Diego Air Pollution Control District (APCD) stations in downtown San Diego or in Chula Vista. Because of topography and metrological conditions and the absence of major air pollutant emission sources upwind, air quality in the Master Plan area would likely continue to be better than downtown San Diego or Chula Vista.

Additional commercial establishments, recreational facilities, and improvements and expansions of existing marine industrial facilities in the Master Plan area would increase the amount of air emissions. These additional emissions have been assessed in preparation of the federally required Air Quality Maintenance Plan (AQMP), San Diego APCD, (1978). The increased emissions are accounted for through the regionally and city-adopted population projections and the "activity level forecasts" developed by the Comprehensive Planning Organization, (CPO,1978h). Major "new source" incremental additions of air emissions to the San Diego Air Basin would be subject to subsequent project-specific environmental review and would continue to be, as they are presently, subject to regulations from the San Diego APCD.

MITIGATING MEASURES

No significant increases in motor vehicle air emissions or fixed source emissions from individual Master Plan proposals are anticipated following Plan implementation and no specific mitigating measures are proposed. Regional emissions, which included the Port's land/water use contributions, are being addressed by a large number of strategies and tactics. Individual projects would still have to comply with all air quality rules and regulations as promulgated and enforced by APCD. Continued and improved modes of public transit could ultimately reduce automobile use and related air emissions. adjacent to and even within the Master Plan area. Future implementation of the Metropolitan Transit Development Board (MTDB) Light Rail Transit System, and the San Diego Bay Route Bikeway could further reduce automobile use and related air emissions. The Port is coordinating and participating in these endeavors.

Energy

IMPACTS

Implementation of the Port's Master Plan would increase energy consumption over that which is currently experienced within the Plan area. Electrical power and natural gas consumption for industrial, commercial and recreational uses would increase by an indeterminate amount dependant upon individual project requirements. It is not anticipated that increases in the demand for electrical power and natural gas as a result of the Master Plan implementation would significantly impact management of energy resources in terms of existing trends of supply and demand.

The Master Plan area does not include residential uses. The surrounding areas which do include residential uses are not expected to experience a substantial increased population growth rate or energy growth rate. Nonetheless, the Master Plan and surrounding area may experience an energy reduction or use restrictions, independent of Plan implementation, due to governmental policies or changes in availability of the energy supply mix which includes domestic fossil fuels, imported oil, gas or power, or possibly nuclear power.

No significant energy consumption impacts are anticipated to result from the implementation of the Port's Master Plan.

MITIGATING MEASURES

Industrial and commercial development and recreational facilities proposed for the Master Plan must be designed for energy efficiency in accordance with the energy conservation standards for new non-residential buildings as adopted by the State of California Energy Commission. Proposed hotels must be designed in accordance with the State Energy Insulation Standards for non-residentail buildings.

In addition, voluntary as well as mandated conservation efforts in the commercial/industrial sectors are being experienced and would be encouraged to continue to be applied to specific projects of the Master Plan. Conservation measures would include energy saving designs for roof, wall, and floor insulation, lighting, heating, air conditioning, and water supply, and would include operational procedures.

The use of solar/thermal energy rather than natural gas would be encouraged for heating swimming pools and supplementary water heating for industrial and commercial applications. State regulations also offer the option of utilizing building designs that consume less energy than standard designs. Such options would be encouraged during construction of individual projects throughout the Master Plan area. The State Regulations are currently enforced through the building permit process applicable to Port and tenant construction projects by the cities adjacent to the Port's Master Plan area.

Biology

IMPACTS

Master Plan implementation would replace existing disturbed weedy areas with landscaped habitat in several locations within the Port's nine Planning Districts. Introduced vegetation in the areas to be landscaped is not anticipated to result in significant adverse biological impact. No naturally occurring, undisturbed terrestrial plant or animal communities exist within locations where landscaping projects are proposed. Isolated native plant communities, together with animals normally associated with these areas, exist within some areas adjacent to Central and South Bay Planning Districts where projects are proposed. In these areas, the terrestrial plants and animals primarily represent those typically found in association with disturbed habitats in urban settings.

Representative examples of relatively undisturbed, naturally occurring marine habitats, which include eelgrass beds, mud flats, and intertidal sandy beach habitats along the Master Plan area shoreline, are not anticipated to be significantly impacted by Master Plan implementation. The only marine habitat intrusions that would result from Master Plan implementation would be the construction of public fishing piers and other shoreline revetment structures in those Planning Districts previously identified, see Figures 16-24. Miscellaneous erosion control revetment improvements along the Plan area shoreline, are designed to replace existing intertidal sandy beach and rubble-strewn shorelines with rock revetment, which itself, constitutes habitat replacement rather than a total habitat loss.

Intensified application of the most stringent water quality control plans to eliminate contaminants from being introduced into the bay waters has successfully initiated the recovery of the formerly distressed marine environment of San Diego Bay. Master Plan implementation would further enhance the opportunities for more effective source control of potential marine habitat pollutants.

No significant adverse biological impact with regard to terrestrial or marine habitat are anticipated to result from Master Plan implementation with the possible exception of the proposed Sweetwater Wharf and the Chula Vista Boat Basin J Street Second Peninsula extension. This extension, which would involve artificial fill nearly a mile in length, would destroy intertidal habitat in relatively close proximity to the Sweetwater River/Paradise Creek marsh complex. This area is known to support a great abundance and large variety of marine fish and invertebrates which are very closely linked with the survival of various birds and other wildlife which reside in the Sweetwater marsh area. The Sweetwater Wharf project has the potential to significantly impact existing tidal marsh and mud flat marine habitat, adjacent to the southern edge of the Sweetwater Flood Control Channel.

Master Plan proposals are not anticipated to have a significant adverse environmental impact upon rare and endangered terrestrial or marine plants or animals which are known to exist in the Plan area. Those areas of maximum biological sensitivity have been previously identified in the Environmental Setting Section, describing biological resources. The Master Plan includes no proposals which would impact these sensitive resources.

MITIGATING MEASURES

National Pollutant Discharge Elimination System Permits (NPDES) would continue to be monitored by the San Diego Regional Water Quality Control Board (SDWQCB) for effectiveness and compliance of future tenant and Port District activities with regard to water contamination potential within the Plan area. Existing tenant leases and future leases require adjerence to all federal, state, and local environmental regulations which would be implemented through future lease agreements. Project proposals proposed for areas either within or in close proximity to sensitive biological resources would receive subsequent environmental review and supplementary EIR's may be required, as appropriate.

No specific mitigating measures are proposed at this time to alleviate the potential significant environmental impacts as a result of the Chula Vista Boat Basin Peninsula J Street extension, or the Sweetwater Wharf project.

Water and Sediment Quality

IMPACTS

Master Plan implementation includes dredge and fill operations in some locations. The proposed dredge operation at Berths 7 and 8 at the Tenth Avenue Marine Terminal to increase water depth for bulk vessels may result in a short-term localized turbidity increase. The fill operation for the Chula Vista Boat Basin Second Peninsula Extension may also result in a short-term turbidity increase.

Construction of marinas at the Harbor Island East Peninsula, the Embarcadero Park, the Chula Vista Boat Basin, and the Coronado Cays East Island would increase turbidity during construction and may have other water quality impacts during operation. Recreational vessels berthed at the proposed marinas introduce the long-term potential for localized water quality degradation from heavy metals in bottom anti-fouling paints and from unauthorized waste discharges.

Short-term impacts associated with pier construction or repairs would occur during reconstruction of the Shelter Island public fishing pier. Construction of the Harbor Island Aquatic Center, the Embarcadero Park's public fishing pier, and the southerly fishing vessel pier and slips at the Fish Market would have similar impacts. Erosion control projects would also have the potential for associated short-term water quality impacts.

Redevelopment and new construction activities would be under continued control of the San Diego Regional Control Board (WQCB). Proposed landscaping and runoff from impermeable surfaces associated with individual Master Plan project development may indirectly increase very minor amounts of contaminants reaching San Diego Bay via existing city storm drain systems.

There are currently no known major uncontrolled sources of water or sediment pollutants within or adjacent to the Master Plan area and no individual elements of the Master Plan proposal include future potential sources, other than minor amounts typically associated with urban developments. No significant water or sediment quality impacts are anticipated to result from Plan implementation other than short-term impacts associated with dredge and fill operations and pier construction.

MITIGATING MEASURES

The WQCB currently controls waste water discharge and operations cleanup at all tenant facilities and Port operations throughout the Master Plan area. Pollutant source control is currently accomplished by regular inspections and insistence on "broom-clean" conditions in effective solid waste handling procedures as well as site-specific measures to prevent pollutants from entering the water under the National Pollutant Discharge Elimination System (NPDES) program.

The US Coast Guard provides for control and clean-up of accidental spills of oil, paint, grease, fuel and other materials into San Diego Bay. The Coast Guard also regulates Marine Sanitation Devices (MSD) to be used by recreational vessels berthed within marinas. These existing regulatory controls would continue to apply to future individual projects during Master Plan implementation.

Diversion and processing of storm drain runoff water is not considered a necessary nor a feasible approach for the Master Plan area, particularly since adequate supervision regarding fertilization and watering programs for recreational and commercial areas to be landscaped would continue to be exercised by the Port of San Diego. Storm drains that exist on properties under the jurisdiction of adjacent cities contribute runoff drainage water from many upland areas. Source control would continue to be exercised by the San Diego Regional Water Quality Control Board.

No significant adverse water or sediment quality impacts have been identified and no other specific mitigating measures are proposed.

Landform/Geology/Archaeology

IMPACTS

Landform

Existing topography of the Master Plan area includes essentially level terrain. No unique landform features are present. Master Plan implementation would not include substanstial amounts of land grading or excavation, and no significant environmental impacts to landforms are anticipated. Master Plan proposals include minor dredge and fill improvements along the shoreline, particularly adjacent to the National City Marine Terminal. No significant environmental impacts on submarine topography in these areas are anticipated.

Geology

No valuable geological resources such as building materials, mineral resources, or paleontological resources are known to exist within the Master Plan area. Agricultural soils exist within the Chula Vista Bayfront Planning District within and adjacent to the Master Plan area. Master Plan proposals, however, do not include modification of these areas which would foreclose their potential use for agricultural purposes.

Soil erosion in the Master Plan area is minimal due largely to the essentially level topography, the small drainage basin, and the relatively sparse annual rainfall. Master Plan implementation is not anticipated to increase existing minimal soil erosion rates. Localized erosion does occur along the shoreline of existing artificial fills, such as the Chula Vista Boat Basin outer peninsula and the Harbor Island east peninsula, however, erosion control measures are presently being implemented.

The physical properties of the soil and underlying rock strata within the Master Plan area have been found to be generally adequate for structural foundations and no significant adverse environmental impacts are anticipated.

Seismicity

Seismic hazards, including ground shaking, ground failure in the forms of liquefaction, and seismically generated tsunamies or seiches are possible within the Plan area. The potential for structural damage and subsequent environmental impact necessitated by repair and/or cleanup operations following a seismic event, such as an earthquake, also exists. Specific potential damage and impact assessment cannot be conducted in the absence of detailed theoretical model studies to predict a seismic event and subsequent structural damage due to ground failure, ground shaking, or seismic sea waves. The use of land elevation contours as the basis to delineate potential damage zones, as has been done by some agencies, is conjecture.

Hydrology

Master Plan implementation is not anticipated to result in significant adverse hydrologic impacts. Ground water stored within the soil and loosely compacted rock strata beneath the Master Plan area may experience a decrease in recharge rate due to the introduction of impermeable surfaces such as streets, pavement, and structures. Since there are no permanent large bodies of surface water stored artificially or which exist as a result of natural processes in the

Master Plan area or in the surrounding area, no adverse environmental impacts on natural stream beds or other surface water features can result. Because of the introduction of impermeable surfaces and improved on-site drainage systems during Master Plan implementation, watershed drainage is likely to improve. Localized ponding, particularly in adjacent city areas such as the City of Coronado, as well as moderation siltation of both upland and tideland areas following heavy rainfall is going to diminish.

Construction with special preliminary designated flood prone areas would be subject to the National Flood Insurance Program established by the Flood Insurance Act of 1968 to make available under Federal auspices specified amounts of flood insurance otherwise unavailable from private insurance companies.

The construction of public fishing piers, shoreline revetment, and recreational marinas would not result in significant environmental impacts on ocean and bay circulation, bay currents, tidal flushing, sediment transport, or shoreline erosion. The placement of the Chula Vista Boat Basin J Street Peninsula extension may result in significant circulation impacts.

Historical and Archaeological Resources

No known significant archaeological or historical resources exist within the Master Plan area which would be adversely impacted by implementation of individual elements of the proposed Master Plan. Although historical and archaeological site record searches indicate that no known submerged sites exist within the Master Plan area, subsequent environmental review would be required in those areas which have not yet been disturbed by major fill and dredge activity, see Figures 5 and 6.

MITIGATING MEASURES

No specific mitigating measures are proposed with regard to potential environmental impact on landform, geological resources, or historical/archaeological resources. Regarding seismic or other geological hazards, specific construction projects would all have to comply with all applicable federal, state and local codes and satisfy soil and seismic requirements. The ongoing shore protection program would upgrade erosion control to prevent future loss of land due to wave and tidal action which have resulted in cutback and collapse of some of the banks of the shoreline. Subsequent individual project construction for individual Master Plan elements may be subject to historical/archaeological resource searches including at the shoreline and in adjacent submerged lands where appropriate.

V. UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

Unavoidable short-term environmental impacts would occur during construction of proposed individual projects of the Master Plan. These would be limited to relatively small areas within the Shelter Island and Harbor Island/ Lindbergh Field Planning Districts, and to various areas previously covered by environmental review of the Centre City/Embarcadero Planning District.

In Central Bay, short-term environmental impacts would occur during planning implementation on the Coronado Bayfront, north of the San Diego/Coronado Bay Bridge Toll Plaza. Central Bay short-term impacts would include areas around the National City Marine Terminal. Chula Vista Bayfront short-term impacts would be restricted largely to the Chula Vista Boat Basin, placement of the outer basin arm, and the existing Rohr Industries area.

South Bay Planning Districts would receive even fewer short-term impacts. No projects are proposed for the South Bay Saltlands. The Silver Strand South Planning District includes only the commercial/marina proposals south of Coronado Cays East Island.

Unavoidable short-term impacts would include:

- Dust generated by site preparation and minor grading activities in each of the Planning Districts where construction is proposed.

- Noise caused by construction equipment during use on site and transportation to and from project construction sites on some surrounding community streets. Short-term noise impacts would also occur during pile driving activity and pier construction.

- Temporary disruption of traffic flow patterns by construction equipment, by minor excavation and demolition operations, and by trucks hauling excavation/fill material.

- Minor amounts of additional air emissions from construction equipment and other work vehicles.

- Increases in vehicle traffic and vehicle traffic noise generated by construction workers commuting to and from individual Planning Districts within the Port's Master Plan area.

- Temporary disruptions in utility services during the installations and hookup of new service facilities.

- Disruption of limited areas of the marine intertidal and subtidal habitat along the shoreline during construction of proposed public fishing piers and other structures built below mean lower low water (MLLW).

Unavoidable long-term impacts, not necessarily adverse, identified with implementation of the Port's Master Plan would include:

- Unavoidable increases in traffic volume and modification to existing traffic circulation patterns in response to anticipated future traffic demands. These impacts would have the greatest effect adjacent to vacant or partially developed areas which are proposed for considerable development and resultant traffic increases.

- Increase in vehicle traffic generated noise levels on some community streets resulting from increased traffic volume and alteration in existing circulation pattern of adjacent communities.

- Potential changes in local and regional air quality primarily from addition of vehicle traffic emissions. Minor emissions are anticipated to increase as a result of on-site operation of proposed commercial and industrial facilities.

- Increase in consumption of electrical energy and natural gas and an increased demand for public services, particularly waste water treatment.

- Overall reduction in biological resources and intertidal and shallow subtidal habitat, primarily as a result of the Chula Vista Boat Basin J Street Marina Second Peninsula extension, and the Sweetwater Wharf project.

Other biological resource impacts would include alteration of primarily intertidal habitat during the construction of piers and other structures which would intrude into water areas. These long-term impacts would primarily consist of conversion of one habitat type to another. The conversion of a shallow intertidal or subtidal sandy bottom to one replaced by rock revetment shoreline and/or pier piling or structures associated with marinas and other facilities would constitute long-term impacts.

VI. ALTERNATIVES TO THE PROPOSED PROJECT

Overall San Diego Bay regional planning alternatives included consideration of over fifteen different City General Plans and Community Plans, and military plan areas. These surrounding areas, see Figure 4, were reviewed extensively during a study of composite land use, and were analyzed in conjunction with the 1964 and 1972 Port Master Plans.

In addition, prior to, and during the preparation of the Master Plan, other land/water use development alternatives were considered in detail for individual Planning Districts within the Port's jurisdiction. Alternatives for Planning Districts 1, 2 and 3, Shelter Island, Harbor Island/Lindbergh Field, and Centre City/Embarcadero were proposed and described in detail in two Precise Plans (SDUPD, 1976c and 1976d), and in the EIR's which accompanied these two Precise Plans (SDUPD 1976a and 1976e).

The Chula Vista Bayfront Plan alternatives have received considerable analysis during the preparation of the Chula Vista Bayfront Precise Plan Development Program Background report (SDUPD, 1974d), and subsequently through numerous other documents published by the City of Chula Vista including: Bayfront Redevelopment Project Plan EIR (City of Chula Vista, 1974); Bayfront Redevelopment Developer's Report (City of Chula Vista Redevelopment Agency, 1976a); and Chula Vista Bayfront Redevelopment Project Draft EIR (City of Chula Vista Redevelopment Agency, 1976b).

Port Master Plan land/water use designations do not differ substantially from those proposed in the SDUPD plans referenced above. Impacts of implementing the alternatives discussed in the corresponding SDUPD EIR's are not anticipated to differ substantially from those identified in the previous EIR's.

As an example, alternatives to the proposed project for the Coronado Bayfront includes two separate options, (SDUPD 1978b, c, and d). The first option (Option A) emphasizes the development of a mixed use oceanographic research park including an educational center, a research and business complex, and a marine sales and service facility. In addition, a small conference hotel and a waterside resort motel were proposed. A dinner restaurant and lounge and a bayside specialty shopping complex, along with the proposed Tidelands Park and shoreline park were also part of this option. This alternative would result in a slightly decreased total overall estimated traffic generation as compared with the use illustrated in the proposed Plan.

A second option (Option B) for the Coronado Bayfront proposed more recreational resort type improvements adjacent to the research park area, but would also include a dinner restaurant, small seafood market, and a recreational resort hotel. Implementation of this alternative would result in a considerable increase in the estimated daily average traffic as compared to the proposed plan. These alternatives have been analyzed in greater detail in the Coronado Bayfront Development Plan EIR (SDUPD, 1978d). Presently (September, 1979) further alternatives are being explored jointly.

Additonal detailed alternatives for the remaining Planning Districts including the National City Bayfront and the South Bay Saltlands and Silver Strand South Planning Districts have been reviewed.

In the National City Bayfront, some consideration was given to possibly phasing out, at some future time, existing lumber storage yards to permit expansion of the National City Marine Terminal or of more port-related developments.

Alternatives considered for the South Bay Saltlands included: continuation of salt production; conversion of the salt ponds to small or large commercial aquaculture production; and the reversion of these lands to the State of California for redevelopment as wildlife habitat.

No specific additional detailed alternatives were considered for the Tenth Avenue Marine Terminal Planning District because of existing, long-term marine industrial lease committments. The overall regional need for marine-related industrial waterfront land area provides the basis for continuation of these established and existing uses.

The remaining alternative for the marine industrial/terminal areas would be to discontinue the expansion of existing facilities, and to propose development of the South Bay Saltlands. As stated in the Master Plan, several specific alternatives, under the general designation of Commercial Recreation, still exist for the Silver Strand South Planning District.

No Project

Under the "No Project" alternative, individual subsequent development proposals for each Planning District would be evaluated against the 1972 Master Plan, Board policies, and other applicable rules and regulations. Without the Master Plan, projects would be individually considered without formal benefit of the integrated planning and environmental management principles developed for the Port's nine Planning Districts. The result would be an emphasis upon "piece-meal planning" as opposed to comprehensive planning. The comprehensive "Planning District" approach includes the feature of availability of appropriate timing and the provision of public facilities, well coordinated with on-going individual aspects of the Master Plan.

Other agencies involved in regional planning efforts, such as the Comprehensive Planning Organization (CPO), and special resource oriented agencies, such as the California Coastal Commission (CCC), have strongly urged the preparation of comprehensive planning documents, to the extent of rejecting individually submitted public facility improvements for an alleged lack of jurisdictional planning commitment. In this sense, it is likely that the "No Project" alternative would have the greatest potential for significant adverse environmental impact on the as yet undeveloped or partially developed portions of the Planning Districts in North and Central Bay; to a lesser extent upon Planning Districts in South Bay.

The "No Project" alternative would also not allow for the comprehensive planning approach required under the California Coastal Act of 1976 and for the Port's Master Plan and accompanying Master Plan EIR to meet the requirements of Chapter 8 of the Coastal Act which require the Port to describe the existing environmental setting and the anticipated adverse environmental impacts on biological resources within the Port's jurisdiction.

VII. RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY OF THE ENVIRONMENT

The Master Plan does not foreclose future development options of a significant nature. There are no absolutely permanent commitments which would be to the detriment of either the short or long range benefit of the environment. The Master Plan is consistent with the goals identified in Port's 1972 Master Plan, and with the General Plans of the surrounding cities. No significant irreversible environmental effects have been identified, other than the proposed Chula Vista Boat Basin, J Street Second Peninsula extension, and the Sweetwater Wharf project.

As transportation/circulation is a major concept of the Port's proposed Master Plan, incorporation of other modes of transportation which would increase the overall efficiency of areawide circulation such as people-movers, etc., can be achieved as they become feasible. A self-contained or even supplementary public transit system in the Master Plan area is neither economically justifiable nor environmentally sound when viewed from the total resource commitment which would be required.

The Master Plan, by its emphasis on coordinated ongoing improvement activities, compatible with existing adjacent land and water uses, sets a pattern of resource conservation which would provide a more effective and efficient use of increasingly scarce land and water areas. As such, the Plan promotes the conservation and efficient utilization of land, water, and energy resources. The Master Plan proposes to further intensify existing Port operations and marine-related facilities, and thereby further concentrate Port-related uses within an already existing center of industry and commerce. The Master Plan thus promotes and carries out the goal of the California Coastal Act of 1976 to conserve undeveloped, non-port coastal land and water areas which are in constant competition for uses other than commerce and industry. Further, by implementation of the South Bay Wildlife Reserve in its completed form, the Port of San Diego has constructed the single largest artificial wildlife reserve of its kind in the Continental United States,(SDUPD, 1976b). As such, this wildlife reserve constitutes an expansion and enhancement of natural biological habitat and has additional value because of its location within the Pacific Flyway, the pathway used by waterfowl during winter migrations to the south. In addition, the clean and calm water of South San Diego Bay in close proximity to this artificial habitat provides an ideal food and shelter source for many fishes and marine invertebrates, which in turn, are fed upon by resident and migratory birds.

The General Plans of the surrounding cities also look to San Diego Bay as being planned to support their residential/resort communities with a large variety of commercial attractions intended to serve the needs of local residents and visitors. The Master Plan clearly encourages the long-term enhancement of San Diego Bay as a commercial and recreational area. The Master Plan also recognizes the close proximity of Naval installations, the US/Mexico border, and San Diego International Airport/Lindbergh Field as being important elements in shaping the future of surrounding cities.

The Master Plan would produce long-term economic benefits to the communities surrounding San Diego Bay, particularly, those of the metropolitan San Diego region. The Centre City Marina residential complex would be greatly enhanced by the increased commercial and recreational developments proposed in the Master Plan.

Except for the J Street Peninsula extension and the Sweetwater Wharf project, it is not anticipated that the developments proposed within the Master Plan would have significant impacts upon the long-term productivity of San Diego Bay as a biological resource. Conservation and enhancement of existing natural habitat areas where feasible, for both terrestrial and marine life, would continue to be implemented under the Master Plan, due largely to the environmental resources inventory established by this EIR and by ongoing federal, state and local programs.

VIII. IRREVERSIBLE ENVIRONMENTAL CHANGES IF THE PROJECT IS IMPLEMENTED

Master Plan implementation would commit natural and manufactured materials including wood, steel, concrete, and the application of support services, management, labor, etc. The basic concept of Master Plan implementation integrates the proposed facilities with the environment in both function and scale. Irreversible environmental changes which would result from implementation of the Master Plan are directly associated with the consumption of non-renewable natural resources including fuel, minerals, energy, air, water, and open space.

Energy in the form of electrical power and natural gas consumed during construction of Master Plan development proposals is irreplaceable. Natural resources for miscellaneous building materials would be used to construct and furnish structures with indirect commitment to provide additional energy sources such as natural gas and electricity and other community services such as water, sewerage facilities, and police and fire protection. Construction of buildings on currently undeveloped areas would preclude future utilization of the land as open space, excepting their future removal. However, the Port leases are limited to a maximum term of 66 years with project leases commensurate with District policy and the sponsor's project proposal.

Master Plan implementation would involve the redevelopment of certain areas, primarily within small sections of the Shelter Island and Coronado Bayfront Planning Districts, necessitating demolition of some existing facilities or structures. These changes are not anticipated to result in significant environmental impacts. The Plan's overall emphasis provides a coordinated comprehensive improvement program. It enhances a basically established port related land/water utilization which includes visitor-oriented and recreational and commercial facilities, as well as marine-related services and community amenities which would provide additional opportunities for area residents. In carrying out the Port's responsibilities under its enabling legislation, the Master Plan is specifically designed to fulfill the Port's obligation to enhance and maintain a balance of activities of commerce, navigation, recreation and fisheries.

With the exception of the Chula Vista Boat Basin J Street Second Peninsula extension and the Sweetwater Wharf project, the Port's Master Plan would not involve irreversible environmental changes to San Diego Bay proper. The construction of this second peninsula extension would necessitate the placement of artificial fill on shallow and deep subtidal habitat adjacent to the Chula Vista Boat Basin in the Chula Vista Planning District. The placement of this fill would constitute an irreversible environmental change in that the removal of the fill, once placed and once developed with commercial and recreational amenities including landscaped public parks, marina and support facilities, including an additional new harbor police station, is highly unlikely.

IX. GROWTH-INDUCING IMPACTS

The Master Plan includes support facilities such as commercial centers and other improvements which would enhance existing public services in surrounding communities, but which could be affected by, or could affect, population growth within the surrounding cities. Population growth in areas immediately surrounding the Port's jurisdiction are not anticipated to increase at a significant rate. The single exception for this circumstance would be the future development of the Centre City Marina residential area adjacent to the Embarcadero Marina Park.

Support facilities proposed for the Master Plan area appear to be adequate to accommodate existing estimated population growth projections for the surrounding cities, but do not, by themselves, appear to have significantly high growth-inducing potential. Plan-related growth inducement might be expected to occur as an indirect result of the provision of visitor accommodations and new commercial operations, which may slightly increase the demand for public support services and infrastructure in the surrounding communities.

The Master Plan would, however, directly and indirectly stimulate considerable economic and some population growth through the creation of additional jobs, visitor accommodations and new commercial enterprises some of which are tourist-related. The Plan would not induce population growth within the surrounding cities by large scale residential demands for subdivisions or etc.

X. AGENCIES/ORGANIZATIONS AND INDIVIDUALS CONSULTED

In addition to routine contact and beyond utilizing available literature or report sources the following have been consulted:

PUBLIC AGENCIES

Federal

U.S. Army Corps of Engineers
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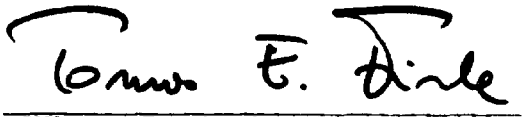
Report Contributors

This Environmental Impact Report was prepared by the San Diego Unified Port District's Environmental Management Department. The environmental information contained in this report has been compiled from many resources including the sources and individuals indicated. To the best of our knowledge and belief this information is accurate, current, and reflects our best professional opinion of the direct and indirect environmental effects of the proposed Master Plan. The primary analysis, evaluation and authorship was carried out by Michael V. Needham, under direction, supervision and editing by Tomas E. Firle, and in on-going interactive coordination with the Port's Planning Department under the direction of the Planning Director, Frederick H. Trull, and the Port's Engineering Department under the direction of the Chief Engineer, Joachim E. Liebmann.



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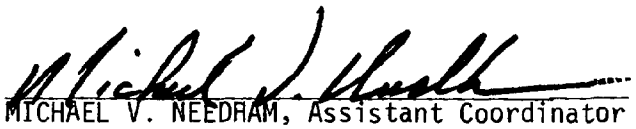

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September 12, 1979

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XII. PUBLIC REVIEW

Initial Distribution

The initial distribution of the Draft EIR was to the following public agencies which have jurisdiction by law, and/or to organizations and individuals with special environmental interests:

U.S. Army Corps of Engineers, Los Angeles
- District Engineer
- Environmental Quality Section
- Navigation Branch
- Engineering Division

U.S. Fish and Wildlife Services
- Portland, OR
- Sacramento, State Coordinator
- Laguna Niguel

11th Naval District
- Commandant
- Environmental Protection Coordinator
- Commander, North Island Naval Air Station
- Commander, Naval Amphibious Base
- Naval Undersea Center (Hal Goforth)
- Aircraft Environmental Support Office (AESO)
  - San Diego (Raymond Glass)

11th Coast Guard District
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- San Diego

Environmental Protection Agency
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City of Chula Vista
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San Diego County Archaeological Society, Inc.
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San Diego Historical Society
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San Diego Construction Industry Coordinating Council
San Diego Construction Industry Advancement Fund
    Phil Walling
San Diego Gas and Electric Company
    Joe Dietz, Environmental Manager
California Mariculture, Inc.

Coronado Journal
San Diego Daily Transcript
San Diego Union
San Diego Evening Tribune
San Diego Log
Los Angeles Times (San Diego Edition)
Imperial Beach Star News
National City Star News
Chula Vista Star News
The Sentinel

<u>Individuals; Special Requests</u>
Michael U. Evans, County of San Diego
Thomas J. Peeling, Navy
John P. Rieger, CALTRANS, San Diego
David D. Smith Associates

Additional Distribution on Request

E. C. Fullerton, Director, California Department of Fish and Game, Sacramento, 10/10/79

William Wrehse, Regional Director, Federal Aviation Administration, Los Angeles, 10/10/79

Arthur Pearsall, Operations Chief, Federal Aviation Administration, San Diego, 10/10/79

Dr. John Bradshaw, University of San Diego, 10/10/79

Dr. Gerald Collier, San Diego State University, 10/10/79

Dr. Richard Ford, San Diego State University, 10/10/79

Dr. Joy Zedler, San Diego State University, 10/10/79

Larry Warren, Shapell Industries, 10/12/79

James Elliott, Lockheed Center for Marine Research, 10/23/79

Frank Kingery, Westec Services, Inc., 10/23/79

Lt. George Thompson, Commanding General, Marine Corps Recruit Depot, San Diego, 11/16/79

U.S. Department of Commerce, Maritime Administration, 11/29/79

U.S. Department of Commerce, Office of Coastal Zone Management, 11/29/79

Comments Received and Response

The cover letter to the Draft EIR, giving pertinent information to the reviewers, and all comments received during the public and agency review period to the close of the public hearing, have been reproduced and are included in this Final EIR.

A legal notice announcing the availability of the Draft EIR and the public hearing was published on October 9, 1979. The review period was set for 45 days, ending on December 1, 1979. A total of 178 copies of the Draft EIR and the announcement of the public hearing were sent to the Board, public agencies which have jurisdiction by law, and to organizations and individuals with special interest. Of these, 111 went to federal, state, regional and local agencies; 26 to community and environmental groups; 16 to the business community; 10 to the news media; and 8 to other interested parties. Copies were sent to the Mayors, City Managers, Planning Directors and City Libraries of the five member cities of the Port District: San Diego, Coronado, National City, Chula Vista, and Imperial Beach. Copies were also sent to the San Diego Main Public Library, and the Government Reference Library, and San Diego County. Copies were also available for public inspection at the Clerk's Office in the Port Administration Building.

This Draft EIR was written based upon the Port District's Preliminary Draft Master Plan submitted to the State Coastal Commission on January 15, 1979, for informal discussion. Subsequent revisions to the Master Plan are also addressed in this Draft EIR.

The objective of the environmental review process under CEQA is to provide decision makers, as well as the public, with information on the environmental consequences of the project. In this manner, they consider the impact on the environment as one aspect in their decision making process when taking action on the project. Comments on the merits or flaws, real or imagined, of the project itself (in this case the proposed revisions to the Port Master Plan), are not relevant to the environmental assessment of the EIR.

During the agency review period, which ended on December 1, 1979, letters concerning the Draft EIR were received from:

Naval Facilities Engineering Command, Western Division, San Bruno
Naval Air Station, North Island
National Marine Fisheries Service
California State Clearinghouse
California State Coastal Commission
California Department of Fish and Game
California Department of Health Services, Office of Noise Control
Areawide Clearinghouse (CPO)
Air Pollution Control District
City of San Diego (EQD)
Share Our Sentiments (SOS)
David D. Smith and Associates

A letter of comment (dated November 28, 1979) was received December 3, 1979 from the California State Lands Commission requesting an extension for submitting

comments on the subject Draft EIR from December 1, 1979 to December 14, 1979. Subsequently on December 19, 1979, comments on the Draft EIR were received from the California State Lands Commission. Also, letters of comment were received after the review period had ended December 1, 1979, on the dates indicated, from the following:

California State Lands Commission (12/19/79),
Assemblyman Peter Chacon (12/3/79),
Metropolitan Transit Development Board (12/18/79),
City of Coronado (12/3/79),
City of San Diego Councilwoman Lucy Killea (12/4/79),
Sierra Club (12/12/79),
Mrs. Helen Tyler (12/4/79).

For informational purposes and to complete the record, receipt of these letters after the review period had ended is noted and copies, together with corresponding District responses, are appended.

The purpose of the public hearing on the Draft EIR is to give an additional opportunity for any one to address the Board of Port Commissioners about environmental impacts deemed inadequately presented. The public hearing on the Draft EIR for the proposed Port of San Diego Master Plan was held on December 4, 1979. The following persons and representatives of public agencies addressed the Board of Port Commissioners:

Michael Dadasovich (California State Coastal Commission Port's Coordinator)
Edward Amador (Assemblyman Chacon Administrative Assistant)
Keeta Haughtson (Community Energy Action Network)
Salvador Torez (Artist)
Rachael Ortiz (Barrio Caucus)
Jose Romez (Chicano Park Steering Committee)
Al Johnston (Bay Front Committee)
Rich Juarez (Barrio Caucus)
James M. Carlberg (California Mariculture Incorporated)

Written comments were also presented to the Board of Port Commissioners at the December 4, 1979, Public Hearing by the following:

Michael Dadasovich (California State Coastal Commission)
Tomasa Camarillo (Chicano Park Steering Committee)
Daniel L. Guevara (Bay Front Committee)
James M. Carlberg (California Mariculture Incorporated)
Al Johnston (Bay Front Committee)

Summary of Public Hearing of December 4, 1979

Commissioner Cohen read into the record, the previously referenced letter of comment from the City of Coronado dated November 30, 1979, received by the District on December 3, 1979.

Points raised by the California Coastal Commission staff to the Board were concerned with: The assertion that although the Draft EIR provided a good environmental data base, the impact analysis section in general should include more details on project specific proposals to reduce the need for greater detail in subsequent EIR's.

Numerous comments were made in opposition to the Master Plan's continued designation of a waterfront area, south of the Tenth Avenue Marine Terminal, as industrial rather than recreational. These comments were primarily concerned with: the issue of alternative sites for boat repair facilities other than in the waterfront adjacent to the Barrio Logan area, such as Coronado and Chula Vista; additional industry such as boat building/repair facilities south of the Tenth Avenue Marine Terminal may pollute and deteriorate the air and impact the adjacent residential neighborhood, and prevent public access to the bay; the distance to the Embarcadero Marina Park, from Bario Logan is said to be too great for Barrio Logan residents, and Embarcadero Marina Park is said to have been designed more for tourists rather than local residents; alleged inadequate discussion of industrial development impacts on bayfront access adjacent to Barrio Logan; the issue of utilization of the area adjacent to Barrio Logan for industrial purposes since bay access has been a community desire for several years; the alleged inadequacy of the Port's proposal serving as bay access for Barrio Logan residents; the Embarcadero Marina Park's alleged shortcoming because it is too distant for Barrio senior citizens; aesthetic conditions of the bayfront adjacent to Barrio Logan are said to be deteriorated including lack of adequate landscaping, and the unsightliness of the marine terminal and industrial facilities, such as silos; and the supposed industrial pollution from NASSCO, canneries, and junkyards in the Barrio Logan area.

The Board sought clarification as to who was the authorized Barrio Logan representative to confer with the Port District staff regarding land use planning adjacent to the Barrio Logan area. This issue of a unified and authorized representative or planning group for Barrio Logan remains unresolved, (1/80).

Other public concerns were expressed regarding information to evaluate the potential of adverse impacts on traffic, noise, air quality, and aesthetics in the Coronado Bayfront Development Plan area with a request for site specific EIR's when actual projects are proposed.

Concern was also expressed for continued maintenance of a high level of water quality in San Diego Bay, related to the potential for development of commercial mariculture facilities, primarily in the South San Diego Bay area.

The Board questioned the request for a time extention by the State Lands Commission and the environmental relevance of the request.

Evaluation of Issues

Most of the points brought to the Board at the Public Hearing, particularly those dealing with the land use and bay access issues in the Barrio Logan area, and land use, circulation and other issues in the Coronado Bayfront area were also raised in written comments and are responded to in greater detail in the Comment Letters and Response section.

The issue of coastal access in the Tenth Avenue Marine Terminal Planning District and the adjacent Barrio Logan community has received attention in the Port Master Plan and was discussed and analyzed in the Master Plan Draft EIR. Developments proposed in the Master Plan which have the potential to affect the Barrio Logan community were analyzed with respect to the expressed desire regarding bay access through an established heavy industrial marine terminal area. This situation and related issues were described in some detail in the Draft EIR on pages 8, 40, and 74-76. The bay access shown in the Master Plan as a promenade and vista area extends west from Crosby Street. The Port District, however, considers this area, and especially the waterfrontage, to be more suitable for port related facilities as required by Section 30708(c) of the California Coastal Act of 1976, which states:

> "All port-related developments shall be located, designed, and constructed so as to: (c) Give highest priority to the use of existing land space within harbors for port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities."

Activities which would remove significant land from industrial use in this area, such as a recreational park, are incompatible with the existing and planned marine industrial uses.

There is considerable demand for waterfront industrial land in the San Diego area. While the Master Plan and Draft EIR recognize the desire of the nearby community for a park, and have analyzed the potential for significant environmental impacts which could result from industrial use of the area south of the Tenth Avenue Marine Terminal, the overriding provisions of Chapter 8 of the Coastal Act prohibit such use to be proposed by the Port. Active recreation uses proposed by various Barrio Logan planning groups, such as soccer, etc., and water contact activities such as swimming and fishing, would not be compatible land uses in this existing heavy marine industrial area. Secondary and indirect environmental effects including noise, public safety, security, and various vehicle traffic and rail traffic hazards have been identified as potential effects. These problems and others have been analyzed in the Draft EIR. Recreational uses in such an area would have the potential for significant environmental impacts which would preclude it from further consideration.

Alternative public access points for recreation are available at the Embarcadero Marina Park area and the Las Chollas Park proposed in the City of San Diego Local Coastal Program. These areas are far larger and more suitable for recreational uses. The Crosby Street promenade access, which was recommended by the Board, is intended to respond to the desire of nearby residents for close-by access to the bayfront for bay viewing and resting. Recreational facilities over larger expanses are available at the Embarcadero Marina Park and in upland areas in the City of San Diego parks and school playgrounds, as stated earlier.

It should also be noted that concerns expressed regarding aspects of pollution associated with industrial uses in the area adjacent to the Barrio Logan community, such as air pollution, and aesthetic improvement needs, have been previously addressed in the Master Plan and in the Draft EIR. The Draft EIR indicates on page 238 that the potential for air quality impacts from any proposal including industrial developments is strictly regulated by the application of Federal, state and local laws through the San Diego Air Pollution Control District (APCD). In specific, industrial facilities mentioned, such as National Steel and Shipbuilding Company and seafood canneries, are all subject to "Authority to Construct" and "Permit to Operate" regulations from APCD prior to construction and operation of the facilities and are under control of that agency.

It should also be noted that the Master Plan project list description for the Tenth Avenue Marine Terminal Planning District, on page 98, includes considerations of aesthetic improvements including screened fencing and landscaping surrounding both the proposed new boatyard facilities and the public bay access promenade adjacent to the Crosby Street access area. The Draft EIR, in addition, provides reference to previous environmental analysis of alternative locations of marine industrial facilities in other areas, such as Coronado and Chula Vista, on pages 249-250. The area south of the Tenth Avenue Marine Terminal, an existing heavy marine industrial area, is from an environmental standpoint, more suitable than alternative locations.

There is no question that substantial public support from residents of the Barrio Logan area exists for public improved bay access to the San Diego Bay waterfront. This has been evidenced by various letters of support presented during the public hearing and also by the presentation of a statement of support signed by about 300 residents of the surrounding Barrio Logan area. It should be noted also that the Embarcadero Marina Park as described in the Master Plan includes no design concepts which are exclusionary of neighborhood use to the benefit of non-resident tourists. To the contrary, the Embarcadero Marina Park includes an active play area with a considerable potential for various recreational uses on the southern peninsula, closest to the Barrio Logan area. The Embarcadero Marina Park is about one mile from the residential areas in the Barrio Logan community. The area of the Embarcadero Marina Park will provide about four times the total acreage of park than would the area adjacent to the Tenth Avenue Marine Terminal.

The Draft EIR discussed the planning efforts of the Coronado/Port "Ad Hoc" Committee and the concerns expressed by the City of Coronado regarding the potential for significant adverse impacts of traffic, noise, air quality, and aesthetic concerns related to Master Plan development proposals for the Coronado Bayfront. These issues were analyzed on pages 4, 8-9, 42-43, 76-78, 222-223, 228, 230 and 249. The analysis of potential environmental impacts for the Master Plan proposal and for additional alternatives was carried out in considerable detail in the previously written Coronado Bayfront Development Plan Draft EIR (UPD #78102-EIR-2), which included a public hearing on February 6, 1979. At that hearing the Board agreed to reconsider the plan and hold further environmental evaluation in abeyance until a joint decision could be reached with the City of Coronado. Project specific environmental documents may be required to be written as appropriate for subsequent development plans within the Coronado Bayfront.

Coastal staff requested additional detailed impact analysis. The reader is referred to the District's response to the California State Coastal Commission comment in the following Comment Letters and Response section. The major conclusions of the potential for environmental impacts as a result of the Port's Master Plan were summarized for 14 different environmentally related categories in the Draft EIR on pages 1-7. In addition, various issues of public controversy or concern over potential Master Plan related impacts were summarized on pages 7-10 of the Draft EIR. these summaries included a discussion of the Barrio Logan bay access issues and the Coronado Bayfront Development Plan, among others.

The Port Master Plan Draft EIR has been prepared according to the degree of specificity and the level of detail appropriate to the preparation of a master plan EIR as provided for in the EIR guidelines, Section 15147, Degree of Specificity, which reads:

> "The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.
>
> (a) An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.
>
> (b) An EIR on projects such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow."

In addition to the analysis of the secondary effects, included in the Draft EIR pages 221-248, the Master Plan has included as Appendix B a coastal policy compliance analysis which provides a section by section description of the Plan's project proposals and overall goals, indicating the established conformity with the California Coastal Act of 1976. Many of the goals of the sections referenced from the California Coastal Act deal with environmental issues related closely to the requirements for impact analysis of the CEQA EIR Guidelines.

For more detailed information, the reader is referred to the following section on Comment Letters with Response to written information submitted both during and following the review period of the Draft EIR and submitted during the public hearing on December 4, 1979.

Overview of Comments

Copies of the actual comment letters received are attached with the District's response following each communication. The letters are arranged in the order given previously.

To focus on the principal issues raised in the letters, a synopsis follows; it is provided to identify the writer's concerns and is given here for informational purposes only, without corresponding District comment. The full District response follows the copy of each comment letter as stated earlier.

The Navy Facilities Engineering Command requested inclusion of information describing the Marine Corps Recruit Depot (MCRD) and Naval Training Center (NTC) populations and related school uses; objected to an alleged lack of recognition of the welfare of military personnel, particularly regarding the potential for aircraft noise impacts; and objected to a consideration of the possibility of a Lindbergh Field runway realignment.

The Naval Air Station (NAS) offered minor corrections to the Draft EIR description of North Island NAS facilities, their total annual aircraft operations, the number of operating squadrons, the number and duration of daily engine runups at the rework operation, and the placement of the CNEL-65 noise contour associated with flight operations at NAS.

The National Marine Fisheries Service (NMFS) said that the biological resources information included in the Draft EIR was good, but that potential environmental impacts were not quantified in sufficient detail for some Master Plan projects such as the Chula Vista Boat Basin Second Peninsula, the Sweetwater Wharf Improvements, and the Rohr Boatyard Improvements. NMFS requested inclusion of a comprehensive habitat loss compensation plan in the final EIR.

The California State Clearinghouse verified compliance with environmental review requirements under CEQA and attached comments from the state agencies listed, subject to the District responding to the comments in the Final EIR, with copies to the respondents.

Staff of the California Coastal Commission commented that: Only a few adverse impacts were identified; appealable development categories should be further discussed, particularly for the Chula Vista Boat Basin Second Peninsula and Rohr Fill areas; all development proposals should reference specific Coastal Act policies, particularly for Coronado, Barrio Logan, and Chula Vista; a safety analysis of storage and transport of potentially hazardous materials should be added; and that the Draft EIR be provided to Federal interests in port planning such as the Office of Coastal Zone Management (OCZM) and the Maritime Administration (MARAD), and to additional public interest groups, particularly those which have appeared at Port District and/or Coastal Commission hearings.

The California State Department of Fish and Game (CFG) indicated that written comments submitted to the District on January 4, 1979, on the preliminary draft of the Port's Master Plan were still relevant and should be applied to this Draft EIR as well. In addition, there were concerns expressed for the management and preservation of biological habitats and potential impacts on rare and endangered species including eelgrass beds, clambeds, light-footed clapper rails, California least terns, and green sea turtles. Concern was expressed regarding water contamination sources near the Naval Training Center estuary. CFG also indicated that the South Bay Wildlife Reserve, as it is not yet finished, does not constitute an expansion and an enhancement of natural biological habitat, since a successful marsh is not yet established.

The California Department of Health Services, Office of Noise Control indicated that noise easements for airport noise control only mitigate the complaints without reducing the noise impact, and suggested additional vehicular traffic noise measurements.

The Areawide Clearinghouse (CPO) indicated that no regional issues were apparent; commented on the desirability of further traffic circulation, air quality, and energy impact analysis for the Lindbergh Field/Harbor Island and Centre City/Embarcadero Planning Districts; and suggested also a discussion of a Coronado cross-bay pedestrian ferry be included in the Draft EIR.

The Air Pollution Control District (APCD) requested a quantitative analysis of potential air emissions resulting from Master Plan implementation; and that the Draft EIR demonstrate consistency of the proposed Port Master Plan with the existing Air Quality Maintenance Plan (AQMP) developed jointly by APCD and CPO, with an explanation of any differences in air emission projections from those based on the Port's existing adopted 1972 Master Plan.

The City of San Diego Environmental Quality Division (EQD) requested additional analysis of potential traffic/circulation impacts of the airport north access road proposed and the Centre City/Embarcadero area in general; and an historical site status update of the former Rowing Club facilities was offered and the suggestion made that they be discussed.

Mrs. Sally Krummenacher and Mr. John Pruyn, representing a Coronado citizen's organization, Share Our Sentiments (SOS), submitted the same objections to the Master Plan Draft EIR as were provided to the Board for the Coronado Bayfront Development Plan Draft EIR in November 1978; and requested that new information from the "Ad Hoc Committee" be incorporated in the Master Plan Draft EIR.

David D. Smith and Associates, an environmental consulting firm, commented that the Port Master Plan EIR is exemplary due to both its comprehensive scope and detailed nature; concurrence was given with a reference to long-standing and highly effective pollution control programs that already provide adequate protection to biological and related resources; and suggested that additional descriptions of the Chula Vista Boat Basin Second Peninsula and Sweetwater Wharf Improvement projects be provided.

Comment Letters With Response

Following is a copy of the transmittal letter which appeared in front of the Draft EIR which presented to the reviewer the scope of the project, announced the review date and public hearing, and directed attention to the purpose of the review to center on the environmental aspects of the proposal rather than on its merits as a project per se. Because of the volume of the material, this section, which includes the comment letters and corresponding responses, is printed in a reduced format.

PORT OF SAN DIEGO
AND LINDBERGH FIELD AIR TERMINAL

(714) 291-3900 • P.O. Box 488, San Diego 92112

September 1979

SUBJECT: "MASTER PLAN, San Diego Unified Port District"
Draft Environmental Impact Report
(UPD #78102-EIR-1; SCH #78030604)

The attached Draft Environmental Impact Report (EIR) has been prepared in accordance with the requirements of the California Public Resources Code, Section 21151, of the California Environmental Quality Act.

The proposed Master Plan revision provides land and water use policies, as well as management guidance, for new developments and for the enhancement of existing developments in the Port of San Diego's nine Planning Districts. It has been conceived to give flexible direction within stated overall goals and provisions for implementation. The proposed Master Plan revision includes enhancement of existing land and water activities as a basis for both Port and leasehold programs. It also plans new developments compatible with existing uses. The proposed land/water uses are preliminary and for discussion. The proposed revisions have not been approved by the Board of Port Commissioners but were submitted to the State Coastal Commission on January 15, 1979 for preliminary discussion. This Draft EIR evaluates the environmental consequences of adoption of the planning goals, objectives, and policies of the proposed Master Plan. The proposed Plan uses some public works projects to illustrate its concepts where, for example, considerable emphasis is placed on creating an inviting environment for pedestrians and bicyclists by incorporating landscaped, people-oriented spaces. Future site-specific improvements will be environmentally evaluated, using the Final EIR as a Master Environmental Assessment for reference.

This EIR also constitutes environmental information for the Port's Coastal Plan under provisions of the California Coastal Act of 1976. This report is being distributed to all public agencies which have jurisdiction by law or special expertise with respect to any environmental effect of the project, and to known organizations with conservation and environmental interest. Your comments regarding this draft report will be a matter of public record, available to other agencies, organizations, and interested citizens, and will become a part of the final report. They will be available to the Board of Port Commissioners for consideration in their Plan adoption. Please focus on the environmental aspects of the proposed Plan in discussing the sufficiency and/or accuracy of the Draft EIR and provide appropriate information where possible. Your written comments regarding this Draft EIR are requested by November 16, 1979. Communications on the Plan itself should be directed to the Port's Director of Planning, Mr. Frederick H. Trull.

A public hearing regarding this EIR before the Board of Port Commissioners has been scheduled for December 4, 1979. The Board meeting will begin at 2:00 PM, and will be held in the Board Room located on the first floor, Room 106, of the Port Administration Building, 3165 Pacific Highway, San Diego, California 92112.

Sincerely,

Tomas E. Firle

TOMAS E. FIRLE, Coordinator
Environmental Management

DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 727
SAN BRUNO, CALIFORNIA 94066

IN REPLY REFER TO:
20C2:CM:ss
P3-548

Mr. Frederick H. Trull
Director of Planning
San Diego Unified Port District
P.O. Box 488
San Diego, California 92112

Dear Mr. Trull:

This Command has reviewed the Draft Environmental Impact Report (DEIR) for "Master Plan, San Diego Unified Port District." The major environmental problem for the Navy and Marine Corps is noise generated by Lindbergh Field operations. On 16 November 1979, Ms. Carol Meyer of my staff called you to refer you to a letter dated 8 November 1979 from the Commandant of the Eleventh Naval District to Mr. Tomas Firle of your staff. Although this letter pertains to the DEIR for the study "New Airline Service, Lindbergh Field," the comments are also applicable to the Master Plan DEIR.

The following matters were not covered in the "Airline Service" DEIR, but relate indirectly to environmental issues. The proposal on page 118 of the Master Plan DEIR for a new runway on the Marine Corps Recruit Depot (MCRD) property is not physically feasible. It has been concluded from findings of a Department of Defense study to close MCRD that the facility will neither be abandoned nor relocated in the foreseeable future. The proposal on page 58 to use military property for an access right-of-way is unacceptable because it would interfere with the missions of Naval Training Center and MCRD by causing a continuous, unacceptable noise level and loss of irreplaceable land area.

The problem of discharge of raw sewage into San Diego Bay has been mitigated to a large extent since 1977. On page 178 the "400,000 gallons" per day should be changed to "approximately 160,000 gallons." The facilities for sewage collection "have been" (not "are currently being") installed at Naval Amphibious Base and elsewhere.

As you explained to Ms. Meyer during the above telephone conversation on 16 November, most of the Navy's concerns, as discussed with you earlier this year by Mr. Robert Forsyth and Ms. Meyer, are to be incorporated into your forthcoming final Master Plan document. You indicated to her that the same changes will also be incorporated into the FEIR following your 4 December 1979 hearing and, therefore, it is not necessary to reiterate Mr. Forsyth's comments prior to your public hearing.

295

20C2:CM:ss
P3-548

The opportunity to review the Master Plan DEIR is appreciated, and any questions or comments on this letter can be directed to Ms. Meyer at (415) 877-7573.

Sincerely,

J. H. WILDES
Acting Director
Installations Planning Division

COMMANDANT
ELEVENTH NAVAL DISTRICT
COMMANDER
NAVAL BASE, SAN DIEGO
SAN DIEGO, CALIFORNIA 92132

IN REPLY REFER TO:
11011
Ser 32/208
08 NOV 1979

RECEIVED
NOV 16 1979
ENVIRONMENTAL MANAGEMENT

Mr. Thomas B. Pirie
Coordinator, Environmental Management
Port of San Diego
P.O. Box 488
San Diego, California 92112

Dear Mr. Pirie:

The Draft Environmental Impact Report, "New Airline Service, Lindberg Field" (UPD 978102-EIR-80) has been reviewed and comments of several major military commands are summarized in this letter.

Throughout the report, land use of military controlled land namely, Marine Corps Recruit Depot (MCRD) and the Naval Training Center (NTC), is regarded to be commercial, public and open military. These designations effectively eliminate any consideration of noise impact on the mission of these essential military bases.

Land uses of both MCRD and NTC include significantly large areas that are appropriately classified as residential and schools. Land use designations used in the report provide only for family residential areas and do not recognize residential areas for bachelor/unaccompanied personnel. Due to the nature of the missions of these Commands, the vast majority of military personnel assigned live on base but are excluded from consideration of impact simply because they are not "Family Residential". The result is an unacceptable omission of a large population from consideration of noise impact.

Training functions are the major mission area of both bases. To classify land use as public and open military is to ignore the actual use and the noise impact on the attendant population within these areas. The preponderance of land use at both bases should be classified as schools and impact appropriately identified and reported.

Figure IVA2 appropriately recognizes military family housing located adjacent to MCRD. However, on Page VII-2 the notation is made that military personnel are not included in "Affected Population" figures within various CNEL contours. Since this housing is shown to be within the 75 CNEL contour on both Figures IVA3 and IVA4, clarification is required as to whether the military population of this "residential community" is included in the "Affected Population" summaries. If not included in the present summary, this population must be addressed.

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Ser 32/208
08 NOV 1979

The Commandant, Eleventh Naval District as Area Coordinator and as tasked by the Chief of Naval Operations to safeguard and promote the welfare of military personnel assigned throughout the Naval District, objects most strongly to the Draft Environmental Impact Report for the reasons stated above. The report does not identify the impact on all populations within the impact area and any conclusions drawn, recommendations made or decisions rendered would be based on incomplete and misleading information.

In order to adequately identify land uses and affected populations, the staff of the Commandant is available to work with the consultant.

Sincerely,

J. D. Longille III

J. E. LONGILLE, III
REAR ADMIRAL, U.S. NAVY

RESPONSE to COMMENT from: NAVAL FACILITIES ENGINEERING COMMAND
signed by J. H. Mildes
Acting Director, Installations Planning
Division Western Division Naval Facilities
Engineering Command
(11/21/79; received 11/26/79)

Response: The Public Works Office of the Eleventh Naval District states that there is currently (12/79) a total military population of 25,000 - 30,000 for both the Marine Corps Recruit Depot (MCRD) and the Naval Training Center (NTC). Of these personnel approximately 22,200 reside, attend school, or work within the 1978 CNEL - 65 contour. The following table lists the population by housing type and number of students impacted within the 1978 contours:

Population	1978 CNEL Contour		
	75	70	65
Single Family Housing	1,200	1,700	1,700
Multiple Family Housing	4,300	10,200	16,200
Students	4,300	9,000	15,700

The Eleventh Naval District has projected total population of the two bases for 1995 as being the same as in 1978. The following table summarizes the estimated impacted military population in 1995.

Population	1995 CNEL Contour		
	75	70	65
Single Family Housing	700	1,700	1,700
Multiple Family Housing	3,500	9,000	16,400
Students	3,500	9,400	15,700

The possibility of a new runway on the Marine Corps Recruit Depot (MCRD) property as described on page 118 of the Master Plan Draft EIR is not in fact a project proposal of the Master Plan. The Master Plan Draft EIR included a reiteration of the Port District's Noise Control Plan as adopted by the Board of Port Commissioners on December 12, 1978. The Noise Control Plan, quoted in its entirety on pages 110-121 and in Appendix K, pages K-1 through K-12, in the Master Plan Draft EIR, was included to describe in detail the existing status and alternatives that have been, or are being considered by the Board of Port Commissioners, regarding aircraft noise associated with Lindbergh Field. The concept of a new runway alignment is an alternative being considered in the Noise Control Plan. The construction of a new runway alignment as described, would provide substantial noise relief in the area west of Lindbergh Field, because it would redirect a significant portion of aircraft departures which now occur on Runway 27. The Noise Control Plan reference on page 119 of the Master Plan Draft EIR stated that "...the land needed for the construction of Runway 30 is presently being used by the United States Marine Corps, and the Port District has no legal means, by eminent domain or otherwise, to acquire the property without the consent of the United States of America." The Port Master Plan assumes continuation of MCRD.

The District's proposed airport peripheral road described generally in the text of the Master Plan on page 77 and illustrated in the Master Plan on Figure 9, page 73-74 is subject to negotiation with the Department of Defense. Most of the road would be located on land occupied by MCRD, however, the exact location, design and ownership of the road would be subject to consideration at a later date. Only the area for the physical location of the roadway would be proposed to be removed from MCRD use. No other areas of MCRD would be affected. The concerns of the Navy that the peripheral access road proposal may disrupt missions of the Naval Training Center (NTC) and MCRD would be interfered with, due to a continuous and unacceptable vehicular noise level and a loss of irreplaceable land area, could be dealt with in greater detail in subsequent environmental analysis. The specific details of project related impacts such as localized vehicle traffic noise and individual land use impacts are not the subject of this Draft EIR.

On page 58 the Draft EIR reiterates the specific aviation policies as adopted in the San Diego Plan for Air Transportation (SANPAT) regarding the peripheral road access. SANPAT indicates that:

> "The City of San Diego shall coordinate the development of a Route Location Plan and an evaluation of other options for improving near term access to Lindbergh Field. This will require the joint efforts of the City of San Diego for improvement to the local arterial system, The California Department of Transportation for localized improvements to the interstate highway system, the San Diego Unified Port District for the development of improved access within the airport boundaries, the US Department of Defense for military real property right-of-way considerations, and other appropriate agencies."

The statement in the Draft EIR on page 178 that, "About 400,000 gallons of raw sewage is discharged into San Diego Bay each day from ships berthed at North Island and the 32nd Street Naval Station..." is, according to the comment letter, "...approximately 160,000 gallons...". The actual discharge depends on the intensity of use and the interested reader can contact the San Diego Regional Water Control Board for up-to-date information. In addition, the text is hereby also corrected to reflect that the facilities for sewage collection "...have been...", as opposed to "...are currently being..." installed at the Naval Amphibious Base and elsewhere.

NAVAL AIR STATION
NORTH ISLAND
SAN DIEGO, CALIFORNIA 92135

IN REPLY REFER TO
302/RDF:amh
November 27, 1979

Mr. Michael V. Needham
Assistant Environmental Management Coordinator
Port of San Diego
PO Box 488
San Diego, California 92112

Dear Mr. Needham:

I have reviewed the DEIR Master Plan, San Diego Unified Port District dated September 1979 and generally find no objection from the Airport Compatible Use Zones aspect. We do however, find some minor difficulty with the data as presented for NAS North Island. (Pg 121-2).

Our field operations, reported as averaging 145,000 per year (11,700) per month have fluctuated from nearly 170,000 ten years ago, to approximately 70,000 in 1973, and currently average 120,000. The Navy currently has 24 air squadrons working from North Island, plus a U. S. Customs Air Service Branch, a large flying club, 2 contract airlines and the test flights commensurate with the Naval Air Rework Facility.

Speaking to the rework operation, the study states that "about 8 engine runups per day occur".... As figure IV-3, pg IV-12 of the 1979 ACIUZ study notes the accurate figures to be more on the order of 50-55 turnups, plus time duration differences, I suggest deletion of the entire engine runup paragraph as inconsequential to the EIR.

Additionally, the 1979 study (figure VIII-1) pg VIII-2 graphically shows CNEL-65 as almost completely contained on Air Station property except a miniscule area near Sunset Park. Therefore, CNEL-65 no longer roughly follows "...Balboa Avenue in Coronado." As the EIR concludes that the Ports Master Plan area is not affected, I also recommend deletion of the 65 CNEL discussion.

These relatively minor corrections are based on current operation and noise reduction initiatives undertaken by NAS North Island. It is unfortunate that both your DEIR and our new AICUZ were simultaneously released, depriving your planners of the most recent North Island information. I am forwarding a copy of the 1979 AICUZ under separate cover, as well as your loan copy of the draft. If I may be of further assistance, please feel free to call. (437-6906).

Sincerely,

R. D. FRENCH
LT USN
Community Liaison Officer

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NOV 30 1979
ENVIRONMENTAL MANAGEMENT

298

IMPLEMENTATION OF AICUZ CONCEPT

Noise impact and accident potential are of mutual concern to the Navy, the public, and local government agencies. While the Navy has an obligation to operate in a safe manner that also minimizes noise impact, local government has the responsibility to plan and zone for the protection of health, safety, and welfare of the public. The successful implementation of compatible future land use in the vicinity of NAS North Island will require efforts on the part of all concerned. The following cooperative actions are recommended.

RECOMMENDED ACTIONS FOR THE COMMUNITY

- Encourage future development in the AICUZ area to be in keeping with the land use suitability guideline suggested in the Land Use Compatibility Matrix.
- The City of Coronado is encouraged to expand the Public Safety and Seismic Safety element of their General Plan to consider the issue of airfield study.
- The City of Coronado should adopt noise insulation standards into the city building code. Site planning should be used to locate noise sensitive uses behind physical noise barriers when possible.
- The City of San Diego should expand its application of California Noise Insulation Standards to single-family residential units in the airport vicinity.
- The San Diego Unified Port District should continue the type of development which is compatible with air operations.
- The City of Coronado authorities, in conjunction with the Department of the Navy, should discourage the development of people intensive buildings in Accident Potential Zones.
- Persons or agencies seeking information about the naval air station or AICUZ should contact the Community Planning Liaison Officer for NAS North Island, telephone (714) 437-6906.

RECOMMENDED ACTIONS FOR THE NAVY

- Displace Runway 29 threshold by 650 feet and construct additional 650 feet on opposite end.
- Utilize acoustical enclosures during sensitive periods of the day and when maintenance schedules permit.
- Educate and encourage pilots to continually use and refine cockpit techniques that can reduce single event noise levels.

AICUZ

AIR INSTALLATION COMPATIBLE USE ZONE STUDY

NAVAL AIR STATION (NAS) NORTH ISLAND

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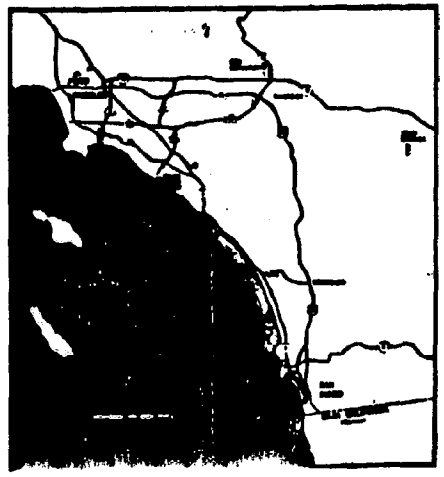
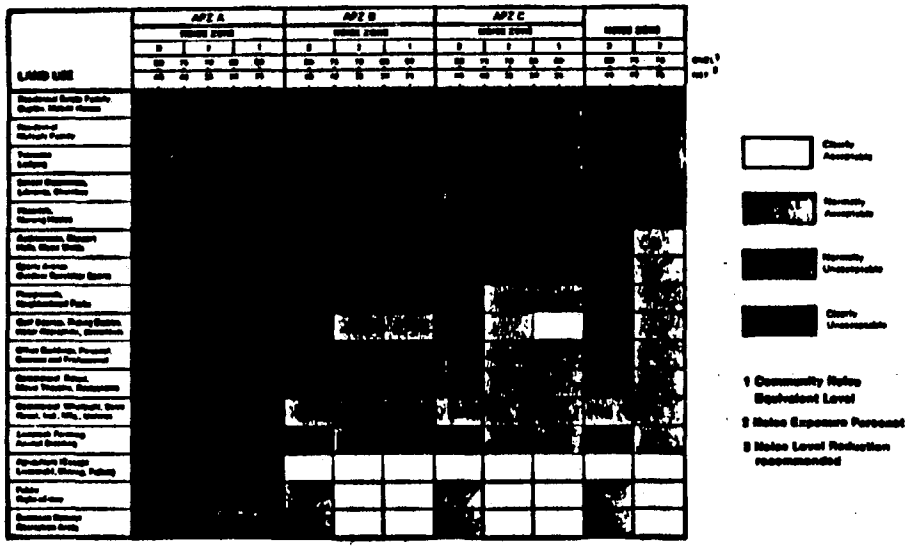
ENVIRONMENTAL MANAGEMENT



LAND USE OBJECTIVES MATRIX



NAS NORTH ISLAND AICUZ

The map to the left depicts the NAS North Island AICUZ. Noise zones for this study were developed using Community Noise Equivalent Level (CNEL) values. This CNEL method has been adopted by the State of California Department of Transportation for specifying aircraft noise exposures and for specifying limiting criteria for land use around airports. The area within the 75 CNEL contour is identified as Noise Zone 3 and represents the area of highest noise impact. Noise Zone 2, the area within the 65 to 75 CNEL contours is an area of significant noise impact. Accident Potential Zones (APZs) were developed from analysis of a 10-year accident history of the station and Department of Defense (DOD) criteria. APZ A represents the area of highest accident potential. APZ B and C represent areas of lesser accident potential. The APZs shown are based on the shift in the Runway 29 landing threshold by 850 feet which is recommended by the study but not yet implemented. A project to construct the additional runway required to implement this change has been placed in the military construction programming system.

AICUZ ZONES

The AICUZ is defined to include all of the area within the 65 CNEL contour and all of the APZ's. These combinations form 9 sub-categories as shown on the map above. The total area within the NAS North Island AICUZ is 5,998 acres. A total of 2,084 acres is located within the boundaries of NAS North Island. A large portion of the off-station AICUZ impact is over the water.

LAND USE OBJECTIVES

The "Land Use Objectives Matrix" shown above is not a zoning plan, but is intended as a long-range land use compatibility guide. By using multiple noise and accident potential zones, land areas within the AICUZ are reasonably differentiated, and land use alternatives are maximized. The matrix illustrates that a wide range of compatible land uses can be achieved in the areas surrounding NAS North Island. The basic implementation objective for the North Island AICUZ is the encouragement of the use, development, and redevelopment of private property in ways that are compatible with the noise and hazard potential of aircraft operations as identified in the AICUZ study.

MORE INFORMATION

Only the major points of the AICUZ are outlined in this pamphlet. The complete study is available through local public libraries for those desiring more information.

WHAT IS AN AICUZ?

The Air Installations Compatible Use Zone, the AICUZ, is defined as the area within which land use controls of some form are desirable to encourage land uses compatible with aircraft operations. An AICUZ study, which defines this area of concern for NAS North Island, was completed in February, 1979. The purpose of preparing an AICUZ study is to ensure compatible development in high noise exposure areas, to minimize public exposure to potential safety hazards associated with aircraft operations, and to protect the operational capability of the air station. This pamphlet is intended to acquaint local officials, concerned citizens, developers, real estate brokers, etc. with the study and recommendations so that, through a cooperative understanding, a solution to this complex problem can be realized.

WHY IS THERE A PROBLEM?

Most air installations attract development to the surrounding area in response to the need for services. In addition, most of the Navy and Marine Corps air installations in California are located in the fast growing coastal areas. As a result, installations which were located in undeveloped areas when first constructed, are now surrounded by suburbs of metropolitan areas, or lie directly in the path of advancing urbanization. In the absence of compatible land use controls, encroachment will normally occur. The land proximate to the airfield is subjected to high noise levels and aircraft accident potential and thus may not be suitable for certain types of development.

INSTALLATION MISSION AND ROLE IN LOCAL ECONOMY

The mission of NAS North Island is to maintain and operate facilities and provide services and material to support operations of aviation activities and units of the Operating Forces of the Navy as well as other activities and units as designated by the Chief of Naval Operations. North Island is the home base for Navy fixed wing and rotary winged (helicopter) anti-submarine warfare squadrons which are capable of deployment at sea. It is also the homeport of aircraft carriers and larger cruisers in the San Diego based fleet. Over 150 tenant and component activities are supported at NAS North Island.

In addition to the squadrons based at North Island, the Commander Anti-Submarine Warfare Wing has scheduling control over the Naval Auxiliary Landing Field, San Clemente Island and the Outlying Field (OLF) Imperial Beach. NAS North Island has the responsibility for facilities administration at these two fields.

The economic contribution of NAS North Island is substantial. Approximately 20,000 military personnel are employed at the station, in addition to roughly 6,000 civilians. Estimates of the annual payroll at North Island are over $230 million. The economic multiplier effect inflates these salaries to a purchasing power of approximately $900 million.

NOISE ABATEMENT ACTIONS

During the past several years aircraft flight operations at NAS North Island have been modified to reduce the noise impact on the surrounding community. Noise abatement measures which have been implemented include:

- Relocation of high performance jet squadrons to other air installations.
- Diversion of most Field Carrier Landing Practice (FCLP) operations to other air installations.
- Relocation of Runway 18 traffic pattern away from residential areas.
- Restriction of Touch and Go landings and limitation of Runway 11 departures.
- Realignment of approach to Runway 29 first by a 4 offset and then increased to 8 offset further seaward.
- Preferential use of Runways 18 and 36 under specified conditions.
- Prohibition of after burner take-offs from Runway 29.
- Installation of a 10-foot high blast fence around the operations area.

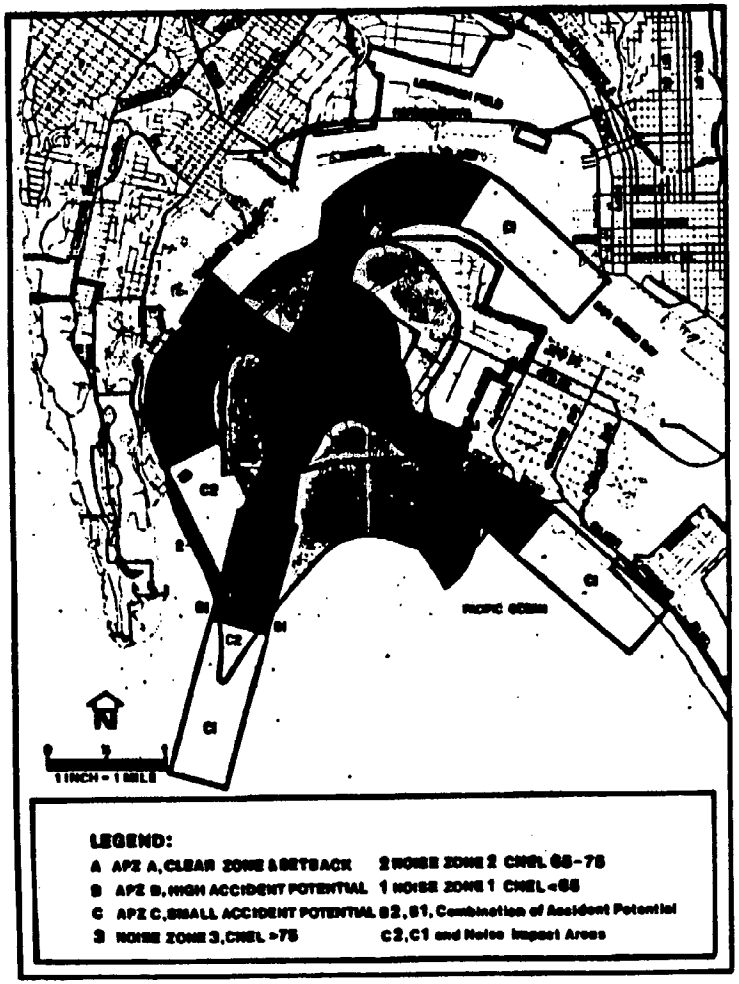
Additional noise abatement alternatives recommended in the AICUZ study are (1) a 650 foot displacement of the Runway 29 landing threshold and construction of an additional 650 feet at the opposite end and (2) utilization of acoustical enclosures for maintenance run-ups during sensitive periods of the day and when maintenance schedules permit.

WHO PREPARED THE STUDY?

The AICUZ study for NAS North Island was prepared by R. Dixon Speas Associates, an internationally known aviation consulting firm with offices in Los Angeles and across the United States. The firm has completed, in the United States and overseas, over 125 airport master plans and 25 state or regional plans. The study was performed for NAS North Island under supervision of the Western Division, Naval Facilities Engineering Command, located in San Bruno, California.

AICUZ

AIR INSTALLATION COMPATIBLE USE ZONE STUDY



RESPONSE to COMMENT from: NAVAL AIR STATION, North Island
signed by Lt. R. D. French
Community Liaison Officer
(11/27/79; received 11/30/79)

Response: The revisions requested by the Naval Air Station (NAS) for data concerning field operations, rework operations, and CNEL contours, according to the 1979 Air Installation Compatible Use Zones Study (AICUZ) are hereby acknowledged in accordance with the new information as suggested in the NAS letter of comment. The 1979 AICUZ study was not completed at the time the Master Plan Draft EIR went to press. Specifically, the Draft EIR, pages 121-123, are hereby revised as follows. The data are corrected to indicate that field operations stated as averaging about 145,000 a year (about 11,700 per month) have fluctuated from nearly 170,000 annual operations ten years ago, to approximately 70,000 in 1973, and currently average about 120,000. In addition, the Navy currently has 24 not 20, as was stated in the Draft EIR, air squadrons working from NAS North Island. Also a US Customs Air Service Branch, a large flying club, two contract airlines, and test flights, commensurate with field operations, occur at the Naval Air Rework Facility (NARF).

Page 121 of the Draft EIR is also hereby corrected to read that between 50 and 55 engine runups per day occur, and that additional runup duration differences may occur as well. Finally, the revised noise contours of the 1979 AICUZ study indicate that the CNEL 65 contour is almost completely contained on NAS property, except for a very small area near Sunset Park. The correction, therefore, is hereby made to the statement on page 122 of the Draft EIR, based on the 1977 AICUZ Study which showed, "...a CNEL 65 contour line generally following Balboa Avenue in Coronado." This statement is hereby deleted.

These minor revisions and corrections having been made, no further response to the NAS letter is required. The pertinent sections, however, from the NAS North Island 1979 AICUZ Study have also been included as attachments to the letter of comment.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
300 South Ferry Street
Terminal Island, California 90731

November 26, 1979 F/SWR33:JJS

Mr. Tomas E. Firle, Coordinator
Environmental Management
Port of San Diego
P.O. Box 488
San Diego, California 92112

RECEIVED
NOV 26 1979
ENVIRONMENTAL MANAGEMENT

Dear Tomas,

Subject: Review of Draft Environmental Impact Report (DEIR) - Master Plan San Diego Unified Port District, September, 1979

Our meeting with you and Mike Needham on October 19 was quite helpful in explaining the overall San Diego Master Plan/DEIR package. The most impressive aspects of the DEIR are the biological resource and water/sediment quality figures presented.

The information provided throughout the section on Biological Setting appears to be accurate and leaves the reviewer with a good knowledge of the resources involved. The disappointing aspect of the DEIR is that the body of biological data developed is never used in the text to document specific damages expected from the implementation of the various projects proposed in the Plan.

In our letter of January 24, 1979 to your office it was suggested that without project specific estimates concerning the amount of dredging and/or filling predicted during Port development, an accurate assessment of environmental impacts could not be made. It was our assumption that the DEIR would address that issue and state a comprehensive program for mitigating and/or compensating the projected environmental damages.

Instead, the Master Plan DEIR indicates that expected impacts and mitigation necessary will be dealt with in separate environmental reviews and supplementary EIR's as appropriate. This sounds as though it may lead to further piecemeal planning of habitat compensation on a project by project basis.

The potential exists that significant cumulative environmental damages will occur from several of the projects planned for development (e.g. Chula Vista Boat Basin Peninsula "J" Street extension, the Sweetwater Wharf project, and the Rohr Boatyard improvements). To minimize the economic expenses of mitigation/compensation while

maximizing resource benefits, a comprehensive plan should be developed now to deal with expected impacts to the South Bay.

The final environmental impact report (FEIR) for the Master Plan should lay the ground work for developing a comprehensive plan of compensation. The FEIR should address the immediate need for such a program, indicate a schedule for program development, and list the agencies whose participation would be required during that development process.

Either I or Bob Hoffman would be glad to give you what help we can in that regard.

Sincerely yours,

Jim Slawson

James J. Slawson
Chief, Environmental Assessment Branch

cc:
CDF&G, Long Beach, R. Hall
USFWS, Laguna Niguel, Ralph Pisapia
CCC, San Francisco, Mike Dadasovich

301

RESPONSE to COMMENT from: NATIONAL MARINE FISHERIES SERVICE
signed by James J. Slawson
Chief, Environmental Assessment Branch
(11/26/79; received 11/28/79)

Response: Regarding the biological resources and water/sediment quality information provided in the Draft EIR, it was not intended to document specific impacts anticipated from implementation of various projects proposed in the Master Plan. Master Plan land/water use designations and various project concepts, within each of the nine Planning Districts, constitute the "project" addressed by the Draft EIR. The project, therefore, is the entire Master Plan, not an individual construction project, but an areawide, comprehensive planning document. Since the details of design, location, and operation of possible future facilities are not known with certainty, such a detailed level of impact analysis as was anticipated by the National Marine Fisheries Service (NMFS) is inappropriate and infeasible.

Specific estimates of the amount of dredging and/or filling anticipated to result from Master Plan implementation can only be identified by general location rather than by area coverage or actual volume of material to be dredged or filled. Information on dredge/fill proposals is generally discussed on page 18 of the Master Plan, under the heading, Dredging, Filling and Shoreline Protection. It indicates that a comprehensive program for shoreline erosion protection and enhancement has been integrated into the Master Plan. This program includes proposals for minor dredge/fill activity for maintenance and protection. Most of these were discussed and disseminated for comments earlier (UPD 78102-EIR-28; SCH #78110636).

302 In addition, exclusive of shoreline erosion, stabilization and replenishment projects, locations which include Port District proposals for major dredge/fill projects, listed according to Port Planning Districts, are as follows:

Planning Districts	Dredge and/or Fill Proposals
Shelter Island	-Beach Restoration.
Harbor Island/Lindbergh Field	-Small Aquatic Center: dredge to remove silt discharged from City storm drain.
Centre City/Embarcadero	-Marine Equipment Site: dredge for access and adequate berthing.
Tenth Avenue Marine Terminal	-Marine Terminal Berths 7 and 8: dredge for adequate water depth for bulk vessels. -Boatyard: dredge for boat launch/retrieval platform.
National City Bayfront	-Completion of Terminal Wharf: dredge for additional rock revetment for wharf expansion.
Coronado Bayfront	-No major dredge or fill proposals.
Chula Vista Bayfront	-D Street Wharf: dredge for deep water berthing clearance and sea wall construction. -Expansion Reserve: dredge and fill to create additional 35 acres. -Boat Basin: channel entrance dredge for completion of basin interior. -Peninsula Extension: fill to create 62 acre area.
Silver Strand South	-No major dredge or fill proposals.
South Bay Salt Lands	-No major dredge or fill proposals.

Additional detail on dredge/fill related proposals is provided in the Master Plan throughout pages 57-140.

The NMFS letter of comment indicated that adverse environmental impacts may result from implementation of some Port projects in South San Diego Bay. NMFS expressed particular concern for the Chula Vista Boat Basin Peninsula J Street Extension, the Sweetwater Wharf (D Street Wharf) project, and the Rohr Boatyard Improvements. The Draft EIR acknowledged the potential for environmental impacts from these proposals on pages 240-243, 245, 247-248, and 251-253. In addition, in response to a suggestion by NMFS, a comprehensive approach, for mitigation/compensation of potential biological habitat losses which may result from implementation of Master Plan proposals, has been begun by the Port District.

The Port of San Diego is continuing to coordinate closely with various Federal and State resources agencies to develop a natural resource management approach to the South San Diego Bay area, in conjunction with those Port projects which have the potential for impact on identified sensitive biological resources. Such a comprehensive and coordinated approach has several advantages over habitat compensation sought out on a project by project basis.

From a biological standpoint, habitat compensation on a project by project basis does not represent a sound approach to natural resource management. The habitat value of most South San Diego Bay areas exists in a continuous sense, not on a parcel by parcel basis. As an example, fishes and other marine life being mobile organisms often utilize many portions of South San Diego Bay within a given time frame. Project impacts and mitigation measures, therefore, have the potential to affect locations other than those specifically confined within the project boundaries. Providing mitigation/compensation measures over an entire area is consequently far preferable, from a resource management standpoint, to applying mitigation/compensation measures at many different locations within the same large area. A comprehensive compensation plan would also provide federal and state resources agencies with an overall opportunity to review and consider the potential areas wherein mitigation and compensation for habitat losses could be feasibly achieved.

From an economic standpoint, the application of individual mitigation measures in conjunction with each proposal is more time consuming and consequently more costly than a comprehensive approach. Port District procedures and federal and state processes are more difficult to coordinate on an individual basis, and are often times repetitive.

The District's development of a comprehensive compensation or natural resource management plan has already included preliminary field visits to candidate compensation areas in South San Diego Bay. Representatives of the California State Department of Fish and Game have recently (12/79) accompanied District staff to South Bay areas adjacent to the County of San Diego Marine Biology Reserve, and the J Street Marsh area, adjacent to the San Diego Gas & Electric Company South Bay Generating Station.

A compensation plan for physical habitat losses, primarily in South San Diego Bay, associated with certain Master Plan proposals could be mutually agreed upon by the District and federal and state resources agencies involved, prior to June 30, 1981, with subsequent implementation by the Port District within two years following such an agreement. Those agencies' participation which would be required during that development process could include at least the following:

US Army Corps of Engineers
US Fish and Wildlife Service
National Marine Fisheries Service
California State Department of Fish & Game
San Diego Regional Water Quality Control Board

The Port of San Diego is prepared to consider such an approach to a comprehensive compensation plan on a pilot basis for candidate areas, given some form of participation from the various agencies listed above. Such a program would necessarily include time limits for implementation and applicability, binding agency agreements for pre-mitigation for portions of anticipated projects, and specific site location and compensation aspects proposed for candidate areas. Some compensation techniques currently being considered as possibly feasible by the District include: eelgrass transplants, marsh habitat enhancement, modifications such as minor dredging of intertidal or supratidal areas for shallow lagoon creation, minor filling and/or clearing of selected areas as site preparation for California least tern nesting, and tidal marsh/salt flat area creation using marsh vegetation planting or transplanting techniques.

303

EDMUND G. BROWN JR.
GOVERNOR

State of California
GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

RECEIVED
DEC 19 1979
ENVIRONMENTAL MANAGEMENT

December 15, 1979

Tomas E. Firle
San Diego Unified Port District
P.O. Box 488
San Diego, CA 92112

Subject: SCH# 78030604 "Port of San Diego Master Plan EIR"(UPD #78102-EIR-1)

Dear Mr. Firle:

State agencies have commented on your draft environmental document (see attached). If you would like to discuss the concerns and recommendations in their comments, contact the staff from the agencies whose names and addresses appear on the comments.

You may formally respond to the agencies' comments by writing to them (including the State Clearinghouse number on all such correspondence). When filing the Final EIR, you must include all comments and responses (State EIR Guidelines, Section 15146). State review of your draft environmental document will then be complete.

To aid in preparing environmental assessments on future projects, you should send to state agencies and the Office of Planning and Research your Notice of Preparation as prescribed by AB 884 and Section 15066 of the EIR Guidelines.

If you would care for assistance or if the need arises, the Office of Planning and Research is available to help identify responsible agencies, distribute Notices of Preparation, organize coordination meetings, mediate disputes, and hold consolidated hearings.

Please contact Laura Ericson at (916) 445-0613 if you have any questions.

Sincerely,

Stephen Williamson
Stephen Williamson
State Clearinghouse

Attachment
cc: Ken Fellows, DWR

9109

RESPONSE to COMMENT from: CALIFORNIA STATE CLEARINGHOUSE
signed by Stephen Williamson
(11/15/79; received 12/19/79)

Response: The State Clearinghouse, part of the Governor's Office, verified compliance with the environmental review requirements under the California Environmental Quality Act (CEQA), having received comments from the state agencies listed and attached as indicated previously. Accordingly, the collective responses to comments received, when appended to the Draft EIR constitute the Final EIR. Contained herein are the responses to the agencies' comments in writing included as per State EIR guidelines. All respondents are provided copies of the responses which are also transmitted to the State Clearinghouse. The transmittal and inclusion of comments and responses concludes the State review process of the Draft EIR.

7902-EIR-1
Comment C.

State of California, Edmund G. B[illegible] Jr., Governor

California Coastal Commission
631 Howard Street, 4th floor
San Francisco, California 94105
(415) 543-8555

November 20, 1979

RECEIVED
NOV 23 1979
ENVIRONMENTAL MANAGEMENT

Mr. Tomas R. Firle
Environmental Management
Port of San Diego
P.O. Box 488
San Diego, CA 92112

SUBJECT: Draft Environmental Impact Report - Master Plan, San Diego Unified Port District

Dear Tomas:

The staffs of the State and San Diego Regional Coastal Commissions have reviewed the draft environmental impact report for the San Diego Unified Port District Master Plan. The document serves well as an environmental data base or "master environmental setting" and the graphic materials are particularly well done. However, the value of the report as an "impact statement" is marginal. With so few adverse impacts identified it would appear that the port have considered a negative declaration on the Master Plan rather than an impact report.

More attention should be paid to those categories of development listed in the Plan as appealable under Section 30715 of the Coastal Act. These projects include the hotel complexes suggested for a number of planning districts, new marinas and marina support facilities, the extension of Tidelands Avenue which the State Commission has already suggested as having severe adverse impacts on coastal resources, the fill area proposed for both the Chula Vista peninsula and extension of "H" Avenue needs greater impact analysis. Developments affecting wetlands or recreation areas must conform to the more restrictive policies of Chapter 3 of the Coastal Act. The DEIR indicates that adverse impacts may be associated with developments proposed for the Chula Vista planning district, but the impact analysis is incomplete. Socio-economic impacts include those planning area activities or project implementations which are likely to generate public controversy. For example, developments proposed affecting Coronado or Barrio Logan should receive more than the brief attention paid to them in both the Master Plan and DEIR.

The document is lacking analysis of hazardous material transport or storage. The Coastal Commission is increasingly concerned over activities or operations which pose risks to vulnerable resource areas. Concentrations of visitor and resident populations in close proximity to industrialized port activities around the bay need to be given greater safety analysis in the DEIR.

In conclusion, the list of agencies and individuals contacted as well as the DEIR distribution list is incomplete. Federal interests in port planning such as Marad and OCZM should be contacted. Public interest groups should receive copies of the DEIR particularly where such group have spoken at port or Coastal Commission hearing on Port of San Diego planning. We would recommend withholding adoption of the DEIR until such distribution and contact together with an extended review period are accorded to other parties.

Sincerely,

MICHAEL DADASOVICH
Ports Coordinator

MD:lr
cc: Fred Trull

RESPONSE to COMMENT from: CALIFORNIA STATE COASTAL COMMISSION
signed by Michael Dadasovich
Port Coordinator
(11/20/79; received 11/23/79)

Response: The comments regarding the Draft EIR as an "impact statement" perhaps would be appropriate for a project specific Draft EIR but are not pertinent to this Draft EIR written on the Port's entire Master Plan. It should be noted that the California Environmental Quality Act (CEQA) requires that EIR's be written at a level of detail and a degree of specificity commensurate with that of the project being analyzed. In this case, the project is the entire Master Plan, not an individual construction project, but an areawide comprehensive planning document. In the case of project specific EIR's wherein details of location, design, and operation of possible future facilities are known with much greater certainty, such a level of analysis is possible and appropriate. For any general plan, or in this case, the Port's Master Plan, such a detailed level of analysis is not only inappropriate, but is infeasible at this early planning stage. It should also be noted that the Port of San Diego's land/water use is considerably more diversified than those of, say, Long Beach or Los Angeles. For those ports the marine terminal areas and projects can indeed be more detailed.

A Negative Declaration was considered inappropriate as there are planning issues which are considered controversial. Environmentally, pages 247-248 of the Draft EIR summarize several unavoidable short-term impacts. Seven unavoidable short-term impacts and six unavoidable long-term impacts have been identified. Pages 221-245 of the Draft EIR discuss, in greater detail, environmental impacts and mitigating measures of all 14 pertinent environmental assessment categories including: Land and Water Use, Open Space, Air Transportation, Circulation, Navigation, Public Services and Facilities, Socio-Economic Characteristics/Growth, Visual Quality, Noise Quality, Climate/ Air Quality, Energy, Biology, Water and Sediment Quality, and Landform/Geology/Archaeology. Potential impacts in these environmental categories have also been described in the Summary and Major Conclusions section of the Draft EIR on pages 1-7. For some identified projects, particularly those further along in the conceptionalization and design stages of project planning, the degree of specificity in the impact analysis is greater than for those areas where specific projects have not yet been (or may not be) planned or designed in any great detail. Examples of this are the proposed Chula Vista Boat Basin, J Street Second Peninsula Extension, and the Sweetwater Wharf (D Street Wharf) Improvements. Although the land and water areas for these proposals have been generally designated in the planning sense, no specific design or construction details have yet been formalized. As indicated on Table 19 on page 126 of the Master Plan, construction would not occur before 1989 and 1992, respectively. If either of these two projects were currently in the design stages, analysis of some or all of the following impacts might be included.

The Peninsula Extension fill could result in the loss of about 62 acres of shallow subtidal habitat in an area in South San Diego Bay known to include sensitive biological resources. It is likely that disturbances or loss to eelgrass beds, benthic (bottom dwelling) marine animals, and populations of several fishes, many with commercial and/or recreational importance, would occur. The habitat value of the site and adjacent areas as fish nursery grounds would likely be diminished. A subsequent deterioration in water quality, e.g., diminished dissolved oxygen (DO) and nutrient exchange could occur as a result of decreased water circulation and tidal flushing. Ultimate development of the area complete with marinas and boatyards would have the potential to affect water/sediment quality and biological habitat value. However, designs can be developed to minimize identified impacts, mitigate the project, and compensate appropriately. Obviously, specifics must await having a definite project proposal for analysis.

The Sweetwater Wharf (also called D Street Wharf) and D Street Expansion Reserve dredging and seawall construction would have the potential to disturb or eliminate about 24 acres of Tidal Marsh and Salt Flat Succulent terrestrial plant habitat and about 20 acres of eelgrass beds and mudflat habitat. The potential for adverse biological and water/sediment quality impacts which could result from such developments would be similar in nature to those identified for the Pensinsula Extension proposal. The impacts could, however, have greater importance, due to the close proximity of the project area to the Sweetwater/Paradise Creek Marsh Complex, and the nearby known habitats of three rare and endangered bird species, including the California least tern (Sterna albifrons browni), the light-footed clapper rail (Rallus longirostris levipes), and the Belding's Savannah sparrow (Passerculus sandwishensis beldingi). In addition, two species of rare and endangered terrestrial plants, the Palmer's frankenia (Frankenia palmeri) and the salt marsh bird's beak (Cordylanthus maritimus maritimus) are known to exist in the area, and could be impacted by the proposal. Again, design/mitigation/compensation may well be feasible, particularly as utilization of the deep draft ship channel becomes necessary in some years ahead.

The previous discussion is based on the resources inventory information provided in the Draft EIR on pages 155-179, and pages 240-243. These proposals and others within or in close proximity to sensitive biological resources would likely receive subsequent environmental review and, as appropriate, EIR's.

Attention should also be directed to pages 11-13 of the Draft EIR which describes it as a foundation document, not intended to be project specific in its impact assessment. Specific environmental documents would be prepared as appropriate for each development project when specific uses and locations are determined.

An analysis of the Master Plan and conformance with the California Coastal Act of 1976 is provided in Appendix B of the Master Plan. A detailed section by section compliance analysis relates all of the applicable requirements of the Coastal Act (referenced by section) to the Port Master Plan. The comments summarize Master Plan compliance and reference by page number, where the information may be found in the Master Plan.

Appealable and nonappealable projects (as defined in the Coastal Act) are treated alike in the Draft EIR, because environmental consequences arise from the type and location of development, not from the fact that they are appealable by law or not. For both cases possible impacts are analyzed in this Master Plan EIR without engaging in, at this early planning stage, inconclusive studies.

The following information summarizes the possible general impacts of various types of appealable developments, and indicates where such developments would occur, i.e., within which Planning District, under the Port Master Plan.

Development	Potential Impacts
Hotels:	Increased vehicular traffic with potential impacts relating to noise, air pollution, traffic congestion, visual impacts, and increased parking demands.
	Increased utility and fuel consumption.
	Increased use of public recreation resources.
	Increased employment and economic benefits.
	Possible view blockage.
Marinas:	Increased vehicle traffic with associated impacts, similar to that for hotels.
	Possible degradation of water quality because of dredging, overboard discharge, toxic hull paint.
	Increased utility and fuel consumption.
	Economic and social benefits of additional recreational facilities.
	Possible adverse effect on benthic (bottom dwelling) marine life and other marine resources.
Commercial Fishing:	Potential impacts similar to marinas.
Shopping Facilities:	Increased vehicle traffic with associated impacts, similar to that for hotels.
	Increased utility and fuel consumption.
	Increased employment and economic benefits.
	Possible view blockage.

The following summarizes the location of proposed appealable projects (pursuant to the Coastal Act) within the various Planning Districts under the Port Master Plan.

Planning District	Major Proposed Appealable Projects
Shelter Island:	None, only beach corridor improvements and restaurant renovations.
Harbor Island/ Lindbergh Field:	Marina, aquatic center, airport access road, Hotel complex.
Centre City/ Embarcadero:	Marina, commercial fishing berthing/support, shopping facilities, Harbor Drive Reroute, Hotels.
Tenth Avenue Marine Terminal:	None.
National City Bayfront:	Shopping facilities, Tidelands Avenue Extension.
Coronado Bayfront:	Hotel.
Chula Vista Bayfront:	Marina, commercial fishing, public park, restaurant, peninsula development.
Silver Strand South:	Marina, shoreline park.
South Bay Salt Lands:	None.

Again, it should be noted that future project proposals such as new marinas and marina support facilities and hotel complexes would be subject to subsequent environmental review and may require additional environmental documents.

As indicated on pages 45-47 of the Draft EIR, the impact analysis on the extension of Tidelands Avenue has already been addressed in detail in the Chula Vista Bayfront Redevelopment Project EIR prepared by the Chula Vista Redevelopment Agency (1976). The findings were incorporated by reference in this Draft EIR. Possible circulation impacts of the proposed extension of Tidelands Avenue were also addressed on pages 228-230 of the Draft EIR. It is noted on page 230 of the Draft EIR that: "The Tidelands Avenue extension would mitigate traffic increase impacts associated with development in the G and H Street areas." It is not anticipated that the Port District's link-up connection with the extension of Tidelands Avenue from the City of Chula Vista would contribute to the concerns over potential adverse impacts on coastal resources indicated by the State Coastal Commission. The extension of Tidelands Avenue from the National City Marine Terminal across the proposed bridge over the existing Sweetwater Channel, onto the barren D Street fill would not likely result in a potential for significant adverse environmental impacts on coastal resources. It would provide a link-up with a more southeasterly extension into the City of Chula Vista's Bayfront Redevelopment Plan area; it is in that area, namely the Sweetwater River/Paradise Creek Complex, that the majority of concerns have been expressed. Coastal resource impacts, particularly biological impacts, in this area have already been adequately addressed in the Chula Vista Redevelopment Agency EIR, incorporated by reference on pages 45-47 of this Draft EIR.

The Master Plan does not propose an extension of H Avenue. The area of the so-called H Street fill between G Street and H Street shown in the Master Plan as Commercial Recreation would be connected to Tidelands Avenue by a short extension of an access street which would follow the general east-west alignment of H Street, but would not constitute an actual connection or extension to H Street.

The Draft EIR indicates that adverse impacts may be associated with proposals in the Chula Vista Bayfront Planning District, but detailed impact analysis of such proposals cannot proceed to completion until such time as project specific elements are developed for those areas. At that time individual projects would be subject to environmental review under CEQA, and subsequent environmental documents focusing on the potential for individual environmental impacts could be written as appropriate.

Socio-economic impacts, particularly those project implementations likely to generate controversy, were given more than "brief attention" in the preparation of the Draft EIR. The Draft EIR points out the work of the Coronado Bayfront "Ad Hoc" Committee and Coronado's concerns on at least the following pages: 4, 8-9, 42-43, 76-78, 222-223, 228, 230, and 249. The rationale for analyzing land/water use plans for the Coronado Bayfront area, although rejected by the City of Coronado, was to obtain a base line of potential impacts. This was carried out in considerable detail in the Coronado Bayfront Development Plan Draft EIR (UPD #78102-EIR-2; SCH #78112818), which included a public hearing before the Board of Port Commissioners on February 6, 1979. At that hearing the Board agreed to further review the Coronado Bayfront Development Plan, and hold further environmental evaluation in abeyance until a joint decision was reached with the City of Coronado. The existing land/water use proposals in the Master Plan represent that decision. The Board of Port Commissioners, on December 18, 1979, adopted by Resolution 79-338 a Memorandum of Understanding with the City of Coronado concerning tideland development; the City of Coronado adopted the Memorandum on December 19, 1979, by Resolution 5909.

In similar fashion, proposed developments which may affect the Barrio Logan area were also given more than brief attention. The issue of the Barrio residents' desire for nearby bay access through an established heavy industrial marine terminal area was described in the Draft EIR on pages 8, 40, and 74-76. This waterfront area has been in active industrial use for decades; statements to the contrary are incorrect.

The regulation of the storage and transportation of hazardous materials within the San Diego Bay area is the responsibility of agencies other than the San Diego Unified Port District. The Federal Office of Safety and Health Administration (OSHA), various state safety inspections, including the Air Resources Board (ARB) through the local San Diego Air Pollution Control District (APCD), and local city fire inspectors and building departments regulate siting and construction of such facilities. In San Diego Bay, hazardous materials are limited to military munitions (US Defense Department responsibility), petroleum fuels, and miscellaneous chemicals. Storage of petroleum fuels occurs at Lindbergh Field (aviation and jet fuels), marine and land service stations (gasoline and diesel fuels), marine terminals (bunker fuels), and the National City industrial area (fuel oil for electric generators). None of the major fuel storage areas are in close proximity to residential areas and only a few are near public recreation areas. No residential uses are permitted on Port tidelands, consequently, no existing nor proposed residential area would in the future be located in close proximity to areas of storage or transportation of hazardous materials. Hazardous chemicals are limited to industrial areas, primarily in the marine industrial area, and the southern portion of the Tenth Avenue Marine Terminal Planning District.

The transportation of hazardous material over waters is regulated by the US Coast Guard, which regularly inspects those fuel facilities capable of filling vessels with a capacity of 250 barrels or more. There are eight such facilities in San Diego Bay located within Port Planning Districts as follows:

Shelter Island:	Harbor Boat and Yacht Company
Harbor Island:	Marina Cortez Fuel Dock; San Diego Marine Service
Embarcadero:	Embarcadero Marine Services
Tenth Avenue:	Tenth Avenue Marine Terminal; Tuna Clipper Marina; Bumble Bee Sea Foods
National City:	San Diego Gas and Electric Company

Since only low-volatility petroleum fuels are transported by ship, the danger of major hazard is remote. In addition, the relatively low volume of ship traffic in San Diego Bay and the ample maneuvering space available lessens the chance of collision or grounding.

Land transportation of hazardous materials is regulated by state and Federal laws. Truck and railroad freight routes generally pass through non-residential areas, with the exception of some mixed residential/industrial areas in Barrio Logan near the Tenth Avenue Marine Terminal. The City's zoning since the mid-1930's for this area has been primarily industrial. Finally, it should be stressed that the Master Plan proposes no major fuel storage or hazardous material handling facilities. The fuel docks shown on the Planning District maps are intended to be small facilities which would only serve the needs of local boating or as support facilities for the marinas wherein they are designed.

At the request of Coastal staff, copies of the Draft EIR were also sent to the federal office of Coastal Zone Management and to the Maritime Administration. Comments have not been received (2/80). A master distribution list for public interest groups and individuals including those interested in Coastal and port planning was obtained from the State Coastal staff and was used as the basis for public notification of the filing of the Final EIR and announcing the proposed date of Certification of the Master Plan EIR. The list contained more than 500 addresses. Additionally, newspaper notices were published.

Regarding conformance of the Port Master Plan with the Coastal Act, referencing appealable projects for conformance is primarily a planning issue rather than an environmentally related issue. If ultimately project proposals are found not to be in conformance, the Master Plan could not be certified. Projects as presented in the Master Plan project lists for each Planning District are assumed to conform to the Coastal Act at the outset. This is indicated in detail in the compliance anaylsis in Appendix B of the Port's Master Plan. If the California State Coastal Commission proposes changes or imposes conditions during the Port Master Plan certification process, subsequent environmental analysis may be required to evaluate the environmental consequences of these revisions.

State of California — The Resources Agency

Memorandum

To : 1. Jim Burns, Projects Coordinator
Resources Agency

2. San Diego Unified Port District
P. O. Box 488
San Diego, California 92112

Date: November 21, 1979

RECEIVED
NOV 2 0 1979
ENVIRONMENTAL MANAGEMENT

From : Department of Fish and Game

Subject: SCH 78030604L - Port of San Diego Port Master Plan Draft Environmental Impact Report (DEIR)

We have reviewed subject document which provides an evaluation of the existing environmental conditions and an assessment of the impacts associated with the implementation of the proposed Port Master Plan. We have previously reviewed the Preliminary Draft Port Master Plan and provided comments to the Port on January 4, 1979. These comments are still relevant and are appended for the Port Districts further consideration. With regard to the DEIR, first of all we commend the Port for their efforts and results in assimilating and portraying Biological Resources data as shown on Figures 17-24. We believe these figures will prove beneficial to future project reviews as they relate to habitat modifications. In addition we have the following specific comments:

1. Page 142 - The section titled Animal Life/Including Rare and Endangered should also include the green sea turtle as an endangered species. This species was so designated by the U.S. Fish and Wildlife Service in January 1979.

2. Figures 17 and 20-24 should also designate California least tern foraging areas in addition to designated nesting areas. The attached proposed critical habitat areas for the least tern delineate both nesting and foraging areas for this species. In addition this species has been observed feeding within the Sweetwater Channel, the shallow subtidal area adjacent to the 24th Street Marine Terminal, the Coronado Bayfront, and Glorietta Bay shallow subtidal areas and adjacent to Crown Island and the U.S. Navy Amphibious Base shallow subtidal areas.

3. Page 166 - Sea Turtle Habitat - This section states that the habitat for this species is limited to south San Diego Bay adjacent to the cooling water discharge of the San Diego Gas and Electric Company. We suggest that this is not the only area utilized by this species within the Bay. Rather, we would expect the animal to inhabit other locations particularly areas containing eelgrass beds. That plant serves as a primary food source and is considered as one of the principal ecological factors determining sea turtle distribution.

4. Page 172 - Unique Habitat Associations - The green sea turtle is known to feed directly on eelgrass and should be included in this section along with the least tern which feeds on juvenile fish associated with eelgrass beds.

5. Page 178 - Contamination Sources - This section should mention the Naval Training Center Estuary as a possible non-point source of water pollution. In past correspondance with the Department, this area has been identified by the Port District as a possible source of high coliform bacteria counts which exceed water contact limits as well as shellfish harvesting limits established by the State Health Department. This possible source of water pollution has been suggested as the principal impediment to establishment of a clam bed enhancement/mitigation project on the southeastern end of Shelter Island.

6. Page 240 - Biology-Impacts - We are in disagreement with the statement in paragraph five that portrays Master Plan proposals as not having the potential for having significant adverse environmental impacts upon rare and endangered animals. In particular, we believe our comments *regarding least tern feeding areas (see our Item 2 and Attachment #2)* contradicts this comment. Further, the reference to "areas of maximum biological sensitivity" as having been identified elsewhere in the DEIR is unclear in its context here, particularly when the comment is offered that the Master Plan includes no proposals that would impact such resources. We believe that this comment is inconsistent with the thoughts expressed in paragraph four on the same page which portrays possible significant impacts from the Sweetwater Wharf and Chula Vista projects. We believe those sites contain areas of biological sensitivity.

7. Page 251 - Paragraph three - It is premature for the Port District to claim that it "has constructed the single largest artificial wildlife reserve of its kind in the Continental United States" (emphasis added). Until the island is completed, design elements implemented and its value clearly documented, it does not constitute an expansion and enhancement of natural biological habitat as claimed. The future may prove otherwise, but at present, it would seem difficult to characterize the area as being more than a large spoil island.

If there are any questions regarding our comments, please contact Mr. R. E. Hall, Environmental Services Supervisor, 350 Golden Shore, Long Beach, California 90802. The phone number is (213) 590-5155.

E. C. Fullerton
Director

Attachment

State of California ATTACHMENT #1 The Resources Agency

Memorandum

To : 1. L. Frank Goodson, Projects Coordinator
Resources Agency

2. Mr. Frederick H. Trull, Planning Director
San Diego Unified Port District
P. O. Box 488
San Diego, CA 92112

Date: January 4, 1979

RECEIVED
NOV 30 1979
ENVIRONMENTAL MANAGEMENT

From : Department of Fish and Game

Subject: SCH 78030604 - Preliminary Draft Port Master Plan, San Diego Unified Port District

We have reviewed the subject document which presents the Port District's planning goals and policies and a brief summarization of the precise plans for the nine planning districts within the Port District's jurisdiction. Our Marine Resources Region previously reviewed and provided comments to the District with regard to a Notice of Preparation for this Master Plan in a letter dated April 7, 1978, and again in a review of a document identified as the 1972 Port Master Plan in a letter dated June 9, 1978. The Region's comments regarding those documents are still relevant and should not be considered as diminished in any manner by our present response to the subject document.

309

As a result of this review, we have prepared comments on part of Section III - Master Plan Interpretation and for Section IV - Precise Plans.

In response to Section III, we offer the following comments:

1. In the discussion of the 31.1 acre Expansion Reserve (page 20) there is no provision for consideration of fish and wildlife habitat protection needs. We consider this one of the most important issues that should be recognized in future planning for this area.

2. In the discussion of Habitat Replacement (page 36), the concept is offered of providing replacement habitat for economically important species. While the language does not seem to preclude the consideration of living resources in general, the necessity for focusing on those of economic importance is unclear to us and perhaps needs expansion. We would also add here that while we recognize the potential benefits that may accrue to certain fish and wildlife resources from the creation of the so-called Habitat Replacement Area, we also believe that: (1) the primary reason for the construction of the area was for spoil disposal in order to render the Chula Vista Marina project economically feasible; (2) the project was initially offered in the context of mitigating impacts from the construction of the Chula Vista Marina; and (3) before too many claims are made by the Port that fish and wildlife habitat in San Diego Bay has been adequately replaced via this mechanism, the project ought to be proven. We are certainly hopeful that this will occur.

With respect to the Precise Plans of Section IV, we have listed those areas which contain habitat and associated resources that are of particular interest to the Department. We recommend that the Port District focus upon these habitat types and associated resources in the Port Master Plan EIR in terms of environmental inventory, impact analyses, alternative planning modes, and mitigation consideration. These areas are listed by Planning District and are as follows:

Planning District 1 - Shelter Island

The district is essentially fully developed but still retains clam beds located along the southeastern and southwestern ends of Shelter Island. These resources are presently utilized by recreational clam diggers. In addition, the southeastern clam bed is the site of a proposed enhancement project. Therefore, we believe that any dredging or fill projects, as well as other projects which would impact these areas, should be avoided or minimized.

Planning District 2 - Harbor Island/Lindberg Field

This area is completely developed except for the northeastern side of Harbor Island and is designated as recreational and specialized berthing within the marina zone. Our concerns for that site focus on the possible degradation of water quality and any resultant impact on marine resources. Also of concern is the possible loss of marine habitat resulting from dredging and/or fill operations which may be necessary to provide the proposed facilities.

Planning District 3 - Center City/Embarcadero

Our interest within this planning district focuses on the proposed 400 berth marina at the Fifth Avenue Marina. Our concerns here are the same as those expressed for the Harbor Island area.

Planning District 4 - Tenth Avenue Marina Terminal

Our concerns for this area are minor and relate to the limited amounts of dredging associated with the proposed channel and berth deepening to accommodate larger draft vessels. The impacts associated with this project would probably be short term loss of benthic organisms and possibly water quality degradation from the resuspension of contaminated sediments.

Planning District 5 - National City Bayfront

The reach along the Sweetwater Channel and the remaining undeveloped bayfront in this District and particularly as they relate to the undeveloped areas in District 7, are of major interest to the Department and development proposals that will impact these areas constitute a major concern. For example, the proposed wharf completion would (1) eliminate the remaining shallow water subtidal and mudflat habitat within the immediate area thus impacting a feeding area of the California least tern and (2) eliminate marine resources which utilize these habitat types. Activities associated with the development and use of this area could also impact adjacent (District 7) proposed critical habitat for the endangered light-footed clapper rail and least tern.

Planning District 6 - Coronado Bayfront

The proposed revetment and marine facilities, which may require some dredging and fill, could impact eelgrass and sandy inter and subtidal habitats and their associated resources.

Planning District 7 - Chula Vista Bayfront

The greatest potential for disagreements between the Department's interests and the Port District's planning efforts exist in proposals for District 7 and the immediately adjacent portions of District 5. The Sweetwater Marsh - Paradise Creek - D Street fill complex and the adjacent inter and subtidal habitats are specific areas within the planning district that are of interest to the Department. These areas are generally within the proposed critical habitat for both the least tern and the clapper rail. As such, they are essential to the continued well being of those species as well as for other organisms that depend upon those habitats.

This planning district is relatively undeveloped, except for the Chula Vista small boat basin and existing industrial area. Future developments, such as the extension of Tidelands Avenue, expansion of the existing industrial area, construction of the proposed peninsula, and extension of D Street fill all have the potential to significantly impact the existing terrestrial and aquatic habitats that are important to a variety of species.

Planning District 8 - Silver Strand South

Within this planning district, are the inter and subtidal marine habitat that could be impacted by dredging for proposed berthing along the southern side of North Island and the southern end of the Coronado Cays Company property. Dredging within these areas could significantly impact marine resources.

In addition, any development on North Island could impact the endangered California least tern which successfully nested on this area during 1978.

Planning District 9 - South Bay Salt Lands

We concur with the conservation classification of this planning district.

We appreciate the opportunity to review and provide comments on the Preliminary Draft Port Master Plan. Should there be any questions regarding these comments, please contact Mr. Rolf E. Mall, Environmental Services Supervisor, 350 Golden Shore, Long Beach, California, 90802. His phone number is (213) 590-5140.

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Director

310

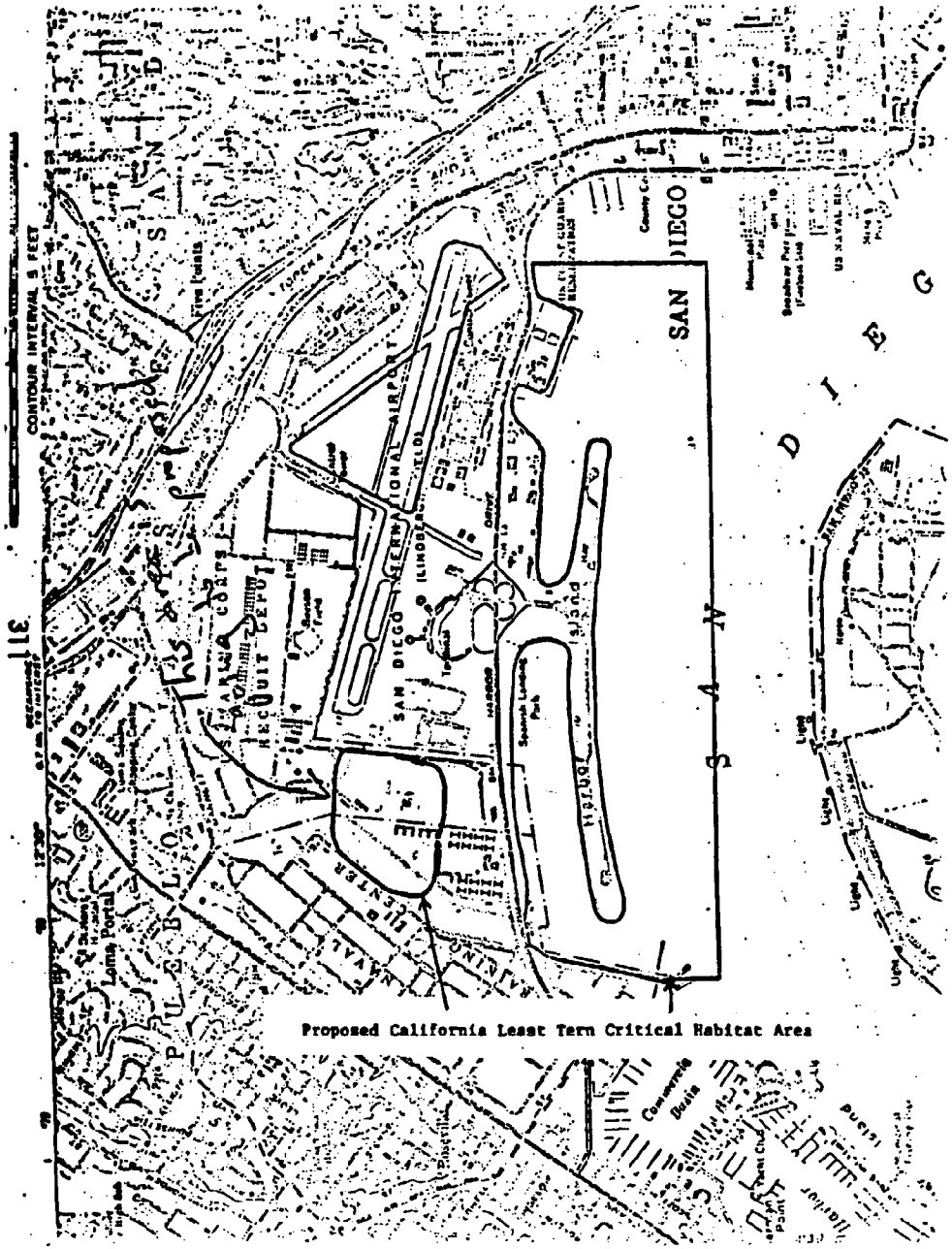
ATTACHMENT #2 Proposed California Least Tern Critical Habitat Area

North San Diego Bay, San Diego, California. Essential habitat includes:

1. All land, excluding established, paved runways and taxiways, in an area bound by a line beginning at the intersection of the west edge of Runway 9 (same as Runway 31) and the south edge of the north taxiway (paralleling Runway 27), extending 2,600 feet northwestwardly along the west edge of Runway 9, thence extending southwesterly along a line parallel with and 100 feet from the east boundary fence of U.S. Marine Corps Recruit Depot a distance of approximately 2,400 feet to the north edge of the south taxiway (paralleling Runway 27), thence extending approximately 1,600 feet along the north edge of the south taxiway to the east edge of Runway 31, thence extending 750 feet southeast along the east edge of Runway 31, thence extending northeastward along a line perpendicular to Runway 31 a distance of 750 feet, thence extending northward along a line perpendicular to Runway 27 a distance of approximately 750 feet to the south edge of the north taxiway, thence extending approximately 2,000 feet westward along the south edge of the north taxiway to its intersection with the west edge of Runway 9. Area includes approximately 80 acres.

2. All open, tidal waters of San Diego Bay bound on the west by longitude 117°13'00" W, on the south by latitude 32°43'10" N, on the east by longitude 117°10'40" W and on the north by Harbor Drive. Area includes approximately 750 acres.

U.S.G.S. map: Point Loma, Calif., N3237.5-W11707.5/7.5x8, 1967. Refer to Map E.



Proposed California Least Tern Critical Habitat Area

Proposed California Least Tern Critical Habitat Area

South San Diego Bay, San Diego County, California. Essential habitat includes all land and water bodies in an area of approximately 4,300 acres bound by a line beginning at the intersection of Silver Strand Boulevard and latitude line 32°37'00" N, extending east along this latitude line approximately 1,500 feet to longitude 117°07'47" W, thence extending north along this longitude line approximately 2,400 feet to Grande Caribe Causeway, Coronado Cays, thence extending eastward approximately 700 feet along Grand Caribe Causeway and its bayward extension to longitude 117°07'40" W, thence extending north approximately 9,000 feet to latitude 32°39'00" N, thence extending east approximately 2,700 feet along this latitude line to the mean high water line of the east shore of San Diego Bay, thence extending southward approximately 900 feet along the mean high water line to the north bank of Sweetwater Channel, National City, thence extending along the mean high water line of the north bank of Sweetwater Channel a distance of approximately 3,300 feet to the channel's eastern end, thence extending southward approximately 200 feet along the mean high water line of the east end of Sweetwater Channel to a line parallel with and 1,200 feet south of the centerline of 32nd Street, thence extending eastward along this line a distance of approximately 500 feet to a line parallel with and 300 feet west of the centerline of the San Diego and Arizona Eastern Railroad tracks, thence extending southward along this line a distance of approximately 1,800 feet to the intersection of this line with the south bank of the main channel of Sweetwater River, thence extending approximately 3,000 feet along the south bank of this channel to its mouth, thence extending southward along the mean high water line of the bay to the north dike of San Diego Gas and Electric cooling water intake, thence extending south 1,000 feet to the north dike of the northeasternmost salt pond of Western Salt Company to Palm Avenue, Imperial Beach, thence continuing west 900 feet along the salt pond dike adjacent to and parallel with Palm Avenue, thence extending northward approximately 900 feet along the 10 foot contour line to the Imperial Beach-San Diego city boundary,, thence north and west approximately 5,600 feet along the city boundary to Silver Strand Boulevard, thence northward approximately 12,000 feet along Silver Strand Boulevard to latitude 32°37'00" N.

Chart: Department of Commerce, United States-West Coast, San Diego Bay, Soundings in Feet at Mean Lower Low Water, Scale 1:20,000, undated (post-May 1972). Refer to Map F.

RESPONSE to COMMENT from: CALIFORNIA DEPARTMENT OF FISH & GAME
signed by E. C. Fullerton, Director
(11/21/79; received 11/29/79)

Response: The California Department of Fish & Game (CFG) offered comments of minor revisions to statements in the Draft EIR which are incorporated as follows.

Various descriptions of the green sea turtle (Chelonia mydas) and its habitat are hereby revised to state that the green sea turtle is also an endangered species. The section in the Draft EIR on page 142 is hereby revised to reflect this change. In addition, the statement on page 166 of the Draft EIR that discusses sea turtle habitat is hereby revised to indicate that sea turtles would be expected to inhabit other locations in San Diego Bay, particularly areas containing eelgrass beds. On page 172 of the Draft EIR under the heading, Unique Habitat Associations, the discussion on eelgrass is hereby revised to state that the green sea turtle is known to feed directly on eelgrass.

Regarding CFG concerns for California least tern foraging (fishing) areas, this species has been observed feeding in various portions of the bay including the Sweetwater Flood Control Channel, adjacent to the National City Marine Terminal, Coronado Bayfront and Glorietta Bay, adjacent to Crown Island, in the Coronado Cays, and adjacent to the US Navy Amphibious Base. Preliminary maps of the habitat areas (proposed to be designated as critical habitat areas) which the California least tern recovery team considers both for nesting and foraging were attached to the CFG letter of comment. It is the position of the District not to include these proposed candidate areas in the Master Plan EIR. These areas have only a proposed status at the present time. The boundary delineations, the implicit limitations on land/water uses, and the biological appropriateness of the preliminary designations remains an unresolved issue for now. It is anticipated that, when the US Fish & Wildlife Service and other appropriate federal and state resources agencies have achieved the official critical habitat designations for rare and endangered species in the San Diego Bay area, the official maps would be transmitted for inclusion at a subsequent plan amendment.

The possibility of bay water pollution from tentatively high concentrations of coliform bacteria, adjacent to the Naval Training Center (NTC) estuary is presently (1/80) under investigation. The Comprehensive Planning Organization (CPO), in cooperation with the Port of San Diego, the San Diego Regional Water Quality Control Board, the County of San Diego Department of Public Health, and other appropriate federal and state agencies, is currently administering a consultant contract to survey, locate, and define the source(s) of water pollution. The study is being conducted under a Clean Water Grant pursuant to Section 208 of the Federal Water Pollution Control Act, as amended (1972). Page 178 of the Draft EIR discusses known contamination sources in existence in San Diego Bay, which could impact water quality and have potential for subsequent indirect impact on biological resources. That discussion is hereby amended to include the information presented describing the existing condition of the area and the studies being conducted. For more information the reader is referred to the CPO Clean Water Grant consultant contract to Aquafarms, a subsidiary of California Mariculture, Inc. Contract completion date is July, 1980.

CFG also expressed concerns regarding the potential of Master Plan proposals to result in significant adverse impacts on the foraging (fishing) of California least terns. Water uses proposed in the Master Plan, such as recreational marinas, commercial fishing facilities, and navigational uses of bay waters, have not been demonstrated to constitute a potential for a significant impact on California least tern feeding activities. In many cases, the presence of artificial structures such as revetment, pilings, marina docks and floats, etc., provide additional attachment areas for marine organisms and additional shelter for marine fishes, upon which the California least tern ultimately depends for food material.

With reference to areas of maximum biological sensitivity, as described on page 240 of the Draft EIR, the intent of the wording of the Draft EIR, as suggested by CFG, appears inconsistent. The statement in the Draft EIR that, "The Master Plan includes no proposals which would impact these sensitive resources," is hereby revised by the following addition, "...with the exception of the proposed Sweetwater Wharf (D Street Wharf) project and the Chula Vista Boat Basin J Street Second Peninsula Extension.

Regarding the value of the South Bay Wildlife Reserve as artificial habitat, the statement made in the Draft EIR on page 251 that "...the Port of San Diego has constructed the single largest artificial wildlife reserve of its kind in the Continental United States..." is hereby revised. It is replaced with, "Upon successful establishment of a healthy, stabilized tidal marsh, the Port of San Diego will have constructed the single largest artificial wildlife reserve of its kind in the Continental United States...". This accomplishment, to which the District is committed to extend its best effort, is, of course, also contingent on the District's ability to complete the Chula Vista Small Boat Basin as a viable, fully usable, small craft harbor.

CFG also provided (January 4, 1979) as an attachment, comments on the Port's Preliminary Draft Master Plan. Although these comments also deal with environmental issues, they have application primarily to planning policies for each of the Port's nine Planning Districts. These comments were taken into account during the development of the Port Master Plan and are addressed within the Precise Plan discussions of the nine Planning Districts of the Port Master Plan, pages 54-140. Overall planning policies which incorporate conservation-oriented land use objectives and criteria are included in the Master Plan on pages 39-41.

313

995

State of California

Memorandum

RECEIVED
NOV 29 1979
ENVIRONMENTAL MANAGEMENT

Department of Health SERVICES

To : Steve Williamson
State Clearinghouse
1400 - 10th Street, Room #121
Sacramento

Date : NOV 14 1979

Subject: SCH #78030604
San Diego Unified Port District Master Plan

From : Environmental Health Branch

The Office of Noise Control within the California Department of Health Services has reviewed the Draft Environmental Impact Report for the San Diego Unified Port District Master Plan (September 1979) and offers the following comments.

The predominant source of noise within the Port Authority's jurisdiction is undoubtedly the flight operations from Lindbergh Field. Reference is made on pages 115-116 to "avigation (sic) easements". Furthermore, it is stated that in the opinion of the Port Authority, Lindbergh Field has a "noise impact area of zero". Regardless of whether or not there exists a prescriptive easement in this matter, it should be recognized that due to the unusually large number of residences and other incompatible land usages within the CNEL 65 contour, significant adverse environmental consequences will result. This ranges from psychological effects such as annoyance, sleep disturbance, etc. to possible hearing damage, depending on the single event levels and duration of flight operations.

In the opinion of the Office of Noise Control, noise easements do not mitigate the problem, they only mitigate some of the complaints. They should be considered as a last resort only and even then in conjunction with measures designed to mitigate the problem of high noise levels.

In considering the effects of motor vehicle traffic on the noise environment several noise metrics are used - in particular the A-weighted sound level, L_{dn}, L_{10}, and L_{50}. It is not always clear which metric is being used when a level is quoted. For example, the second paragraph from the bottom on page 125 refers to the use of noise estimates made using L_{50} at 100 feet. It is implicitly although not clearly stated that the noise levels which follow are reported using this measure. It should be noted that L_{50} alone is an inappropriate for adequately assessing the noise environment due to traffic noise. It should be used in conjunction with another measure such as L_{10}, L_{max}, etc. In addition, the levels quoted should be arranged in tabular form for purposes of comparison. The noise contour maps referred to in the text should be included either within the body of the Report or as an appendix, so that the current and projected impact on the noise environment may be assessed.

If you have any questions or comments, please feel free to contact Mr. John Gilbert, Office of Noise Control, 2151 Berkeley Way, Berkeley, California 94704, (415) 540-2657.

Kenneth Buell, Chief

RESPONSE to COMMENT from: CALIFORNIA DEPARTMENT OF HEALTH SERVICES, OFFICE OF NOISE CONTROL
signed by Kenneth Buell
Chief of Environmental Health Branch
(11/14/79; received 11/29/79)

Response: The California Department of Health Services expressed concerns regarding noise impacts associated with aircraft operations from Lindbergh Field. It is recognized that a potential for significant environmental consequences regarding incompatible land uses within the Lindbergh Field CNEL 65 contour exists.

As stated in the Draft EIR on page 115, "...it is the position of the Port District that it has acquired all necessary navigation easements for noise by prescription."

As indicated in the Draft EIR on page 110, "A discussion of ... noise reduction programs can be found in the Port's Noise Control Plan...attached as Appendix K."

In response to the comment regarding the effects of motor vehicle traffic on the noise environment, the reference for noise estimates on page 125 of the Draft EIR, which indicates measurements using L50 at 100 feet, does apply to the noise levels which follow in the remainder of the paragraph. This information was incorporated by reference from the Port District's Embarcadero Development Plan EIR (1976). It is acknowledged that L50 alone is not the most precise means of assessing the noise environment due to traffic noise. It should be noted, however, that L50 does represent noise levels presented as a median (middle of the range of noise levels), as indicated on page 109 of the Draft EIR.

No additional detailed vehicle traffic noise studies were conducted for the Master Plan Draft EIR. Given the level of detail and the degree of specificity required by CEQA EIR Guidelines for a Master Plan Draft EIR, as opposed to a project-specific Draft EIR, the incorporation by reference of noise assessment information from previous traffic noise studies of Port Planning Districts is appropriate. It is possible that additional, more detailed, information for assessing the noise environment due to traffic noise could be developed if the L50 measurements were used in conjunction with other measurements such as L10, Lmax, etc. Such detailed determinations would be provided in subsequent project-specific environmental documents as appropriate.

Noise associated with motor vehicle traffic has been described for the Master Plan area for selected locations. Tabular arrangement of the quoted noise levels for purposes of comparison would serve no useful purpose, since the dates of the various surveys, the methodologies involved, and the noise levels employed vary from study to study. It is for this reason that a general relationship between vehicle traffic noise and average daily traffic (ADT) was described on pages 122 and 125 of the Draft EIR. When this relationship is applied to those sample areas where existing ADT's are known, an approximation of the existing noise environment can be made.

9960

The Transportation Noise Contour maps referenced on page 122 of the Draft EIR include 1973 noise contour information from freeways, highways, railroads, and aircraft for the San Diego Bay area, developed by the Comprehensive Planning Organization (CPO). These maps have never been prepared in a reproducible format. They presently (1/80) exist as working mylar drawings on wall size maps, available for public inspection at CPO. Other detailed noise measurement information can readily be secured from the City of San Diego's Noise Abatement Office.

315

SAN DIEGO REGION'S COUNCIL OF GOVERNMENTS

COMPREHENSIVE
PLANNING ORGANIZATION
Suite 524
Security Pacific Plaza
1200 Third Avenue
San Diego, California 92101
(714) 236-5300

November 2, 1979

RECEIVED
NOV 5 1979
ENVIRONMENTAL MANAGEMENT

Mr. Tomas E. Firle, Coordinator
Environmental Management
San Diego Unified Port District
P.O. Box 488
San Diego, CA 92112

Subject: Executive Committee Action on Notice of Intent
Re: Master Plan Draft EIR, San Diego
Unified Port District

Dear Mr. Firle:

On November 2, 1979, the Executive Committee reviewed your Draft Environmental Impact Report of the Proposed Master Plan Revision.

Based on CPO investigation, of the proposed Draft EIR, the Executive Committee has determined that there are no unresolved regional issues regarding your application and that further review and comment by CPO is unnecessary. However, consistent with CPO's efforts to provide assistance in developing a complete and successful project, the Executive Committee recommends consideration of the comments in the attached staff report.

If you have any questions or if we can be of assistance in any way, please do not hesitate to contact Mr. Michael S. Elliott, 236-5323. We wish you success in the final stages of your application process.

Sincerely,

Joan Katherine Martin

JOAN KATHERINE MARTIN
Director, Areawide Clearinghouse

JKM/MSE/bh

NI-88

Enc. NI-88 Staff Report

AB MIEMBRO AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, San Diego, San Marcos, Vista, and County of San Diego. EX OFFICIO MIEMBRO: California Department of Transportation. ASOCIADO MIEMBRO: Imperial County.

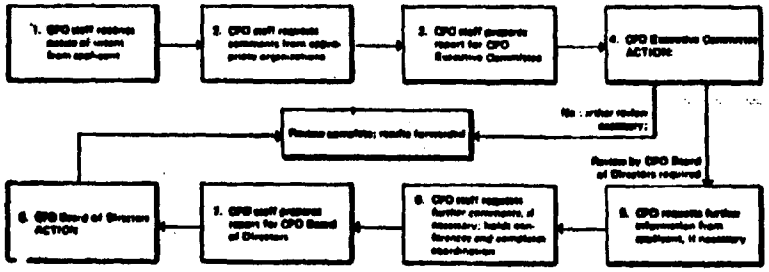
AREAWIDE CLEARINGHOUSE REVIEW

Objectives

The Areawide Clearinghouse Review process in San Diego is a regionwide intergovernmental cooperation mechanism designed to improve federal and state activities in a manner consistent with local government needs. It provides a quick and efficient service to federal, state and local governments by maximizing direct intergovernmental contacts before major federal and state planning, funding, development and regulatory decisions are completed.

The process works best at the outset of federal and state planning and decision-making affecting the San Diego Region. Often its most useful product is the strengthening of local applications for federal funds prior to the point when they are submitted to the federal government, thereby improving the chances for funding approval. The process also has the capability of resolving untimely, inconsistent, or duplicating federal and state activities and is designed in a positive, cooperative framework that supports the needs of local governments.

Process



Criteria

1. The extent to which the project is consistent with or contributes to the fulfillment of comprehensive planning for the region, or any of its localities.
2. The extent to which the proposed project:
   (a) Duplicates, runs counter to, or needs to be coordinated with other projects or activities being carried out in or affecting the area; or
   (b) Might be revised to increase its effectiveness or efficiency.
3. The extent to which the project contributes to the achievement of State, areawide, and local objectives and priorities relating to natural and human resources and economic and community development including:
   (a) Appropriate land uses for housing, commercial, industrial, governmental, institutional, agricultural, and other purposes;
   (b) Wise development and conservation of natural resources, including land, air, water, mineral, wildlife, vegetative and others;
   (c) Balanced transportation systems, including highway, air, water, pedestrian, mass transit, and other modes for the movement of people and goods;
   (d) Adequate outdoor recreation and open space;
   (e) Protection of areas of unique natural beauty, historical and scientific interest;
   (f) Properly planned community facilities, including utilities for the supply of power, water, and communications, for the safe disposal of wastes, and for other purposes; and
   (g) Concern for high standards of design.
4. The extent to which the project significantly affects the environment including the consideration of:
   (a) the environmental impact of the proposed project;
   (b) Any adverse environmental effects which cannot be avoided should the proposed project be implemented;
   (c) Mitigation measures proposed to minimize the impact;
   (d) Alternatives to the proposed project;
   (e) The relationship between local short term uses of man's environment and the maintenance and enhancement of long term productivity;
   (f) Any irreversible and irretrievable commitments of resources which would be involved in the proposed project or action, should it be implemented; and
   (g) The growth, inducing impact of the project.
5. The extent to which the project contributes to more balanced patterns of settlement and delivery of services to all sectors of the area population; including minority groups.
6. Effects on energy resource supply and demand.
7. The extent to which people or businesses will be displaced and the availability of relocation resources.
8. In the case of a project located in the coastal zone, the relationship of the project to the approved State program for the management of the coastal zone and its consistency therewith.
9. In the case of a project for which assistance is being sought by a special purpose unit of government, whether the unit of general local government having jurisdiction over the area in which the project is to be located has applied, or plans to apply for assistance for the same or a similar type project.

Project Applications

Item No.: NI-80-70,79,81,84,85,87, 88,89,90,95,96,99,100

Date 11/2/79

RECEIVED
NOV 5 1979
ENVIRONMENTAL MANAGEMENT

TO: Executive Committee

FROM: Executive Director

SUBJECT: Project Notifications Submitted to Areawide Clearinghouse October, 1979

ITEM #			STAFF RECOMMENDATION
(9)	NI-88	Master Plan Draft Environmental Impact Report/ San Diego Unified Port District	COMMENT

The San Diego Unified Port District requests comment on the Draft EIR of their proposed Master Plan by November 16, 1979. Staff has reviewed the Draft EIR and finds it generally satisfactory for those items covered. However, staff feels that several comments should be transmitted to the Port District to assist it in preparing its final EIR.

Lindbergh Field-Harbor Island: The Master Plan proposes to extend Washington Street through MCRD to the new West Terminal. It also proposes construction of 600 hotel rooms, 500 boat berths, two restaurants, and two coffee shops on East Harbor Island. The Draft EIR states that the extension of Washington Street would help offset congestion on Harbor Drive associated with proposed development on Harbor Island. However, no traffic projections were given for either the Washington Street extension or Harbor Island developments, and their energy and air quality impacts were not discussed.

Centre City-Embarcadero: Master Plan-proposed redevelopment of this area calls for a major hotel complex with 1,100 rooms, a 500-berth marina, and a 20-acre park. The Master Plan proposes that through traffic on Harbor Drive between Grape and Market would be diverted to

Pacific Highway. From south of Market Street to Fifth Avenue, Harbor Drive would be relocated from the waterfront to west of the railroad tracks. Staff feels that the traffic, energy and air quality impacts of these proposals were not addressed in sufficient detail in the Draft EIR. For example, the Draft EIR states that Hawthorn and Grape Streets are probably the most critical locations due to high traffic volumes and short blocks. However, it does not describe the proposed redesign of the Grape/Hawthorn intersections and proposed improvement of Pacific Highway which are expected to accommodate the increased traffic.

Cross-Bay Pedestrian Ferry: No mention has been made of a potential cross-bay pedestrian ferry. The possibility should be evaluated as an alternative or additional solution to the auto traffic congestion at the bridge toll gate. This could be accomplished upon retirement of bridge bonds.

Staff feels that addressing the traffic, energy and air quality impacts and mitigation measures of the proposed master plan in greater detail would improve the final EIR, and that the above comments should be transmitted to the Port District.

317

RESPONSE to COMMENT from: AREAWIDE CLEARINGHOUSE
COMPREHENSIVE PLANNING ORGANIZATION (CPO)
signed by Joan Catherine Martin
Director, Areawide Clearinghouse
(11/2/79; received 11/3/79)

Response: Specific vehicle traffic, energy, and air quality impacts in the Lindbergh Field/Harbor Island and Centre City/Embarcadero Planning Districts cannot be analyzed in more detail because specific traffic data for future proposals are, of course, not available. The Draft EIR provided general traffic projections for the type of developments wherein traffic generators are known (pages 227-230).

Actual traffic projections of the proposed Washington Street extension through the Marine Corps Recruit Depot (MCRD) to the new West Terminal cannot be made. On page 63, the Draft EIR does, however, provide traffic volume data for the eastern portion of Washington Street and for the two connecting streets, Harbor Drive and Pacific Highway. 1979 Average Daily Traffic (ADT) volume on Pacific Highway near the area where Washington Street would provide peripheral access to Lindbergh Field has an existing traffic volume of 51,000 ADT. The traffic is through volume on an elevated highway with existing on and off ramps to Washington Street. Washington Street adjacent to Pacific Highway has an existing traffic volume of 23,900 ADT. Harbor Drive in the vicinity of the new West Terminal, the proposed terminus of the peripheral access road has 32,100 ADT.

Additional vehicle traffic generated by Master Plan developments on East Harbor Island could equal 4,000 to 6,000 ADT. Specific details of the attendant energy and air quality impacts resulting from these developments are not the subject of the Master Plan Draft EIR. Such detailed impact analyses would be considered during subsequent environmental review of proposals for the East Harbor Island area.

Master Plan proposals in the Centre City/Embarcadero Planning District affecting traffic, energy, and air quality have already been described, see below. It is anticipated that very localized projects such as the Harbor Drive relocation and overpass, and the intersection modifications at Hawthorn and Grape Streets would receive subsequent environmental review as needed. Traffic impact analysis and mitigating measures for the Centre City/Embarcadero have previously been provided on pages 59-70 in the Port District's Embarcadero Development Plan Final EIR (1976). That analysis included estimated trip generations, traffic projections, and trip distributions for all of the streets and intersections in question. Specifically, the Embarcadero Development Plan Final EIR stated on page 64:

> "As proposed, a new link would connect Harbor Drive and Pacific Highway in the vicinity of Hawthorn and Grape Streets. Under existing physical constraints, this shift would probably have to be accomplished between Hawthorn and Grape Streets, conforming to the Pacific Highway at Grape Street. Although no design elements are included in this study, preliminary sketches indicate several intersection operational areas in which significant peak hour congestion could develop if the higher traffic projections are realized.

3091

Pacific Highway has excess capacity under current traffic volumes, and that capacity should be sufficient to accommodate projected volumes at an acceptable level of service. A probable exception is the Grape Street - Hawthorn Street - Harbor Drive intersection area, which could experience peak hour congestion as noted in the preceding paragraph."

Again, it is anticipated that more specific and updated traffic, energy, and air quality impacts of these proposals would be disclosed during subsequent environmental review when initial project designs are formalized.

The passenger ferry proposal was not included in the Port Master Plan because a careful study of the proposal by CPO in 1975 concluded that (1) It was not legally possible to operate the ferry until the bridge bonds were retired, and (2) Operating costs would exceed revenues to such an extent that it would be financially infeasible. When the bonds are retired sometime in the 1990's, the question could be re-studied and, if feasible, included in a Port Master Plan revision. If CPO has further or different information or plans, consideration could be given to these at a future Master Plan amendment. In the interim, the Bridge Authority has finally (1/80) implemented a one-way fare collection (westbound) with free-flowing eastbound traffic. This should materially reduce the peak afternoon traffic congestion which has affected residential areas of the City of Coronado.

318

78102-EIR-1

AIR POLLUTION CONTROL DISTRICT

COUNTY OF SAN DIEGO

R.J. Sommerville
Air Pollution
Control Officer

9150 Chesapeake Drive
San Diego, Calif. 92123
(714) 565-5901 (MS 0176)

November 8, 1979

RECEIVED
NOV 19 1979
ENVIRONMENTAL
MANAGEMENT

Tomas E. Firle
Port of San Diego
P.O. Box 488
San Diego, CA 92112

SUBJECT: "Master Plan, San Diego Unified Port District" Draft Environmental Impact Report (UPD #78102-EIR-1; SCH #78030604)

The Air Pollution Control District has reviewed the above referenced draft Environmental Impact Report and has the following comments with regards to the air quality section and Appendix C - Air Quality Information.

- The report does not include sufficient data to enable a comprehensive review of the Air Quality Section. The EIR simply states that the master plan is consistent with the Air Quality Maintenance Plan (AMP) but does not substantiate this claim. A quantitative analysis should be included to demonstrate the plans consistency.

- While the EIR claims the Port's Master Plan is consistent with the AQMP, it indicates that changes in the plan have occurred since its original submittal as stated on Page 129 of the EIR:

  "The intensity and distribution of various land uses designated in the Port's Master Plan have only changed negligibly since the land use designation information has been submitted to CPO and, therefore, the various emission products for proposed Port developments have already been incorporated into the AQMP."

  These "negligible" changes have not been identified in the EIR, therefore a determination of their significance or insignificance cannot be made. The EIR should identify what changes have occurred since the Port's Master Plan was originally submitted to the Comprehensive Planning Organization (CPO). It should also include an analysis of how emissions projections for the planning area differ from the original estimates contained in the AQMP.

- The EIR states (Page 129) that:

  "The Master Plan area is situated in the western portion of the San Diego Air Basin, which includes the western two-thirds of San Diego County. This area has been designated as an Air Quality Attainment Maintenance Area by the California Air Resources Board."

This statement, as written is incorrect. While said area has been designated as an attainment area for sulfur dioxide (SO_2), it has also been designated as a nonattainment area for the pollutants carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and total suspended particulates (TSP). The EIR should be corrected to include the above information.

Thank you for the opportunity to comment on the Environmental Impact Report. If you have any questions, contact me at 565-5904.

Raymond L. Weeks

RAYMOND L. WEEKS
Environmental Management Specialist

RLW:jo

cc: John Wise, EPA
William Lockett, ARB
Lari Sheehan, Planning Dept.
Dick Huff, CPO

319

RESPONSE to COMMENT from: AIR POLLUTION CONTROL DISTRICT
signed by Raymond L. Weeks
(11/8/79; received 11/19/79)

Response: The San Diego Air Pollution Control District (APCD) requested a quantitative analysis of air quality impacts which could result from implementation of the Port's Master Plan.

In some cases the Master Plan provides details of individual projects on a site-specific basis. In most instances, however, specific land and water use proposals for areas within the Port's jurisdiction cannot proceed beyond the concept stage. It is primarily for this reason that a quantitative analysis of the air emissions which may result from implementation of the specific aspects of the Port Master Plan is infeasible at this stage of the planning process.

Even if the design details and the specifics of all individual project concepts were completed, the application of air emission projections for future Port development proposals would not be applicable in a comparative sense with the most recent (10/78) Regional Emission Trends Projections for the San Diego AQMP/Non-Attainment Plan. Otherwise known as the Air Quality Maintenance Plan (AQMP), the report, developed by APCD and the Comprehensive Planning Organization (CPO), is a summary of present and projected emissions of major air contaminants for the entire San Diego Air Basin.

The AQMP is the present and future forecasting baseline standard against which major land and water use proposals (such as the Port's Master Plan) within the San Diego Air Basin are to be compared. The AQMP was not, however, derived on the basis of a quantitative analysis of individual air emissions sources, but rather on their aggregate. It is an emissions inventory and forecast compiled by relating emission factors (source categories) with activity indicators (measures of urban development). Future air emissions have been calculated by forecasting the emission factors and the activity indicators. The bases of such calculations and forecasts were not quantitative analyses of individual air emission sources, but rather the data were derived indirectly from various activity indicators which included: population projections, employment forecasts, vehicle miles traveled, vehicle trips, gasoline consumption, and electrical power generation. The Port Staff provided APCD/CPO with the necessary information.

The assumption was made in the AQMP that the changes in air emissions production could be represented by the changes in properly chosen activity indicator levels, in the absence of more specific quantitative data.

It is for these reasons, therefore, that a quantitative analysis of the air emissions anticipated from Master Plan implementation could not be used to demonstrate the consistency of the Master Plan with the AQMP.

As referenced on page 129 of the Draft EIR, the AQMP accounted for air emissions for specific activities, anticipated to develop as allowed under various land use designations (such as those of the Port's Master Plan), using the Regional Emissions Trends Projections. Development assumptions included land/water uses in the 1972 Port Master Plan and in the proposed 1980 Port Master Plan. Using the emission projections, the AQMP identified five major emission source categories including:

-Process losses

-Fuel combustion

-Air, water, rail transportation

-Motor vehicles

-Miscellaneous

Activity indicator assignments in the AQMP were based upon:

-CPO Series IV8, Employment and Population Data

-California Department of Motor Vehicles Registration Projections (CALTRANS)

-Transportation Models ADT (Average Daily Traffic) and VMT (Vehicle Miles Travelled) Data

-CPO Regional Energy Plan gasoline Consumption Data

-CPO SANPAT (San Diego Plan for Air Transportation) Annual Operations Data

-SDG&E Energy Source and Requirements Forecasts

As indicated in the Draft EIR on page 129, the Port of San Diego submitted to the CPO the existing adopted 1972 Master Plan land/water use designations. Using the Regional Emission Trends Projections and the five major emission source categories, the various projected emission products for Port developments of the 1972 Master Plan were incorporated by CPO/APCD into the AQMP.

320

In support of the statement in the Draft EIR that only negligible changes have been made in land use designations, the following comparison was made between land areas allocated for major use groups in the adopted Master Plan of 1972 and the proposed Master Plan of 1980:

Land Use Designations	Land Use in Acres 1972	1980
Commercial	448.8	418.5
Industrial	1,220.2	1,186.1
Public Recreation	376.3	276.6
Public Facilities (see text)	---	245.2
Military	41.3	25.9

Specific detailed comparisons are difficult due primarily to changes made in use categories and land fill areas. For example: streets, which were previously included in whichever land use category they occurred, were separated out and placed in the Public Facilities category for the 1980 Master Plan. This partially explains the slight decrease in acreage in each category. The overall developments in the 1980 Master Plan are approximately the same or slightly less than indicated in the 1972 Master Plan. Therefore, the total anticipated air emission projections from the various individual project developments throughout the Port's Master Plan area would hardly differ from the original base utilized by CPO/APCD in the derivation of information produced in the AQMP.

The statement on page 129 of the Draft EIR is hereby revised, as suggested by APCD, to read, "The San Diego Air Basin is an area which has also been designated as a non-attainment area for the pollutants carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), and total suspended particulates (TSP).

THE CITY OF

SAN DIEGO

CITY ADMINISTRATION BUILDING • 202 C STREET • SAN DIEGO, CALIF. 92101

ENVIRONMENTAL
QUALITY DIVISION
PLANNING
DEPARTMENT
236-6776

RECEIVED
NOV 21 1979
ENVIRONMENTAL
MANAGEMENT

RECEIVED
NOV 19 1979
SAN DIEGO UNIFIED
PORT DISTRICT
PLANNING

November 19, 1979

Mr. Frederick H. Trull
Director of Planning
Port of San Diego
P. O. Box 488
San Diego, California 92112

Dear ~~Mr. Trull~~ Fred

The following comments are in response to the Draft EIR for the proposed Master Plan of the San Diego Unified Port District. There are several distinct areas of the Draft EIR that need more sufficient analysis.

321

Circulation:

Under the discussion of mitigating measures on Page 229, second paragraph, there is not sufficient analysis of the traffic/circulation impacts or existing conditions to warrant the conclusion that the construction of the West Terminal and associated parking lots has mitigated the problem. The "proposed airport peripheral road," Page 229, (extension of Washington Street) is not sufficiently discussed or analyzed in any section of the EIR. Generally, there is no real quantitative analysis of circulation impacts, ADT's, existing parking available, anticipated increased demand, etc. For the Centre City/Embarcadero area, the previous statement also applies.

Land Use:

There is some question as to whether the discussion of the Port District's intention regarding the use or claim to vacated MCRD property is necessary.

Historical Resources:

The CCDC has recently concluded a Historical-106 Survey for HUD, the results of which should be included or referenced in the EIR. Also, the Rowing Club is a City of San Diego Historical Site

(#105) and was recently added to the National Register. There is no discussion of the Rowing Club or its physical site.

Please feel free to contact us if clarification of any comments is needed.

Sincerely,

for James F. Gleason
Environmental Quality Division

JFG:jlp

RESPONSE to COMMENT from: CITY OF SAN DIEGO
ENVIRONMENTAL QUALITY DIVISION
signed by James F. Gleason
(11/19/79; received 11/19/79)

Response: The concerns expressed by the City of San Diego, Environmental Quality Division (EQD) were addressed in the Draft EIR on pages 62-80, 227-230, and in the Circulation Analysis Summary, Appendix B of the Draft EIR.

Parking spaces at Lindbergh Field subsequent to the construction of the West Terminal have been increased from about 1,500 to about 4,500. Earlier Airport related traffic congestion, long lines, and vehicles circulating throughout the airport parking lots looking for available parking spaces had been due to construction activities, aggravated by permit delays. These conditions have been eliminated with the opening of the West Terminal (July 11, 1979) and many of the problems previously associated with vehicle traffic congestion at Lindbergh Field have been substantially mitigated.

The proposed airport peripheral road is still a concept which requires further study and planning to achieve; therefore, the Draft EIR impact analysis of the proposal can by definition only be preliminary. Detailed information cannot be provided at this time. It is, however, reasonable to infer that a portion of the vehicle traffic now entering Lindbergh Field from Harbor Drive could and would be carried on such a peripheral road, thereby easing existing peak congestion and vehicle traffic on Harbor Drive and Laurel Street. The potential for vehicle traffic congestion exists near the peripheral road ingress and egress points; however, such detailed information could only be provided in subsequent environmental documents, written as appropriate. For additional information, the reader is also referred to the response to the comment letter of the Comprehensive Planning Organization (CPO).

The Port Master Plan assumes continuation of the Marine Corps Recruit Depot (MCRD). The proposed airport peripheral road is subject to negotiation with the Department of Defense. No other areas of MCRD are proposed to be vacated. It should be noted again that the response letter from the Naval Facilities Engineering Command, November 21, 1979, states, "It has been concluded from findings of a Department of Defense study to close MCRD that the facility will neither be abandoned nor relocated in the forseeable future."

In most cases, the Master Plan Draft EIR primarily provides general environmental baseline information for future reference of subsequent project-specific environmental documents. To avoid unnecessary repetition while still serving as a comprehensive source document, the Draft EIR has incorporated existing information by reference. The Draft EIR references and summarizes many previous environmental and technical documents written by various agencies, firms, and/or individuals. These studies have included the same general project areas, some provided more specific project assessment and analysis, some provided general overall background and data.

For example, the District's Embarcadero Development Plan and Final EIR (1976) on pages 59-70, as referenced in the Master Plan Draft EIR on pages 37 and 71-74, provides a more detailed impact assessment of circulation, transportation, and parking. Detailed traffic and circulation data was provided for estimated trip generation rates and average daily traffic flows on several area streets within the Centre City/Embarcadero area on pages 60-62 of the Embarcadero Development Plan Final EIR.

The Master Plan Draft EIR also provided a comprehensive summary of information on the Lindbergh Field/Harbor Island and Centre City/Embarcadero Planning Districts on pages 63-74. Current (1979) traffic volume flows are also shown bayside on page 63 of the Master Plan Draft EIR, including data for both the areas of concern expressed by the City of San Diego.

Regarding reference to listing of historic sites within the Port's Master Plan area, historic sites as shown in Figure 37, page 215 of the Draft EIR, were based upon information available during the time of Draft EIR preparation (9/79). It is acknowledged that the Centre City Development Corporation (CCDC) has recently concluded a historical survey for the Federal Department of Housing and Urban Development. The comment on the inclusion of the deteriorating Rowing Club structure on the National Historic Register is noted for future reference. The former Rowing Club's structure is in a severely deteriorated, unsafe state which has been condemned by the City of San Diego Building Department and which is no longer under District lease to the San Diego Rowing Club. The physical location of the structure is adjacent to the south peninsula of the Embarcadero Marina Park, in the southern portion of the Centre City/Embarcadero Planning District.

Share Our Sentiments, Inc.
P.O. Box 702
Coronado, Ca. 92118

November 9, 1979

RECEIVED
NOV 20 1979
ENVIRONMENTAL MANAGEMENT

Mr. Frederick M. Trull
Director of Planning
Port Of San Diego
P.O. Box 488
San Diego, Ca. 92112

Dear Sir,

We are residents of Coronado and have recently completed examination and study of the Draft E.I.R. for the Port's Master Plan (Sept. 1979).

We have examined this draft E.I.R. in detail, especially those sections that include the city of Coronado. We find the same objections to this draft E.I.R. as we did with the draft E.I.R. on the Coronado Bayfront Development Plan (November 1978).

We do not believe a duplicate and lengthy listing of possible deficiencies is necessary here, and that is why we are enclosing our comments of January 2 and February 6, 1979 addressed to the San Diego Port and the San Diego Port Commissioners respectively.

In these documents we have listed very specificly the sections of C.E.Q.A. that we believe were not also addressed in preparation of the Draft E.I.R. for the Port's Master Plan.

We were hopeful that in the preparation of this new E.I.R. that these sections of the law would be met and that new information on the possible adverse and nonreversable effects on the environment of Coronado would be dealt with (See minutes of Port-Coronado Ad-Hoc Committee on open space requirements, traffic impacts and circulation, etc.). This has not been done.

We were very disappointed to discover the Port continues to view its developmental proposals for Coronado as the "only and best" land uses worthy of consideration. In fact, you present us with an E.I.R. that in every case of examination: land and water use, open space, traffic circulation, public services and facilities, growth, visual, noise and air quality, water supply and energy consumption -- you state "no adverse environmental impacts have been identified, therefore no specific mitigating measures are proposed."

This, Mr. Trull, is the crucial problem with this draft E.I.R. for the Port's Master Plan. The port planners and administrators continue to see their proposed plans for Coronado Tidelands as "so well done" that no negative environmental impacts will occur when many adverse impacts have already been well documented by various Coronado Councilpersons, community leaders, and citizens organizations.

This E.I.R. fails to honestly address the environmental effects of the proposed Master Plan for the Coronado Bayfront.

Sincerely,

Mrs. Sally Rummenacher

Mrs. Sally Rummenacher

J. John Truyn

cc: Mr. Michael Fisher
Executive Director
California State Coastal Commission

0123

February 6, 1979

TO: San Diego Port Commissioners

FROM: Share Our Sentiments Organization, Inc. P.O. Box 702, Coronado, Ca. 92118

SUBJECT: Sufficiency of Draft E.I.R. for Coronado Bayfront Development Plan (Nov. 1978).

Whereas the California legislature has declared in Title 14 Article 3 Section 15010 of the California Environmental Quality Act of 1970 that: a)Every citizen has a responsibility to contribute to the preservation and enhancement of the environment and b)It is the intent of the legislation that all agencies of the state government which regulate activities of private individuals, corporations and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, and whereas SHARE OUR SENTIMENTS is a Coronado citizens' organization dedicated to preserving the unique residential environment of Coronado, we wish to submit the following comments on the Draft E.I.R. for Coronado Bayfront Development Plan (Nov. 1978).

We find the Draft E.I.R. for the Coronado Bayfront plan not acceptable and insufficient as required by sections 15012, 15140 (c), 15142, 15143.5, 15075, 15150, 15143 (c),15082(c)of the California Environmental Quality Act of 1970.

1. Section 15012

This section states an "E.I.R. may not be used as an instrument to rationalize approval of a project." The whole direction and tenor of this Draft E.I.R. is questionable. The proposed Plan C is examined, but Alternative plans A & B are not given serious consideration as options nor any combinations thereof.

2. Section 15140 (c)

This section states an E.I.R. shall contain summarized technical data, maps, diagrams, etc., and other relevant information to permit full assessment of significant environmental impacts. This E.I.R. falls far short of having sufficient expert data to examine

the impacts on open space necessary for a city of Coronado's size and population, the specific costs of public services required, the effects on air and noise quality (no local monitoring station reports), and the increases to traffic and circulation (the Marsden Report indicates Port District figures on traffic generators have been found to be invalid and misleading in almost every case).

Although much data is included in this E.I.R. as required by Section 15142, much of it is dated, too general to apply, not relevant, and lacking in technical and scientific expertise required for intelligent decision making.

3. Section 15142

This section also states that special emphasis should be placed on environmental resources that are rare or unique to that region. In that the San Diego Bay has been designated as an estuary, insufficient attention has been given to this unique environmental resource as it pertains to the policies of Chapter 3 of the California Coastal Act of 1976.

Throughout the whole of Section III (Environmental Impacts and Mitigating Measures), this E.I.R. states no environmentally significant impacts have been assessed for land and water use for open space, for urban support systems (including parking, street circulation and traffic), for public services and facilities, for visual, noise, climate and air quality, etc.

A proposed development the magnitude of the Port's proposed Plan C is bound to have significant environmental impacts — be they negative or positive.

4. Section 15143.5

This section requires an E.I.R. to explain why various possible significant effects of a project were determined not to be significant. This E.I.R. fails to substantiate its findings of no significant impact since the basis for such judgement is not clearly presented.

5. Section 15075

This section states an E.I.R. is to explain effects of the proposed project on the environment, alternatives to the project, and ways to minimize the adverse effects. This E.I.R. appears to ignore the intent of this section completely.

6. Section 15150

Requires a sufficient degree of analysis for intelligent decision making. There is simply not enough comparative analysis of proposed plans in this E.I.R. in the major environmental areas under consideration.

7. Section 15143 (c)

This section requires an examination of mitigating measures for each of the environmentally significant areas. The overwhelming lack of mitigating measures indicates a serious problem with this E.I.R. and its viewpoint. Serious public controversy exists over the Port's proposed plan and mitigating measures are too well known by an intelligent citizenry not to be identified and included even in a draft E.I.R.

For example, the serious traffic problem is well recognized in Coronado. Yet, the E.I.R. states that in spite of a significant increase in motor vehicles, Plan C would generate "no significant increase in vehicle air emissions and therefore, no specific mitigation measures are proposed." (Page 101) This is an absurd conclusion.

This draft E.I.R., by making the conclusions that there are no environmentally significant impacts from the Port's proposed plans, sidesteps altogether the E.I.R. responsibility of detailing mitigating measures. This is a serious drawback to the authenticity of the E.I.R. findings.

8. Section 15082 (c)

Mandatory Findings of Significance. This section states "a project shall be found to have a significant effect on the environment if (c)the project has possible environmental effects which are individually limited but cumulatively considerable." This E.I.R. fails to address the obvious cumulative effects of the overall proposal.

We urge the Port Commission to recognized its responsibility in committing a non-renewable and irreplacable resource. We recommend that the Commission find this Draft E.I.R. inadequate and insufficient. We would additionally urge the Port District to cooperate with the City of Coronado, with its Land Use Committee, and with its citizenry to achieve an equitable use of the Tidelands and a respectable position in regard to the California Environmental Quality Act of 1970 and the California Coastal Act of 1976 and ultimately, "to demonstrate to an apprehensive citizenry that the agency has in fact analysed and considered the ecological implications of its actions." [Section 15011.5d]

Respectfully submitted,

John Pruyn for
Share Our Sentiments, Inc.
P.O. Box 702
Coronado, Ca. 92118

925

January 2, 1979

RECEIVED
NOV 2 1979
ENVIRONMENTAL MANAGEMENT

Port of San Diego
P.O. Box 488 San Diego
Subject: Coronado Bayfront Development Plan
Draft EIR (UPD - #78102 - EIR2)
San Diego Unified Port District

Dear Sir:

Time has not permitted more than a cursory examination of the Port District Draft EIR for the Coronado Bayfront Development Plan, but serious deficiencies are immediately apparent.

We must question the premature quality of a Draft EIR prepared for a "Preliminary Plan" which has not yet been reviewed by the State Coastal Commission for consistency with the Coastal Act. It is also disturbing that the Draft does not properly assess the lessor effects of alternate Plans A and B, raising the question of just how "preliminary, unapproved, unofficial" Plan C really is.

Additionally, the failure of the Draft to address any site specific commercial development on Port land in Glorietta Bay or in the Coronado Cays renders the document incomplete, since the total impact of Port development on Coronado lands must be considered accumulatively and not in a piecemeal fashion.

It must be noted that the Port's proposed Coronado Bayfront Plan C authorizes the most intense, energy consuming, environmentally destructive, growth inducing uses for the bayfront of any of the three plans originally presented. It is also more intense than the previously adopted Port Master Plan of 1974.

The uses, as proposed, violate Coronado's General Plan designations of civic use - open space, ignore Coronado's height limitation, and involve irreversible environmental changes committing non-renewable resources without sufficient examination of alternatives available.

The growth inducing aspects of the plan are disregarded and no mitigating measures are proposed.

The irreversible long term effects on the residential community bordering the Plan area are summarily dismissed and the recognized air pollution, to be expected from the vehicular onslaught, is inadequately addressed since no air quality monitoring station is located on the island to provide data for proper forecasting.

Traffic data as provided by Coronado's NEIR is also misleading

since two weeks after the MEIR was certified, Coronado's City Engineer refuted the findings by stating that many of the city streets had already reached peak capacity.

The long term effects on the citizens of Coronado from such an intense development are not examined sufficiently, nor are proper alternatives proposed. The commitment for capital improvements involving public streets and public services is assumed while growth inducement is ignored.

The Draft makes the erroneous judgment that the alternative of "NO Project" would necessarily result in piecemeal development. This is absurd!

Finally, the avowed goal of the Coronado General Plan is to preserve Coronado as a residential community and not to provide yet another Revenue Producer for the Port of San Diego. Yet the preservation of community identity and the retention of Coronado's unique residential character are inadequately addressed, perhaps ignored, by the preparers of this document, since in no way can the proposed development be made compatible with these goals.

The expressed objections of many Coronado residents to the proposed Plan C have been totally disregarded as was their reluctant selection of Plan A as the least offensive of the three plans presented.

We urge the Port to realistically reexamine this project as planned, recognize the irreversible impacts it will have on a very special, irreplaceable Coastal Resource, and then return with an environmentally aware document offering acceptable alternative proposals which may then hopefully meet both the requirements as well as the intent of the California Environmental Quality Act.

Respectfully,

Sally Krummenacher

Sally Krummenacher - Chairman,
S.O.S.,"Share Our Sentiments,"
Inc., Box 702, Coronado, CA 92118
Coast Committee Member, San Diego
Chapter, Sierra Club

cc: Mr. Don May
Mr. Ben Cohen
California State Coastal Commission
San Diego Regional Coastal Commission

RESPONSE to COMMENT from: SHARE OUR SENTIMENTS (SOS)
signed by Mrs. Sally Krummenacher and
Mr. John Pruyn
(11/9/79; received 11/12/79)

Response: The comments of the Coronado citizens' group, Share Our Sentiments (SOS), essentially reiterated the same objections to the Port Master Plan and Draft EIR as were previously submitted by SOS in a November 1978 letter of comment to the Port District regarding the Coronado Bayfront Development Plan Draft EIR (UPD #78102-EIR-2). The comments maintain that the Master Plan Draft EIR has not adequately addressed the environmental effects of land and water use, open space, traffic circulation, public services and facilities, growth, visual, noise and air quality, and water supply and energy consumption. Before referencing sections in the Master Plan Draft EIR and in the Coronado Bayfront Development Plan Draft EIR wherein these issues have been addressed, the following synopsis is provided of the evolution and progress of joint Port/Coronado planning efforts for the Coronado Bayfront Planning District.

The Port District tidelands area of the Coronado Bayfront, north of the San Diego/Coronado Bay Bridge, has a long history of attempts by the Port of San Diego to resolve possible land use alternatives with the City of Coronado (see Master Plan Appendix A). The City of Coronado has expressed concern over both the intensity and scale of development proposed and analyzed in the Coronado Bayfront Development Plan and Draft EIR by the Port of San Diego in November, 1978. Prior to submission of the Coronado Bayfront Development Plan, the Coronado City Council appointed a Land Use Committee (May 4, 1978) to review the Port's alternative plan options and make recommendations back to the Coronado City Council. On March 30, 1979, a joint Ad Hoc Committee, including some members of the Coronado City Council and the Port of San Diego Board of Port Commissioners, was formed to continue to work toward resolution of the concerns over various planning alternatives and other key land issues along the Coronado Bayfront. The Land Use Committee was suspended by City Council action on August 9, 1979, and the Ad Hoc Committee continued to work toward further revision of design concepts of the Coronado Bayfront. The Ad Hoc Committee has met numerous times in publicly attended workshops and has received and reviewed written information from Coronado citizens.

The Tidelands Park public recreational area and a shoreline park had been completed by the Port District through design phases (15 acres, 4/78) for the area immediately north of the San Diego/Coronado Bay Bridge. An agreement has recently been reached, as described on page 109 of the Master Plan, which provides the basis of a plan that divides the approximately 50 acres of undeveloped area north of the San Diego/Coronado Bay Bridge into allocations for commercial development and park/recreational use. The total street right-of-way area located on tidelands, except for the loop road under the Bridge, would be assigned to major use groups or subtracted from the total area. The proposal includes maintenance of the shoreline for pedestrian access where feasible; the provision of parks, recreational activities and facilities; the retention and expansion of marine related uses; the introduction of a wide array of visitor serving facilities; and encourages the integration of open space into all commercial developments. It further provides that direct traffic ingress/egress to the tidelands would be developed as necessary.

The rationale for the Master Plan EIR analysis of the land and water use plan for the Coronado Bayfront Planning District is to provide a baseline of environmental information upon which subsequent impact assessment could be conducted. This was carried out in considerable detail in the Coronado Bayfront Development Plan Draft EIR which was before the Board during a public hearing on February 6, 1979. At that time the Board agreed to re-evaluate the Coronado Bayfront Development Plan, and hold further environmental processing in abeyance until a joint decision was reached with the City of Coronado.

On page 107 of the Coronado Bayfront Development Plan Draft EIR, the following unavoidable long-term impacts have been summarized and are hereby incorporated by reference in this Master Plan EIR as follows:

-Increases in traffic volume in identified areas throughout the City of Coronado and modification to existing traffic circulation patterns in response to anticipated future traffic demands.

-Increases in vehicle traffic generated noise levels on some area streets resulting from increased traffic volume and operation in existing circulation pattern.

-Potential changes in local and regional air quality primarily from addition to vehicle traffic commissions.

-Increases in consumption of electrical energy and natural gas and an increased demand for public services, particularly waste water treatment.

327

Given consideration of the increase in amount of recreational land and water use allocations and a decrease in commercial and shopping facilities allocations in the Coronado Bayfront, it is likely that the unavoidable impacts primarily related to vehicle traffic circulation, as identified in the Coronado Bayfront Development Plan Draft EIR, would be less under the newly agreed upon planning alternative.

The Draft EIR addressed the Coronado Bayfront Planning District ongoing joint planning process on pages 4, 8-9, 43-43, 76-78, 222-223, 228, 230, and 249. The Master Plan Draft EIR incorporated by reference the environmental impact analysis included in the Coronado Bayfront Development Plan Draft EIR, which addressed the following issues in that document: land and water use, pages 91-92; open space, page 93; traffic circulation, page 94; public services and facilities, page 96; growth, page 98; visual and noise, pages 99-100; air quality, page 101; water supply, pages 96 and 102; and energy consumption, page 103.

DAVID D. SMITH AND ASSOCIATES ENVIRONMENTAL CONSULTANTS

November 19, 1979

RECEIVED
NOV 23 1979
ENVIRONMENTAL MANAGEMENT

Mr. Tomas E. Firle
Environmental Management Coordinator
San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92112

Dear Mr. Firle:

We have now completed our review of San Diego Unified Port District's Master Plan Draft Environmental Impact Report, and this letter sets forth our comments thereon. We have focused our review in particular on those sections of the Environmental Impact Report dealing with the natural sciences, namely, biology water and sediment quality, and earth sciences. These technical disciplines are the areas of specialization which we address in our consulting practice.

The Port District is to be complimented on the comprehensive scope and detailed nature of this draft environmental impact report; the obvious thoroughness and care with which it has been prepared is exemplary.

An important feature of this draft environmental impact report is the thorough way in which it identifies and outlines the environmentally protective role of existing State and Federal regulatory agencies (such as the San Diego Regional Water Quality Control Board and the Environmental Protection Agency) and their regulations (such as Waste Discharge Requirements and National Pollutants Discharge Elimination System Permit). All too commonly the impact assessment and mitigation sections of environmental reports tend to overlook long standing and highly effective pollution control programs that already provide adequate protection for biological and related resources.

Because of the potentially significant adverse impacts on the biological resources of the bay that may result from the proposed J Street Peninsula extension and the Sweetwater Wharf project, it would be helpful if a brief description of these proposed projects and figures illustrating their locations and dimensions were included in the draft EIR.

BOX 1148, LA JOLLA, CALIFORNIA 92038 TELEPHONE (714) 453-2210

4

We appreciate this opportunity to review and comment on the Port District's Master Plan Draft Environmental Impact Report.

Yours truly,

David D. Smith, Ph.D.
Environmental Scientist

DDS:jlr

4117

RESPONSE to COMMENT from: DAVID D. SMITH & ASSOCIATES
signed by David D. Smith
(11/19/79; received 11/23/79)

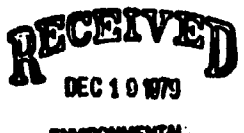
Response: The comment from this environmental consulting firm offered concurrence with the Draft EIR's emphasis on the application of existing federal and state water quality and waste discharge regulations.

Also requested were descriptions of individual Master Plan proposals, which are referenced as follows. The Master Plan described the Chula Vista Boat Basin J Street Second Peninsula Extension and the Sweetwater Wharf project (D Street Wharf) in the Precise Plan section of the Master Plan for the Chula Vista Bayfront Planning District, on pages 117-126. The Second Peninsula Extension was described in more detail on page 124; and the Sweetwater Wharf (D Street Wharf) was described on page 121. The location and dimensions of the projects are illustrated in Figure 19 on pages 119 and 120 in the Master Plan.

James Burns, Assistant Secretary
Resources Agency

December 14, 1979

Tomas Firle, Coordinator
Port of San Diego
P. O. Box 488
San Diego, CA 92112



Comments to Draft Environmental Impact Report
Master Plan, San Diego Unified Port District
SCH #78030604

The staff of the State Lands Commission has reviewed the Draft EIR for the San Diego Unified Port District Master Plan and hereby submits the following comments for your consideration.

329

We are concerned with the use of certain terms in the legends explaining the maps contained in the Draft EIR and in the text of the document itself. Terms such as "tidelands", "submerged lands", and "granted lands", are words of art having specific meanings in public land law. The use of these terms in the Draft EIR appear to be used interchangeably and as such their meaning is vague, uncertain, and, at times, erroneous. These terms should be expressly defined in the document and should be used only where their specific meaning is intended.

It also appears that the maps included in the Draft EIR are intended as approximate representations of the character of the lands in and around San Diego Bay. The staff of the Commission does not accept these maps as accurately depicting the nature of said lands or the extent of sovereign interests therein held either by Federal, State or local agencies. We feel that it is imperative that the document include a statement to that effect.

If you have any questions, please do not hesitate to contact Jane S. Mochon or Curtis L. Fossum of our legal office.

Daniel Gorfain

DANIEL GORFAIN
Planning and Environmental
Coordination

JSM:CLF:DG:js
bcc: J. Mochon
C. Fossum

RESPONSE to COMMENT from: CALIFORNIA STATE LANDS COMMISSION
signed by Daniel Gorfain
Planning and Environmental Coordination
(12/14/79; received 12/19/79)

Response: The utilization of terms such as "tidelands", "submerged lands", and "granted lands", in the legends explaining the maps contained in the Draft EIR and in the text of the Master Plan have been used as defined in the Port District Act of 1972.

The maps included in the Draft EIR are intended as representations of the character of the lands in and around San Diego Bay; they are not to be construed to be survey or parcel maps. The boundaries shown on the maps of the Draft EIR and the Master Plan may not exactly depict the precise boundaries of the Port jurisdiction in all cases; however, for preliminary planning and environmental management purposes, the accuracy of the boundaries in the absence of attached lengthy legal descriptions is quite appropriate, under the California Environmental Quality Act (CEQA).

DISTRICT OFFICE
3100 Fifth Ave., Suite 307
San Diego, California 92103
(714) 293-2140

JOE DEAR AND JOAN M. WALSH
ADMINISTRATIVE ASSISTANTS

SACRAMENTO
State Capitol 95814
445-7810

Assembly
California Legislature

COMMITTEES
Elections and Reapportionment
Public Employees and Retirement
Ways and Means
Joint Committee on the State's Economy
Commission of the California Equal Educational Opportunities Commission

PETER R. CHACON
ASSEMBLYMAN, SEVENTY-NINTH DISTRICT

November 30, 1979

OFFICE OF
RECEIVED
DEC 3 - 1979
THE PORT DIRECTOR

Mr. Don Nay, Port Director
San Diego Port Authority
P.O. Box 488
San Diego, California 92112

Dear Mr. Nay:

I am glad to see that the Port Authority has partially implemented the California Coastal Act of 1976, in regards to the Port District's Master Plan and Environmental Impact Report in regards to the Barrio Logan/Southeast San Diego area.

However, in close analysis of the Port District's Master Plan and Environmental Impact Report, there is a lack of alternative viewpoints from the community residents and organizations in the Barrio Logan section of San Diego.

May I take this time to present information consistent with "priorities" of the Coastal Act that citizens, business, professional and community organizations have approached a number of governmental bodies in relation to urban/industrial planning for their community:

1) All of the Barrio Logan San Diego area is landlocked and Chapter 3 of the Coastal Act specifically acknowledges the right for citizens to have "public access" to the bayfront.

2) Chapter 8 of the Coastal Act requires that the Port District use the facilities for beneficial use that fulfills the needs of "public access."

3) Barrio Logan residents along with business and professional organizations have expressed a recreational need for a bayfront access.

4) In regards to boatyard facilities in the Barrio Logan area (Mauricio and Sons) the Coastal Commission has indicated alternative sites for such industrial yacht service repair.

Finally, the last piece of property that would be available to Barrio Logan San Diegans for a waterfront recreational facility is the 5.4 acres specifically designated by the Bay Front Park Committee (AB 47).

I strongly urge the Commission to incorporate the 5.4 acres of bayfront property as expressed by the Bay Front Park Committee into the Environmental Impact Report and Master Plan.

Sincerely yours,

Peter Chacon

PETER R. CHACON

PRC/js

cc: Assemblyman Larry Kapiloff
Senator Jim Mills
Councilwoman Lucy Killea
Michael Fisher, California Coastal Commission
Mr. Dan Guevara, Chairman, Bay Front Park Committee

RESPONSE to COMMENT from: ASSEMBLYMAN PETER CHACON
signed by Peter R. Chacon
(11/30/79; received 12/3/79)

Response: The issue of coastal access in the Tenth Avenue Marine Terminal Planning District was addressed in the Port Master Plan and in the Draft EIR. Access, shown on the Precise Plan as a Promenade and Vista Area, extends west from Crosby Street. The Port District considers this general waterfront area to be most suitable for Port related facilities as required by Section 30708(c) of the California Coastal Act of 1976. This issue is described on pages 8, 10, and 40 of the Draft EIR.

The demand for waterfront industrial areas in San Diego is very great and is increasing. While the Master Plan recognizes the desire of the Barrio Logan residents for a waterfront park and nearby bay access, the overriding provisions of Chapter 8 of the Coastal Act give lower priority to such use. The type of active recreational uses proposed for such an area, which could also include water contact activities such as swimming and boating, could result in many potential problems in this heavy marine industrial area. Safety and security, and vehicle traffic and railroad crossing hazards are ever present in this area. The placement of recreational facilities nestled among existing heavy marine industrial activities would constitute an application of incompatible land use planning and could result in a potential for significant adverse environmental impacts upon future park users.

Existing alternative bay access points are available at the Embarcadero Marina Park on Port tidelands, and at the Las Chollas Creek Park, proposed in the City of San Diego's Local Coastal Program (LCP). These parks are much larger and more suitable for use as a bayfront community park. The Embarcadero Marina Park includes about four times as much park area as the Crosby Street waterfront area and is within about one mile from the Barrio Logan community.

The Crosby Street bay access proposal contained in the Master Plan was proposed by the Board to provide for the desire of nearby residents for nearby access to the bay for viewing and resting. More active recreational facilities would remain available at the Embarcadero Marina Park and at various neighborhood park and school playgrounds within the City of San Diego.

{79102 EIR

mtdb Metropolitan Transit Development Board
620 "C" Street, Suite 400, San Diego, California 92101 (714) 231-1466

December 14, 1979

RECEIVED
DEC 18 1979
ENVIRONMENTAL MANAGEMENT

Mr. Tomas E. Firle, Coordinator
Environmental Management
San Diego Unified Port District
P.O. Box 488
San Diego, CA 92112

Dear Mr. Firle:

We have reviewed the Environmental Impact Report (EIR) on the Port District's Master Plan and suggest that information on the MTDB light-rail transit (LRT) project be updated as follows:

1. Page 62 - The LRT vehicles will operate from the east side of the Santa Fe Depot.

2. Page 228 - Covered passenger waiting areas will be constructed at Civic Center Drive (13th Street) and 24th Street. A stop at 8th Street has been deleted from the plan.

3. B-12 - The Civic Center Drive station location replaces the 8th Street designation on the map of the LRT route.

These notations reflect project changes which have occurred since the final studies were completed. We appreciate this opportunity to comment on the draft EIR and to provide you with the current information.

Sincerely,

Thomas F. Larwin
General Manager

TFL:JB:dg

cc: Janet Britt
Maurice Carter

[illegible] City of [illegible] City of [illegible] City of [illegible]
City of [illegible] City of [illegible] City of San Diego, County of San Diego, State of California

9114

RESPONSE to COMMENT from: METROPOLITAN TRANSIT DEVELOPMENT BOARD (MTDB)
signed by Thomas F. Larwin, General Manager
(12/14/79; received 12/18/79)

Response: The three minor changes suggested as update information by MTDB are herein incorporated in the EIR as follows:

1. Page 62 of the Master Plan Draft EIR is hereby revised to indicate that Light Rail Transit (LRT) vehicles will operate from the east side of the Santa Fe depot.

2. Page 228 of the Draft EIR is corrected to indicate that covered passenger waiting areas will be constructed at Civic Center Drive (13th Street) and at 24th Street, and that a stop at Eighth Street has been deleted from the MTDB Plan.

3. Appendix B, page B-12 of the Master Plan Draft EIR, is corrected to include the statement that the Civic Center Drive station location replaces the Eighth Street designation on the map of the LRT route.

CITY OF CORONADO

RECEIVED
DEC 3 1979
ENVIRONMENTAL MANAGEMENT

1825 STRAND WAY
CORONADO, CA. 92118

CITY HALL
(714) 435-2211

November 30, 1979

Mr. Tomas E. Firle, Coordinator
Environmental Management
Port of San Diego
P.O. Box 488
San Diego, CA. 92112

Dear Mr. Firle:

At the meeting of November 29, 1979 the Coronado City Council reviewed the Draft Environmental Impact Report on the Port Master Plan. As a result of that review the Council decided that:

1. The Draft EIR on the Port Master Plan is inaccurate relative to district 6 in that it addresses a plan which has been rejected by the City of Coronado, and it does not reflect the work of the City/Port Ad Hoc Committee; and

2. The EIR on the Master Plan is not sufficient to evaluate particular potential significant adverse impacts (e.g. traffic, noise, air quality, aesthetic concerns, etc.) relative to the ultimate site specific development of the Coronado Tidelands. Therefore, the City of Coronado requests that a further detailed EIR(s) addressing all relevant potential significant adverse impacts be prepared for the tidelands when site specific detailed plans are completed.

It is further requested that this letter be submitted to the Board of Port Commissioners at their metting of December 4, 1979 for consideration, and that the City's position as outlined in this letter be responded to and incorporated for the record in the Final EIR on the Master Plan.

Thank you for allowing the City the opportunity to respond to the Draft EIR.

Sincerely,

C. Patrick Callahan

C. Patrick Callahan, Mayor
City of Coronado, California

CPC/cm

4954

RESPONSE to COMMENT from: CITY OF CORONADO
signed by C. Patrick Callahan, Mayor
(11/30/79; received 12/3/79)

Response: The Draft EIR has pointed out that the land/water use portion of Planning District 6 was under reconsideration and that a Port/City of Coronado Ad Hoc Committee was established to resolve the issues, see pages 4, 8-9, 42-43, 76-78, 222-223, 228, 230, and 249. It is further stated that the Draft EIR (similar to the earlier Coronado Bayfront Plan DEIR, UPD #78102-EIR-2; SCH #78112818) has valid environmental setting data and that a decrease of the intensity of development would most likely bring about a decrease of "impacts". After the circulation of the Master Plan Draft EIR had been concluded and the Public Hearing of December 4, 1979 was held, the Port/City Ad Hoc Committee has achieved a Memorandum of Understanding. The Board of Port Commissioners, at their meeting of December 18, 1979 approved the Memorandum of Understanding by Resolution 79-338; the City of Coronado approved the document on December 19, 1979 by Resolution 5909.

As indicated in the Draft EIR, and requested by the City of Coronado, site-specific project proposals would be subject to environmental review when the respective project proposals are activated.

It has been the practice of the Port to include all written material received in connection with an EIR review, in the Final EIR; the Port sees no reason to change this and consequently has included the City's letter as specifically requested.

333

THE CITY OF
SAN DIEGO

CITY ADMINISTRATION BUILDING • 202 C STREET • SAN DIEGO, CALIFORNIA 92101
PHONE (714) 236-6688

LUCY KILLEA
COUNCILWOMAN

December 3, 1979

RECEIVED
DEC 4 1979
ENVIRONMENTAL MANAGEMENT

Mr. Miles D. Bowler
Member, Unified Port District
212 Daisy Street
Imperial Beach, California 92032

Dear Mr. Bowler:

In your review of the Draft Environmental Impact Report for the Port District's Master Plan on December 4, I urge you to reconsider the Port District's position regarding bayfront access for the Barrio Logan community's recreational and open space needs. This last remaining vacant parcel on the waterfront in the area is vitally needed for the residents and people who work within this community. No other recreational facility has satisfied this need, and there are no current plans to do so, except as envisioned in a general way by the community plan.

The Port District holds this land in the public trust and has a responsibility to the public to weigh the needs of the community in its land use decisions. In this case I believe the need for recreational use of the bayfront far exceeds the need for this last vacant parcel to be used exclusively for industrial purposes. Other sites can be used for ship repair facilities, as the Regional Coastal Commission staff has pointed out.

The public access afforded by the Port District's compromise "walkway" is not adequate, a fact readily apparent when you consider that on the opposite side of the bay Coronado has 132 acres of Port property, of which 98 acres are utilized for a public golf course and recreational use. Perhaps a more equitable compromise could be attained with creative site planning and imaginative engineering. Such a compromise might retain some industrial activity on this site while providing a significant amount of area for recreational uses in a mutually compatible and interesting way.

I would be happy to assist the Port District in any way in developing such a compromise. I believe it is in everyone's best interest to work towards this goal.

Sincerely,

Lucy Killea

LUCY KILLEA
Councilwoman
Eighth District

RESPONSE to COMMENT from: CITY OF SAN DIEGO COUNCILWOMAN LUCY KILLEA
signed by Lucy Killea, Councilwoman
8th District
(12/3/79; received 12/4/79)

Response: The questions on planning policies raised by Councilwoman Killea have been brought before the Board of Port Commissioners earlier. Additional staff information has been provided in the responses to the State Coastal Commission, Assemblyman Chacon, the Chicano Park Steering Committee, Daniel L. Guevara, Al Johnston, as well as in the "Summary of the Public Hearing" section.

For clarification purposes only, the area in question has been in industrial use for decades and the Port has, as leases terminated in the last few years, assembled a more viable parcel to support the limited water frontage. Further it has razed obsolete buildings and phased out uses such as a carcass rendering plant. Various interim, small boatyard uses, but on a short-term basis, were accommodated while a more comprehensive proposal was being developed. The area was not a "last remaining parcel."

It appears from Councilwoman Killea's communication that a different design solution could be developed, capable to achieve a bay access while accommodating the water dependent uses of, particularly, the water frontage. The schematic indication of bay access was the result of the Board of Port Commissioners direction, and, interpretation as solely a "walkway" (sidewalk) was not the intent.

It is not the prerogative of the Environmental Management staff to engage in alternative land/water use planning or policy directions. However, as part of the EIR review, the Board of Port Commissioners is apprised of all issues and suggestions to resolve problems of competing priorities such as expressed particularly in the last two paragraphs of Councilwoman Killea's letter.

334

December 12, 1979

Tomas E. Pirle
Environmental Management
Port of San Diego
#488
San Diego, Ca. 92112

RECEIVED
DEC 14 1979
ENVIRONMENTAL MANAGEMENT

re: DEIR, Master Plan, San Diego Unified Port District

Dear Sir:

My comments on the above referenced Draft EIR follow.

1) The Alternatives section should include a discussion of the oft-proposed Barrio Logan Water Front Park.

All documents included by reference in this section should be summarized as required by the State EIR Guidelines 15149 sect. C.

In general, the cursory treatment given to alternatives is inadequate.

2) The Socioeconomic setting should discuss the characteristics and needs of major port dependent activities, including recreation and commercial fishing. Socioeconomic impact should discuss how the Master Plan would affect those activities.

3) To state , as the DEIR does on page 232, that each city around the Port has existing allotments of sewerage capacity is misleading, when the Metro System cannot physically accomodate those allocation committments. This misleading impression should be corrected in the Impact section.

4) Specific mitigating measures to alleviate the potential significant environmental impact resulting from the Chula Vista Boat Basin Peninsula J Street Extension and the Sweetwater Wharf project should be examined before the EIR is considered complete.

I am available to discuss these comments.

Sincerely,

Scott Griffiths
San Diego Chapter, Sierra Club
1010 27th St.
San Diego, Ca 92102
239-8588

RESPONSE to COMMENT from: SIERRA CLUB
Signed by Scott Griffiths, San Diego Chapter
(12/12/79; received 12/12/79)

Response: The Alternatives section of the Draft EIR on Pages 249-250 is hereby amended to include the consideration of the Barrio Logan bay Waterfront Park alternative and related issues as described and incorporated by reference, in the Draft EIR on Pages 8, 10, 40 and 53, and in the Master Plan on Pages 97-98.

The documents included by reference in the Alternatives section of the Draft EIR were summarized as required by the State EIR guidelines, Section 15149 (c), on Pages 27-52.

In consideration of regional planning alternatives for the Port Master Plan, over 15 different city general plans and community plans, as well as military plans for the surrounding areas were analyzed. In addition, Port Precise Plans and corresponding EIRs of Port Planning Districts for Shelter Island, Harbor Island/Lindbergh Field, Centre City/Embarcadero, Chula Vista Bayfront, and Coronado Bayfront Development Plans were analyzed and described in detail in the previous documents cited. They were also incorporated by reference in the Draft EIR on Pages 27-52. These previously written Precise Plan documents were also referenced in the Environmental Impacts and Mitigating Measures section of the Draft EIR on Pages 221-245.

The Socio-economic setting of the Master Plan Draft EIR did not include an additional discussion of the characteristics and needs of major Port dependent activities such as recreational and commercial fishing since these land uses together with their objectives and criteria were described in the Master Plan for recreation on pages 36-38; for commercial fishing on pages 23-25; and for various major Port dependent activities on pages 31-34.

The statement in the Draft EIR on page 232 that, "Each of the cities surrounding the Master Plan area has an existing allotment of sewerage capacity purchased from the San Diego Metropolitan Sewerage System." is hereby qualified as follows.

Although the presently existing unencumbered capacity of the San Diego Metropolitan Sewerage System (Metro) cannot physically accommodate all allocation commitments of the surrounding County and City areas, it should be noted that each surrounding area purchases a contract allotment which assumes gradual, not instantaneous population growth increases over some future projected period. If the surrounding residential areas experienced instantaneous population growth increases, the existing physical capacity of the Metro System would in fact, not be able to accommodate such growth increases. Improvements to facilities and expansion of capacity of the Metro System as identified in the Draft EIR, are coordinated with the general plans and the various growth projection requirements of the surrounding areas which it serves. Additional available capacity therefore, is generally maintained for those surrounding service areas.

In the absence of such coordination, various decision making bodies such as the County of San Diego Board of Supervisors and the City Councils within the San Diego region have historically regulated residential development and population growth increases in surrounding areas by invoking priority connection requirements and in some cases, building moratoriums. The Comprehensive Planning Organization (CPO) exercises planning control for infrastructure development directly, and indirectly via the A-95 process.

It should be noted, further, that with regard to Port District development proposals, no residential uses are permitted on Port tidelands. Consequently, additional significant demands which may be placed upon the Metro System would result primarily from the population growth rate increases from the surrounding city and county areas.

Specific mitigating measures regarding the potentials for significant environmental impacts which could result from the Chula Vista Boat Basin Peninsula J Street Extension and the Sweetwater Wharf (D Street Wharf) project cannot feasibly be proposed at this time. These projects and others in the same general vicinity would be subject to subsequent environmental review and may necessitate the preparation of environmental documents as appropriate. Estimates of the impacts which may be associated with these projects together with suggestions for approaches to biological habitat mitigation/compensation measures are described in the Response letters to comments received from the National Marine Fisheries Service (NMFS) and the California Department of Fish and Game (CFG) in the Comments Received and Response Section of this EIR.

December 3, 1979

Commissioners of the Board
San Diego Unified Port District

Subject: Preliminary Draft Master Plan
Environmental Impact Report

The Preliminary Draft, Master Plan Environmental Impact Report neglects to mention Shelter Island was built with federal funds which allows the Corridor area to be one half commercial business and one half recreational facilities. This in itself allows the commercial fisherman the use of the Corridor area for their fishing business interests.

The EIR neglects to mention public opposition to the Shelter Island Bay Corridor Plan as previously presented. The port district plan for removal of the Star Kist unloading facility which was used specifically for the use of commercial fishing vessels to unload their catch of fish was denied by the Regional Coastal Commission. This same proposal was also denied to the port district by the State Coastal Commission. It is inconceivable that the port district is again planning on the implementation of the same project.

The EIR neglects to mention opposition to the installation of a low cost, fast food restaurant and park like setting at the corner of Anchorage Lane and Shelter Island Drive. Previously this project was to be installed at the cost of the removal of present parking area of over 120 car spaces. A much needed parking area for the people using the Corridor. This same proposed project was denied to the port district by the Regional Coastal Commission and was also denied by the State Coastal Commission. The port district was instructed to look elsewhere on Shelter Island for the fast food restaurant.

336

The port district officials, or staff, evidently disregards the wishes of the people who use Shelter Island and who have gone through the correct and necessary governmental procedures to make their wishes known. In fact, it appears the port district totally disregards the Regional Coastal Commission and State Coastal Commission on their decisions.

In the best interest of the fishing industry of San Diego the previous input should not be ignored by the San Diego Unified Port District. The port district is mandated to promote the fishing industry, as well as others. This should include the smaller commercial fishing vessels, as weal as the seiners.

The EIR also omits the fact that the Commercial Basin area was originally designated as an anchorage for transient vessels.

In the proposed 120 bow and stern anchorage facility, the port district should not use the 120 figure as permanent tie up spaces for commercial fishing vessels. It should be noted, fishing vessels are working boats, not pleasure craft, and these same boats require shore side facilities, along with electricity and water. The proposed anchorage will serve as an emergency tie up. It is inconceivable that the port district would attempt to force the fishing boats to anchor in the basin on a permanent basis.

Respectfully submitted,

Mrs. Helen L. Tyler

RESPONSE to COMMENT from: MRS. HELEN TYLER
Signed by Helen L. Tyler
(12/3/79; received 12/4/79)

Response: Concerns were expressed regarding commercial fishing interests in the Shelter Island Planning District, the "Shelter Island Bay Corridor Plan," possible removal of the Star-Kist dock and unloading facility, and a proposed low-cost, fast-food restaurant at Anchorage Lane and Shelter Island Drive. No specific environmental issues however, were raised in conjunction with the expressed concerns, except for the issue of available parking spaces. It should be noted that the Master Plan indicates conversion of an existing parking area of 68 spaces, not 120. Additional parking is allocated across the street in the same area.

The Port Master Plan has been revised to show retention of the so-called Star-Kist dock for commercial fishing uses. Proposals for a low-cost, fast-food restaurant and a small park on Anchorage Lane have been previously analyzed in the Shelter Island Precise Plan Final EIR, referenced in the Master Plan Draft EIR on pages 27-28.

The discussion of proposals for improvements to the Commercial Basin area on page 65 of the Master Plan describes in some detail the proposed renovations to commercial fishing facilities. Included are shoreside support facilities, improvements to the pier and dock berthing areas for the commercial fishing fleet, and proposed improvements for the anchorage area. Further improvements for the commercial fishing fleet are proposed in the G-Street Mole area and in the Chula Vista Planning District.

State of California, Edmund G. Brown Jr, Governor

California Coastal Commission
631 Howard Street, 4th floor
San Francisco, California 94105
(415) 543-8555

December 4, 1979

RECEIVED
DEC 4 1979
ENVIRONMENTAL MANAGEMENT

Mr. Tomas Firle
Environmental Coordinator
Port of San Diego
P.O. Box 488
San Diego, CA 92112

SUBJECT: Additional Comments on Port Master Plan EIR (To be presented at December 4, 1979 public hearing)

Dear Tomas:

Pursuant to our telephone conversation, I am providing additional comments on the Port of San Diego Master Plan EIR to help clarify and/or expand upon the concerns referenced in our letter of November 20, 1979. As we discussed, the EIR prepared by the Port of Los Angeles for their Master Plan appears to us to meet the Coastal Act requirements and provide the level of detail we feel adequate for a Master Plan environmental impact report.

637

Impacts on the Physical Environment

1. Geology and Topography. Several projects in the port master plan anticipate dredging and/or landfilling, which will result in significant terrain modifications. Seismic impacts, including ground shaking, liquefaction, differential compaction, and landslides are considered possibilities due to the Port's location in a seismically active region.

2. Atmospheric Conditions. Motor vehicle traffic and vessel operations are generally associated with most land use categories and are considered to be significant sources of air pollutant emissions. Motor vehicle emissions are probably more significant, particularly exhaust from trucks associated with cargo operations.

3. Acoustics. Receptor areas such as residential areas, schools hospitals, convalescent homes, and business and related to offices are considered most sensitive to noise in the vicinity of the port. Assessments should be made of the density of these receptors and their distance from potentially noise-intensive areas of the port including areas where major construction activities such as pile driving would be expected to occur in implementing the plan.

4. Hydrology and Oceanography. The creation of additional landfills in the South Bay could affect circulation in the harbor. The potential reduction in the fetch by the creation of new landfill areas are likely to affect locally generated wind

waves. These short period waves may also experience a reduction in energy as new piers and land areas, basins and slips may increase the number of possible resonant modes of oscillation for long-period waves. The irregular reflective surfaces of existing shorelines and new landfill areas combined with existing and proposed basins and channels will become more complex requiring detailed hydrographic analysis for the project EIR.

5. Water Quality. Landfill operations involve many of the same potential impacts that are created during dredging procedures. Turbidity increases in B.O.D. and C.O.D., decreases in dissolved oxygen concentrations, and the release of nutrients into the water column as return water leaves the diked landfill areas. These impacts can usually be minimized through dike design, specific landfilling procedures, siltation curtains, and flocculants.

Impacts on the Biotic Environment

1. Habitats. A summary of the impacts to marine habitats and benthic organisms (as represented by their biomass) of the development projects in the Master Plan should be presented in the final EIR.

2. Biota. Impacts to the biota will likely arise from the major development projects in the Port Master Plan. Short-term impacts from dredging activities and long-term impacts from channel deepening and land filling will occur. The use of hydraulic cutterhead dredges may minimize many of the impacts normally associated with dredging as this type of equipment causes the least turbidity and sediment resuspension.

3. Endangered Species. The major impacts of the Port Master Plan implementation on endangered species will result from the proposed activities in Planning District 7. Additional landfill in shallow waters of the South Bay may impact the California least tern since it provides a close feeding ground for least terns nesting on the Chula Vista Bayfront and D Street fill areas.

Impacts on the Socio-Economic and Cultural Environment

1. Land and Water Use. Implementation of the Port Master Plan will have a significant impact on land and water use in most undeveloped land and water areas of the bay. Land and water use priorities, as they are depicted in the Master Plan will shift the presently balanced commercial and recreational related land and water uses to one of predominantly recreation related. Because the ports of California are considered a significant economic and coastal resource the preemption of primary port or water dependent industrial uses by recreation may have significant impacts on the economy or the region.

2. Archaeological and Cultural Resources. The present master plan and EIR fail to identify sites in the port which have been identified as significant historical or cultural resources by virtue of their being listed by the State Historic Preservation Officer or the National Register of Historic Places.

5. Fire and Safety. Risk Management and Safety Planning deals with the safety aspects of Port planning and operations. The design on new facilities should include fire prevention and safety features. Pilot service, Coast Guard regulations, anchorage area designations, vessel traffic safety systems, isolated fueling or hazardous cargo operations help to reduce the level of risk associated with normal port operations.

I hope this information will be helpful in revising the draft EIR to better meet the requirements of the Coastal Act of 1976 and provide a useable framework for future port planning decisions.

Sincerely,

MICHAEL DADASOVICH
Ports Coordinator

MD:lr

cc: Mike Kennedy

RESPONSE to COMMENT from: CALIFORNIA STATE COASTAL COMMISSION
signed by Michael Dadasovich
Ports Coordinator
(12/4/79; submitted during 12/4/79
public hearing)

Response: State Coastal Commission staff provided the following additional comments on the Port Master Plan Draft EIR. Responses corresponding to the categories listed are provided in the same order as follows:

Impacts on the Physical Environment

1. Geology and Topography
Landform modification as a result of Master Plan implementation, and aspects of seismicity and related geologic hazards were addressed and described in the Draft EIR on pages 180-203, and 244. Project-specific information cannot be developed with regard to seismic and geological hazard issues since the majority of location and design details necessary for such analysis are unavailable, until the project is actually proposed.

2. Atmospheric Conditions
Motor vehicle traffic and vessel operations associated with Master Plan land use categories are only a potential source of significant air pollutant emissions. The existing air quality setting and the potential for air quality impacts were addressed in the Master Plan Draft EIR on pages 126-135, and 238. The reader is also directed to the response to the letter from the San Diego Air Pollution Control District.

3. Acoustics
It was acknowledged in the Draft EIR on page 247 that major construction activities such as pile driving would have the potential for noise impacts on adjacent areas. It must be noted, however, that such noise impacts would be short-term, limited to the duration of the construction activities. Further, the amount of water development which requires pile-driving is minimal. Generally speaking, as was noted in the Draft EIR on pages 106-125, and 236-237, standard construction regulations generally limit construction, including activities such as pile-driving to normal working hours. Assessments of the density of receptor areas such as residential areas, schools, hospitals, convalescent homes, and business and related offices, would be appropriate if long-term significantly adverse noise impacts were anticipated from major construction activities resulting from implementation of the Port Master Plan.

4. Hydrology and Oceanography
As indicated in the Master Plan Draft EIR, water circulation in San Diego Bay could be affected by additional land fills in the South Bay; however, such potential effects are primarily related to the effect of tidal flushing on water circulation, as discussed in the Draft EIR sections on Hydrology on pages 204-213, and 244-245. The effects of wind or vessel generated waves on

water circulation are minor. It is possible that following project-specific proposals involving fills, such as the Chula Vista Boat Basin J Street Second Peninsula Extension, hydrographic analyses may be required. However, for planning purposes, the Master Plan Draft EIR serves to highlight the general issues of concern over hydrologic modification in south San Diego Bay and as previously referenced, the Draft EIR has done so.

Water Quality
As indicated in the Draft EIR on pages 174-179, and 242-243, it is anticipated that a potential exists for environmental impacts upon water quality, particularly in South San Diego Bay where water circulation is relatively slow and water depths are shallow. It should be noted, however, that water quality impacts can usually be minimized through dike design, specific land filling procedures, and other measures such as siltation curtains and flocculants. Such specific mitigating measures, however, cannot be proposed for land FILL operations as shown in the Master Plan until such time as detailed designs are available. Subsequent environmental review may reveal the necessity for EIR's focusing on issues such as circulation and water quality as appropriate.

Impacts on the Biotic Environment

1. Habitats
A summary of the impacts on marine habitats and benthic (bottom dwelling) organisms was provided in the Draft EIR on pages 240-241.

The request for representation of the biomass of marine habitats and benthic organisms as a means of assessing Master Plan development impacts is inappropriate. The term biomass refers to the actual physical weight of marine life existing in the San Diego Bay area. Even preliminary biomass estimates throughout San Diego Bay would be prohibitively expensive ($100,000 and up) and would not materially change the quality of information upon which to base impact assessments. The Draft EIR provided a summary of habitat types and acreage covered on page 141 and a general impact analysis on pages 240-241. For additional information, the reader is referenced to the response to comments from the National Marine Fisheries Service and the California Department of Fish and Game.

Because individual design and construction details for the majority of Master Plan proposals planned (which may have a potential for biological impacts) are out of necessity unavailable until actually activated, specific details of impacts and mitigating/compensating measures cannot be presented at this time. Such information would become available during subsequent environmental review of those individual projects which have a potential for significant biological impact. Under the California Environmental Quality Act (CEQA), impacts are only deemed significant if they are unmitigatable to a level beneath a threshold of substantial adverse as per examples in the State EIR guidelines.

Because of many existing applicable federal and state regulations regarding biological resources and water quality control, a large majority of the potentially significant impacts on biological resources and water quality in San Diego Bay can be regulated during the required environmental review process. As an example, The Port of San Diego employs as standard mitigating measures for shoreline improvement and erosion control projects, construction procedures that replace intertidal marine habitat disturbed during the construction process. This procedure provides for the recolonization of the area by benthic organisms following construction activities.

2. Biota
It is acknowledged that the use of hydraulic cutterhead dredges can minimize many of the impacts normally associated with dredging due to inherent low level increases in background turbidity and sediment resuspension. Consideration of alternative construction procedures such as this, is standard practice during environmental analysis of all dredge-related proposals within the Port's jurisdiction.

3. Endangered Species
The Master Plan Draft EIR acknowledged the potential for environmental impact upon endangered species including the California least tern on pages 240 and 241. The reader is also referred to the response to the comment from the California State Department of Fish and Game for additional information.

Impacts on the Socioeconomic and Cultural Environment

1. Land and Water Use
It has not been demonstrated that implementation of the Master Plan will have a significant impact on land and water use in most undeveloped land and water areas of the bay. Undeveloped land and water areas include Master Plan proposals which have been designed to be compatible with surrounding land uses.

The statement that, "Land and water use priorities, as they are depicted in the Master Plan will shift the presently balanced commercial and recreational related land and water uses to one of predominantly recreation related." is unfounded. The reader is referred to the summary of Master Plan Land and Water Use Allocations, Table 4 on Page 17 of the Master Plan, which indicates acreages within each of the major categories of land and water uses proposed. The reader is also referred to the response to the letter of comment from the San Diego Air Pollution Control District (APCD) wherein the land and water use allocations of the adopted 1972 Master Plan and the proposed 1980 Master Plan are compared. These data indicate that in fact, the presently balanced commercial, recreational and industrial land and water uses are maintained by the 1980 Master Plan proposals.

There is no basis in fact for the assertion that primary port or water dependent industrial uses will be preempted by recreation use; and thereby result in significant impacts on the economy of the region.

2. Archeological and Cultural Resources
The Draft EIR identified both in the text and in illustrative form, significant historical and cultural resources listed by the State Historic Preservation Officer and the National Register of Historic Places on pages 214-220. Additional historic site descriptions of the San Diego Bay area, based on the California Inventory of Historic Resources by the California Department of Parks and Recreation (1976) are also included in their entirety in Appendix F, Historical Site Descriptions on pages F-1 and F-2 of the Draft EIR.

Recorded archeological sites were also described both in text and in illustrative form on pages 214-220 of the Draft EIR. Archeological site records and summaries of complete record searches and site information were also provided in Appendix G of the Draft EIR on pages G-1 through G-7.

3. Fire Prevention and Safety
The ultimate design of specific facilities under Master Plan proposals will indeed include fire prevention and safety features. All aspects of fire prevention and safety measures including pilot service, Coast Guard regulations, anchorage area designations, vessel traffic safety, and isolated fueling or hazardous cargo operations help to reduce the level of risks associated with normal port operations. These procedures are described in the Master Plan and Draft EIR. The reader is also referred to the response to the letter of comment (11/20/79) submitted during the public review period by the California State Coastal Commission on storage and transportation of hazardous materials.

340

CHICANO PARK STEERING COMMITTEE
1960 NATIONAL AVE
SAN DIEGO CALIF 92113
(714) 236 1228

RECEIVED
DEC 4 1979
ENVIRONMENTAL MANAGEMENT

December 4, 1979

Port of San Diego
P.O. Box 488
San Diego, Califas 92112

Gentlemen:

It is the position of the Chicano Park Steering Committee and the residents of Logan Heights to strive for bay-access by any means necessary.

Historically, the Barrio Logan community has been ignored and neglected by different levels of government. The 1960's brought a freeway and bridge through the heart of this community. It was because of the poor living conditions in the barrio and the "cement rape" of the community, that forced residents to take action and the stop the construction of a CHP sub-station and establish the neighborhood's only park: Chicano Park.

When Chicano Park was founded almost 10 years ago, the long-range goal of the park was to develop it to the waterfront. The Barrio Logan community and it's surrounding communities are growing and need open space on the coast. The Chicano Park Steering Committee has worked 10 years toward this goal and will continue to pursue this til the end.

We have also worked in conjunction with the Barrio Logan/ Harbor 101 Planning Association and the Planning Association Barrio Caucus to develop plans to extend Chicano Park to the bay. We clearly oppose any suggestions or ideas of a "pedestrian walk-way" by the bay. Our position is clear. The community needs land recreational use. This is greatly needed in this area and your cooperation will be appreciated.

Sincerely,

Tomasa Camarillo
Consultant

RS
cc: Coastal Commission
Barrio Caucus
City Planning Dept.

21

RESPONSE to COMMENT from: CHICANO PARK STEERING COMMITTEE,
Tomasa Camarillo
signed by Tomasa Camarillo, Consultant
(12/4/79; submitted 12/4/79 at public hearing)

Response: Contents of this letter of comment are essentially the same as those of the letter of comment from California State Assemblyman Peter Chacon. The reader is referenced to the responses to those comments.

DANIEL L. GUEVARA
ATTORNEY AT LAW
600 B Street, Suite 2250
San Diego, California 92101
Telephone: (714) 234-8113

December 4, 1979

RECEIVED
DEC 4 1979
ENVIRONMENTAL MANAGEMENT

The Unified Port of San Diego
3165 Pacific Highway
San Diego, California 92101

Gentlemen:

For over ten years, the Southeast San Diego Community has been voicing its need for recreational facilities on the bayfront. There remains one last remaining undeveloped parcel in the Barrio Logan bay frontage. Contrary to the public's interest, this parcel has been dedicated by the San Diego Unified Port District for only marine industrial development. The employees and residents of Barrio Logan, including the Southeast San Diego communities, believe that they, too, are legally entitled to the beneficial use of bay frontage for recreational development. The acreage is held in public trust and any other use is detrimental in that regard.

The Bay Front Committee represents local and state-wide community organizations, social service agencies, environmental associations, along with professional and business groups interested in the recreational fulfillment of the public trust concerning this small five and one-half acre port bay frontage.

Briefly, let us present the Port's objections, followed by our response

1. Site is unsafe due to railroad tracks and industrial nature of area.

   Three separate areas in the port district are presently developed for recreational use that have railroad tracks nearby. In Chula Vista, National City and in the Embarcadero Marina, well-designed pedestrian walkways have solved that concern. Another proposal is the construction of a pedestrian overpass that will visually enhance this area. It will connect the new educational cultural complex to the bayfront scenery.

   This area is not industrial, but a unique half-and-half mix of industry and an historically-established residential community. Add to this community the 50,000 employees who will benefit from this recreational facility.

2. The Embarcadero-Marina development will satisfy the area's need for recreation.

The Marina is not a facility that will fulfill the recreational needs of the southeast San Diego Community. The area's residents do not own small crafts and yachts.

The City of San Diego's study on transportation found less than one-third of the households in the Barrio Logan Community own a car, and one-third of the population are senior citizens. When these facts are combined, one understands the need for this recreational site to be located within the community. We do not want to be bussed out of our residential core; besides, the rising cost of transportation represents a problem of accessibility. The impact of not utilizing that small five-acre parcel for this purpose will adversely affect the public's opportunity to this coastal resource.

The City's LCP is planning to provide bike paths and landscape pedestrian walkways especially guided to the bayfront along Crosby Street where this park will be situated.

The bay is only one block from the residential community, yet it is entirely landlocked and this is the last undeveloped property.

3. Crosby Road is a new street, built by the Port and is the sole gateway for the Tenth Avenue Marine Terminal. It is over this route that all truck traffic must pass to and from the terminal.

   The City's LCP Plan indicates that the more effective route is near Eighth Avenue and is planning to direct street truck traffic in that direction. Otherwise, the heavy trucking crosses the residential community and poses a hazard with its proximity to the new four-block educational cultural complex.

4. Reduction of already small inventory of port-related industrial sites in the region.

   The Port's utilization of property must also meet the recreational needs of the general public, not only the industrial. In planning for state tidelands, the Port has the responsibility to incorporate recreational use especially with respect to the public's concern for this property for so many years.

   It is important to note that if the Port property in this bay is so valuable, why is so much in the Marina being planned as recreational? Carefully conceived planning would have proposed three acres near the Marina (north end of 10th Avenue Terminal) for the boat repair yard.

5. Remaining sites on San Diego Bay are not adequate for boat repair facilities.

   The Regional Coastal Commission Staff Findings Report earlier this year indicated alternative sites. The Port District and State Coastal Commission have been unable to discuss any alternatives. The Port contends there is no need for discussion of alternatives because that site is designated for that industrial use.

6. Condemnation of property rights of existing tenants.

   There are no permanent structures on the property because the Coastal Commission has denied permits for industrial use, and therefore has avoided landlocking this area and precluded permanent loss to the community of recreational facilities on the bay front.

7. Recreational uses are inconsistent with planning policies established by the Port District Act and Port-related policies of the California Coastal Act.

   Chapter 8 of the Coastal Act states in part that "developments shall be located, designed and constructed so as to provide for other beneficial uses consistent with the public trust, including, but not limited to, recreation and wildlife habitat uses, to the extent feasible."

   Since there are competing uses for the land, the other applicable section of Chapter 8 of the Coastal Act is 30007.5 which gives guidance for resolution of such conflicts:

   > "The Legislature further finds and recognizes that conflicts may occur between one or more policies of the division. The Legislature therefore declares that in carrying out the provisions of this division such conflicts be resolved in a manner which on balance is the most protective of significant coastal resources."

   A dedication of the acreage by the Port for recreational use would, "on balance", be "most protective of significant coastal resources. Any other proposal will preclude the recreational use and adversely impact this public's need. Remember, this is the last vacant undeveloped parcel that will serve the southeast San Diego regions.

Chapter 3 of the Coastal Act requires public access for every community located on the coastline. In reaction, the Port offered to landscape a 25-foot wide walkway and a new fishing pier. In review of this proposal, it is not adequate space to meet the demands of over 50,000 employees in this bay front, the Barrio residents and the southeast San Diego region that will utilize this recreational facility.

In summary, the present Port District EIR in this land use issue is inadequate. An EIR must follow CEQA regulations, which call for disclosure of all impacts of a proposal. The Port District staff knew about the public's need and interest, yet failed to adequately discuss the adverse impact of the boat repair proposal. No alternatives were indicated for the boatyard in violation of CEQA's policies for failure to disclose and describe alternatives. The EIR does not explain the impact of the loss of the opportunity for recreational facilities on that specific site.

The Port Commissions are a public body charged with the responsibility of balancing industrial and recreational uses of significant coastal resources for the public welfare. In the balance, it must be concluded that the welfare of the community needs the complement of recreational facilities along bay frontage already heavily industrialized.

The region historically had access and, now, has the momentum to regain some scenic value, vista area and new fishing pier.

Thank you for this opportunity to present the public's interest.

Very truly yours,

DANIEL L. GUEVARA

DLC:tb

cc: Mr. Michael Fischer, California Coastal Commission
Mr. Steve Horn, " " "
Mr. Dani Greene, Office of Planning & Research
Assemblyman Peter Chacone
Councilwoman Lucy Killea, City of San Diego

343

RESPONSE to COMMENT from: DANIEL L. GUEVARA, ATTORNEY AT LAW
Signed by Daniel L. Guevara
(12/4/79; submitted 12/4/79 during public hearing)

Response: Contents of this letter of comment are essentially the same as those of the letter of comment from California State Assemblyman Peter Chacon. The reader is referenced to the responses to those comments.

RECEIVED
DEC 4 1979
ENVIRONMENTAL
MANAGEMENT

December 4, 1979

Board of Commissioners
San Diego Unified Port District
P.O. Box 488
San Diego, CA 92112

Dear Sirs:

We appreciate this opportunity to address the Commissioners of the Unified Port District. We have reviewed the draft Environmental Impact Report for the Port of San Diego master plan and are pleased to note a strong concern for maintaining and improving water quality in San Diego Bay. As a local corporation involved in aquaculture and marine biology, our interest in the bay concerns several related topics. We presently are under contract from the Comprehensive Planning Organization to identify and locate sources of bacterial pollution in the northern end of San Diego Bay. Also, we are in the process of developing a major commercial fish and shrimp farm near the San Diego Gas & Electric Company's power plant in south San Diego Bay. We have considerable experience in the use of warm seawater effluent for accelerating the growth of several species of marine animals. Encouraging negotiations are underway with SDG&E for use of this water and with the Western Salt Company for use of a portion of their existing salt ponds.

We have discussed our interests with the Environmental Management and Planning Departments of the Port District. Any actions by the Port to protect and improve the water quality of the bay will be of direct benefit to companies such as ours. Aquaculture is an intelligent, ecologically-aware, non-exploitive use of our marine resources which helps to meet the increasing demands for high-quality seafood without causing further exploitation of fisheries stocks that already are under heavy fishing pressure. It also is very compatible with environmental concerns for preservation of critical wildlife habitat. We believe that San Diego is an excellent location for aquaculture and expect that as this new technology develops many new firms will choose to locate here.

Again, we would like to thank the Commissioners for this opportunity to introduce our plans and interests in the future of San Diego Bay. We look forward to working with the Port District to achieve our objectives and will be happy to provide more detailed information if requested.

Sincerely,

Jon C. Van Olst

James M. Carlberg

8167 La Jolla Shores Drive, La Jolla, California 92037 (714) 459-4595/(714) 454-6453

344

RESPONSE to COMMENT from: CALIFORNIA MARICULTURE INCORPORATED signed by James M. Carlberg and Jon C. Van Olst (12/4/79); submitted 12/4/79 during public hearing)

Response: The importance of maintaining and improving water quality in San Diego Bay, particularly as related to the potential for aquaculture activities, is acknowledged. The Master Plan's description of Marine Related Industry uses, on page 32, includes the potential of commercial mariculture activities in converted salt ponds in areas of South Bay, particularly wherein adjacent warm water discharge from electrical power plants is available. It is further acknowledged that such commercial activities may retain compatibility with biological habitat and other environmental concerns in the area.

[REPRESENTATIVE SAMPLE OF NINE PAGES SUBMITTED]

RECEIVED
DEC 4 1979
ENVIRONMENTAL MANAGEMENT

November 29, 1979

TO: The Board of Commissioners, San Diego Port District

We, the undersigned, wish to express the need for recreational bay front acreage in the southeast San Diego/Barrio Logan communities. We have been informed that the San Diego Port District's Master Plan and Environmental Impact Report (E.I.R.) have dedicated this last vacant property for marine industrial development.

We wish to inform the honorable commissioner of our dissatisfaction with the Master Plan, specifically the inadequate discussion of the impact that an industrial development will have on the public's need for bay frontage.

Furthermore, we urge the commissioners to adopt the Bay Front Committee's recommendation for recreational access in that last remaining 8.4 acres of Barrio Logan.

Name: (NEW MEXICO)	Address:	Telephone No.	Date
Richard Castillo Jr.	Asst. 8118 Dodie Street.		
Mr. + Mrs. David Pinard	2252 Union St San Diego CA	work at 282-5750	
Miguel Cuevas	1930½ Tuvia Ave	224-5910	
Estela Larralde	4138 Arbor Drive	563-6062	"
Myrna Flemming	1168 National Ave.	231-7158	12-2-79
Juan M. Ramos	4283 46th St. SD	281-6772	"
Gloria M. Ramos	4283 46th St SD	281-6772	"
Olga Lopez	2209 Logan Ave	231-3593	"
Judith A. Huber	809 Olivia St. La Jolla, CA	459-8855	
R. Bustos	3148 47th	282-7742	"
Ed Davila	2345 Delgrosso St	582-7561	"
Ramon Mendez	2807 Island		"
Rafael Tellez	638 W 42nd St	263770	"
Phil Gutierrez	816 Derby St		
Tom Hinton	938 La Senda Way	CV 92010	
Rosa E. Hinton	938 La Senda Way	CV 92010	
Rosario Lopez	1111 Mykonos Ave	CV 92011	
Juan Zuniga	1111 Malaga Ave	CV 92010	
Eric M. Johnston Sr.	131 South 39th St	S.D. 92113	
Teresa M. Johnston	131 So 39th St	S.D. 92113	
Teresa Sanchez	2321 Rachel Ave	San Diego, Calif 92139	
[illegible]	1517 24th	1ST San Diego CA 92102	

Lupita Collazo Salvador Abato Torres 12-2-79

RESPONSE to COMMENT from: AL JOHNSTON, Bay Front Committee
Signed by Al Johnston
(11/29/79; submitted together with attached signatures 12/4/79 at public hearing)

Response: Contents of this letter of comment are essentially the same as those of the letter of comment from California State Assemblyman Peter Chacon. The reader is referenced to the responses to those comments.

APPENDIX A

SAN DIEGO BAY/GLORIETTA BAY

ANCHORAGE LOCATIONS AND REGULATIONS

N O T I C E - N O T I C E - N O T I C E

THE REGULATORY ORDINANCES LISTED BELOW HAVE BEEN REPRINTED IN THEIR ENTIRETY FROM THE CITY OF CORONADO MUNICIPAL CODE AND SAN DIEGO UNIFIED PORT DISTRICT CODE FOR INFORMATION AND COMPLIANCE. THESE SECTIONS HAVE BEEN VERIFIED TO BE IN FULL FORCE AND EFFECT AND IN CONSONANCE WITH APPLICABLE STATE AND LOCAL LAWS.

13.16.540 Water-skiing areas, etc. The following area is hereby designated a water-skiing area and shall be devoted exclusively to water-skiing, surfboard and use of similar devices:

That portion of Glorietta Bay and San Diego Bay within the city limits lying easterly of a line drawn between a point one thousand twenty-five feet northerly of station 518 and station 500 of the United States Bulkhead Line. (Prior code 7551).

13.16.550 Bathing, swimming and surfboarding. Except when participating in a public exhibition or meet conducted pursuant to a permit issued by the port director, no person shall bathe, swim, use or ride a surfboard, water skis or other device in t at portion of Glorietta Bay lying westerly of a line drawn between a point one thousand twenty-five feet northerly of station 518 and station 500 of the established United States Bulkhead Line. (Prior code 7551.1).

U.P.D. Code. Sec. 8.27 - Aquatic Activities Regulated

(a) It shall be unlawful to fish, swim, surfboard, water-ski or engage in any other aquatic activity in any area within the harbor or on the tidelands or submerged lands of the District where any such activity is prohibited by order of the Board of Port Commissioners, or to engage in any such activity contrary to regulations adopted by the Board of Port Commissioners. Prohibited activities and regulations ordered by the Board of Port Commissioners shall be displayed by signs posted in areas where such prohibitions or regulations apply.

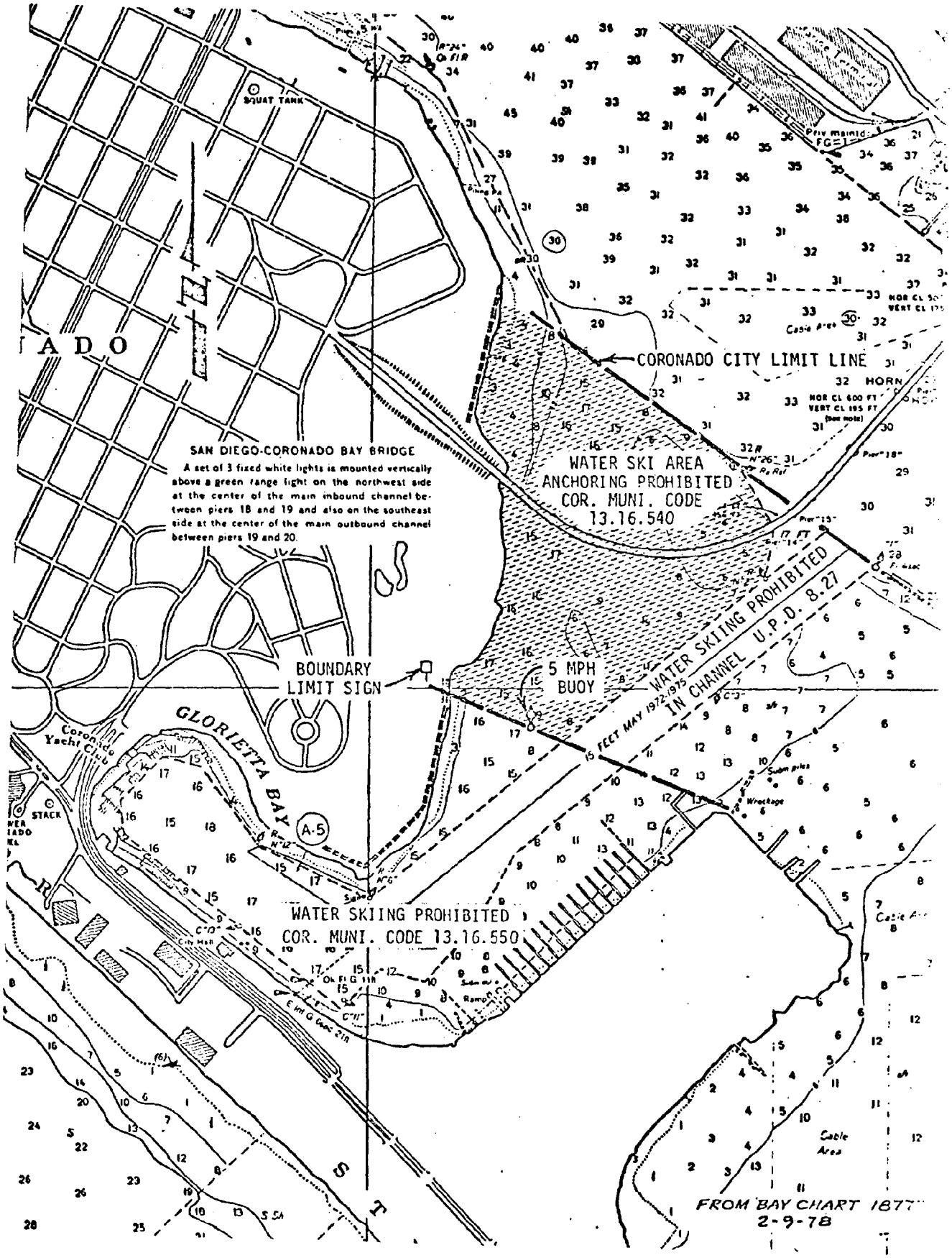
(b) It shall be unlawful to swim, bathe, water-ski or use a surfboard or paddleboard in the marked channel of Shelter Island Yacht Harbor, the marked entrance channel to Shelter Island Yacht Harbor, the marked channel of the Commercial Basin, the marked entrance channel to the Commercial Basin, the marked channel of Glorietta Bay, the marked entrance channel to Glorietta Bay, the marked channel of the east and west lagoons of Harbor Island, the marked Chula Vista channel, the National City Launching Ramp Basin, or the marked Coronado Cays channel.

(Enacted April 12, 1966 - Ordinance No. 224)
(Amended September 5, 1967 - Ordinance No. 321)
(Amended August 21, 1973 - Ordinance No. 635)

A CHARTLET IS PROVIDED ON THE REVERSE SIDE FOR FURTHER CLARIFICATION. ENFORCEMENT OF THESE REGULATIONS WILL COMMENCE FEBRUARY 17, 1978.

SAN DIEGO UNIFIED PORT DISTRICT
HARBOR POLICE

FIGURE A-1


SQUAT TANK
CORONADO CITY LIMIT LINE
SAN DIEGO-CORONADO BAY BRIDGE
A set of 3 fixed white lights is mounted vertically above a green range light on the northwest side at the center of the main inbound channel between piers 18 and 19 and also on the southeast side at the center of the main outbound channel between piers 19 and 20.
WATER SKI AREA
ANCHORING PROHIBITED
COR. MUNI. CODE
13.16.540
BOUNDARY
LIMIT SIGN
5 MPH
BUOY
WATER SKIING PROHIBITED
IN CHANNEL U.P.D. 8.27
FEET MAY 1972-1975
GLORIETTA BAY
A-5
Coronado
Yacht Club
WATER SKIING PROHIBITED
COR. MUNI. CODE 13.16.550
Wreckage
Cable Area
FROM BAY CHART 1877
2-9-78

APPENDIX B

CIRCULATION ANALYSIS SUMMARY

CIRCULATION ANALYSIS

AN OVERVIEW

(UPD #78102-EIR-1 CA)

prepared for

SAN DIEGO UNIFIED PORT DISTRICT
P.O. Box 488
San Diego, CA 92112

prepared by

BERRYMAN AND STEPHENSON, INC.
CONSULTANTS TO GOVERNMENTAL AGENCIES
200 North Ash Street
Suite 100
Escondido, CA 92026

April 1979

EXECUTIVE SUMMARY

Introduction

The Circulation Analysis is to provide the San Diego Unified Port District with a report that includes an overview of circulation, traffic, and parking problem areas within and contiguous to the Port District's nine planning districts. The Circulation Analysis was not meant to be an in-depth study, but a review and identification of problem areas with recommendations for correction or further study to determine actual problems and solutions. The information provided can be integrated into the District's Master Plan so that related environmental issues will be included within the Port's Coastal Plan.

Project Organization

The project was initiated in November 1978 and was conducted by the firm of BERRYMAN AND STEPHENSON, INC., Consultants to Governmental Agencies. It was under the direction of the Port District's Environmental Management Department and coordinated with the Planning Department.

Project Objectives

The primary objective of the Circulation Analysis was to conduct site evaluations and prepare an overview report of a) vehicle traffic circulation and congestion areas, b) parking space availability, and c) street and road capacities within specific districts. The nine districts which were reviewed and analyzed include:

Shelter Island
Harbor Island/Lindbergh Field
Centre City/Embarcadero
Tenth Avenue Marine Terminal
National City Bayfront
Coronado Bayfront
Chula Vista Bayfront
Silver Strand South
South Bay Saltlands

The specific purpose of this project was to obtain, analyze, and evaluate existing data, studies and reports pertaining to circulation, traffic, parking, and transportation within the Port District's jurisdiction.

Project Approach

This project was approached by the Consultant as if he was a member of the Port District's staff. Information regarding traffic problem areas and future traffic needs was obtained from the contiguous agencies through telephone discussions and personal interviews with people at the agencies. Studies, reports, and environmental documents that had been prepared for particular traffic and transportation related concerns were reviewed and analyzed for inclusion in this report. Field studies and site evaluations were conducted to authenticate the existing reports and provide a basis for the Consultant's conclusions. Field studies included automobile speed and delay in traffic to determine levels-of-service of significant arterial streets within, and providing access to, the Port's jurisdiction. Parking availability was reviewed and analyzed, although not inventoried, to identify space problems within the planning districts. Traffic circulation problem areas and specific problems were discussed with the appropriate agency involved and are included in the report.

Conclusions and Recommendations

During the conduct of this project, it was found by the Consultant that closer coordination and communication is needed between the various regional and local agencies. Projects and studies are being conducted by the governmental agencies within the San Diego area which directly affect each entity. It is suggested that a review of the coordination and cooperation procedures between the Comprehensive Planning Organization, Bay Cities, Metropolitan Transit Development Board, Regional Coastal Commission, San Diego County, San Diego Port District, and other agencies be undertaken to develop closer relationships. The close cooperation should develop into a more comprehensive and worthwhile planning effort.

Throughout this report the results of the Consultant's investigative work and evaluation of traffic circulation concerns are presented. It was found that there is an ongoing need for professional traffic engineering assistance in determining solutions to the capacity and congestion problems occurring within and contiguous to the Port District's jurisdiction. The rapid development within the Planning Districts need to be assessed for traffic impacts as a whole and not on a piecemeal fashion as obtained with individual environmental impact statements. Many of the traffic impact studies completed for the developments within the District have been adequate, but have not gone far enough to provide a Plan for Impact Mitigation. It is therefore suggested that the District consider the development of a Plan for Traffic and Circulation Improvements.

The review and evaluation of each Planning District for traffic circulation resulted in some significant findings and recommendations for improvements or further study. Districts where additional planning for traffic improvements is needed and significant circulation deficiencies are located include the Centre City/Embarcadero area, Coronado Bayfront access, and Chula Vista Bayfront. The methodology, analysis, and recommendations are included in the report. Following are some of the significant findings and recommendations within each Planning District:

1. Shelter Island
   The roadways that provide access to this District are in need of improvements to guide signing, striping, and traffic signal timing under the auspices of the City of San Diego. Specific recommendations for the District include the installation of a Class III bikeway and continuity of travel lane striping for Shelter Island Drive, providing either two or four travel lanes throughout.

2. Harbor Island/Lindbergh Field
   Harbor Drive experiences severe congestion near the Crescent Zone of the bay during peak hour travel periods. The roadway in this area of the City is also in need of repair due to the heavy traffic loads.

The Port District should install warning signs and devices prior to the curve on the easterly end of Harbor Island Drive.

3. Centre City/Embarcadero
   Short term peak hour congestion is occurring on the arterial roadways providing the major access to the Centre City and Embarcadero areas. The shifting of traffic from Harbor Drive to Pacific Highway will relieve much of the congestion near the waterfront, but the traffic volumes are going to steadily increase along these major routes due to generation from proposed developments within the area. The feasibility and need for a major east-west corridor route connecting Harbor Drive with the I-5 Freeway within the South San Diego area (i.e. Imperial Avenue) should be studied by the City or C.P.O. This route would provide a "loop" system for traffic traveling through the Embarcadero, in addition to a bypass route for trucks and the work force in the southerly area.

   The interface of light rail transit and overall parking needs with the future development in the District needs to be studied. New developments should determine ways of getting their generated traffic to and from the proposed transit stations thus lessening traffic impacts on the heavily burdened street system.

4. Tenth Avenue Marine Terminal
   There is need for structural repair and maintenance for Harbor Drive through this District due to the high volume of heavy vehicles utilizing the street. The Light Rail Transit Stations within the area contiguous to the District will generate higher volumes of pedestrian activity. Improvements to the roadways for the safety of pedestrians within the area should be undertaken by the City and Port District within their respective jurisdictions. This may include sidewalks, pedestrian overcrossings, and/or signalization.

5. Coronado Bayfront
   The Coronado Bayfront District generated much discussion and analysis to determine actual roadway capacity problems and possible improvements. Coronado will experience increasing capacity and traffic problems during peak hours unless changes in City development and especially Military employment occur. The levels-of-service and high peak hour traffic on several of the streets within Coronado found that the roadways are underutilized during much of the day.

   The long queues of vehicles on Fourth Street at the Bay Bridge waiting to pay the toll charge cause much congestion for side street traffic, in addition to many traffic accidents and frustrated residents. It is proposed that Caltrans consider an experimental program to remove the toll charge for outbound vehicles but retain the toll charge for inbound vehicles.

   To provide more efficient north-south circulation and lessen the traffic impact on Orange Avenue, a study to determine the feasibility of a roadway under the Bay Bridge on Coronado should be studied by the agencies involved.

6. Chula Vista Bayfront
   The development proposed within the Chula Vista Bayfront District will increase the traffic impact and congestion within this area. The Tidelands Avenue extension into National City and the Route 54 Freeway will serve to reduce these impacts considerably within the area.

FIGURE B-1

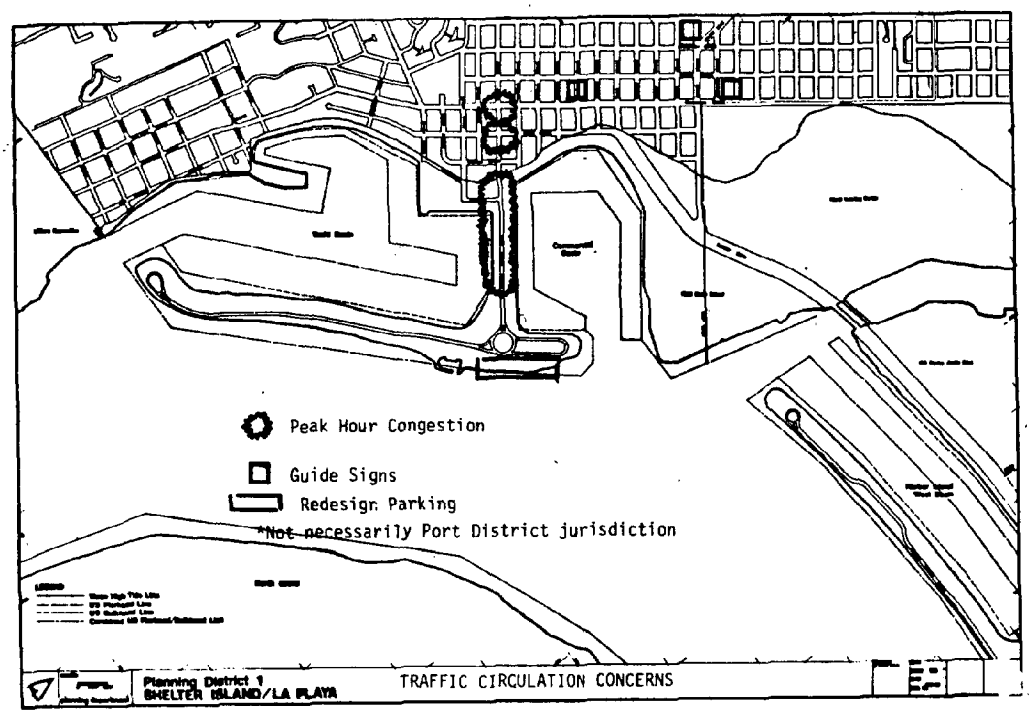


FIGURE B-2

SPEED AND DELAY STUDIES

GRAPHICS INDICATE AN AVERAGE FROM RUNS OF EACH DIRECTION

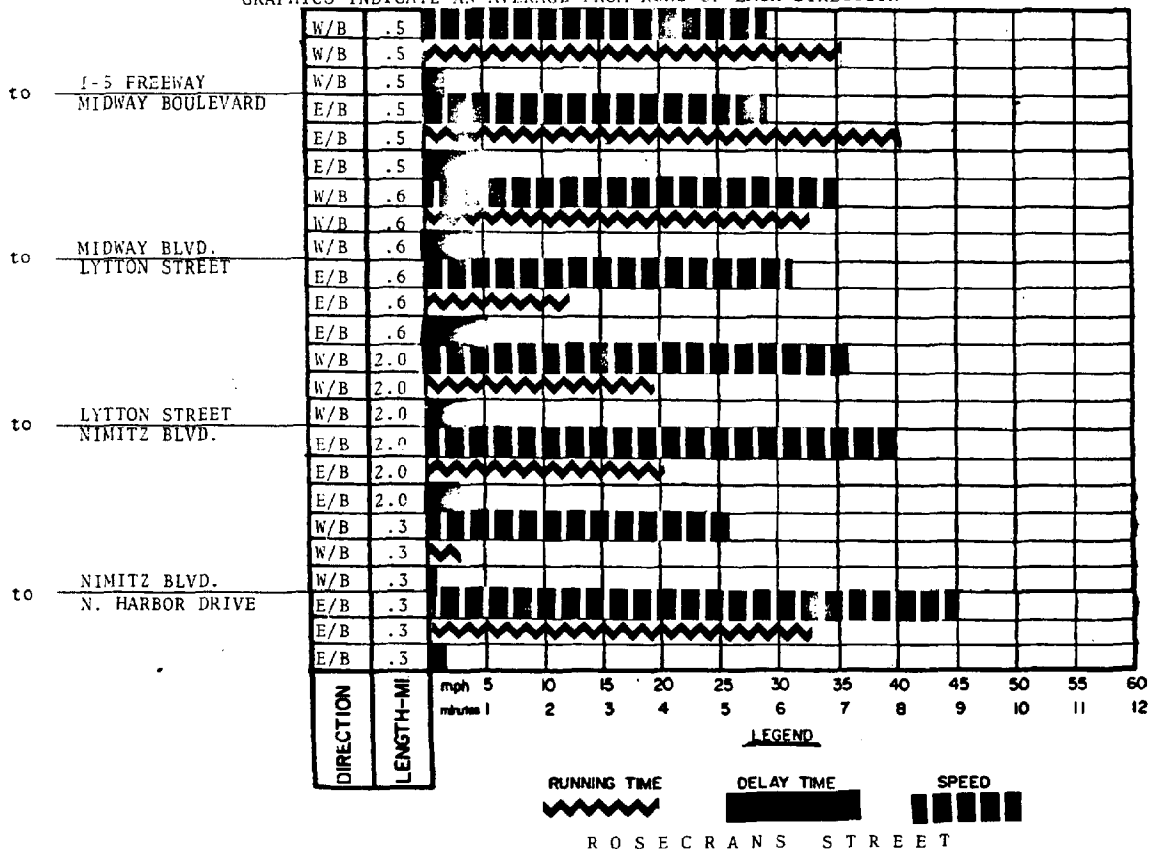
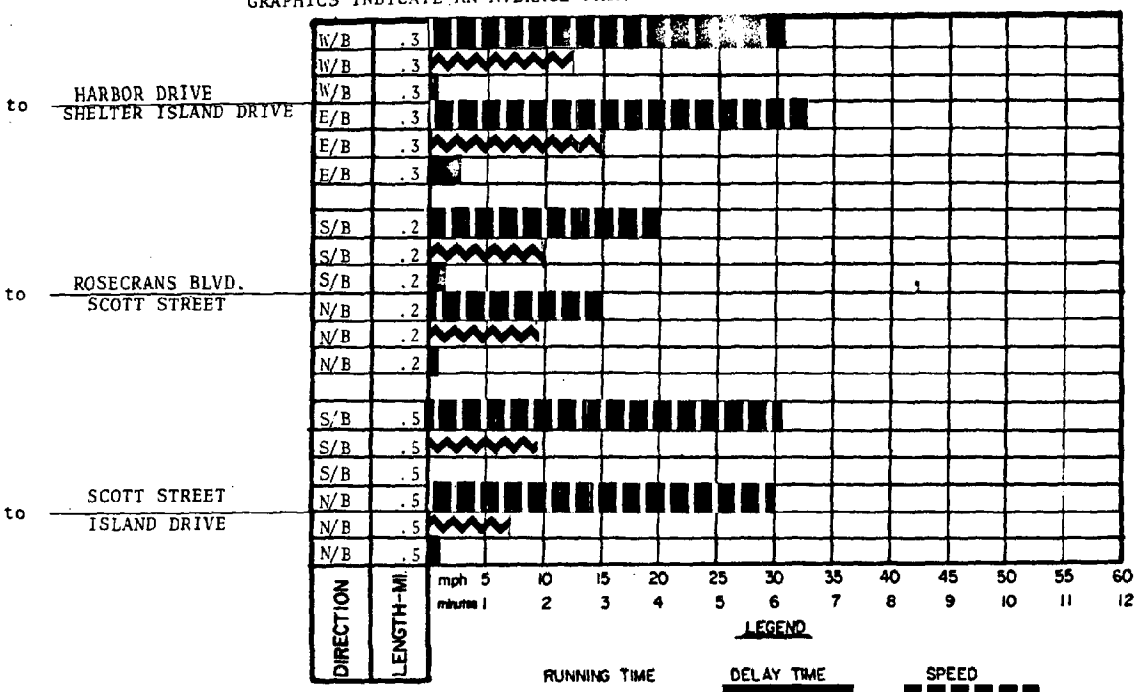


FIGURE B-3

SPEED AND DELAY STUDIES

GRAPHICS INDICATE AN AVERAGE FROM RUNS OF EACH DIRECTION



SHELTER ISLAND

FIGURE B-4

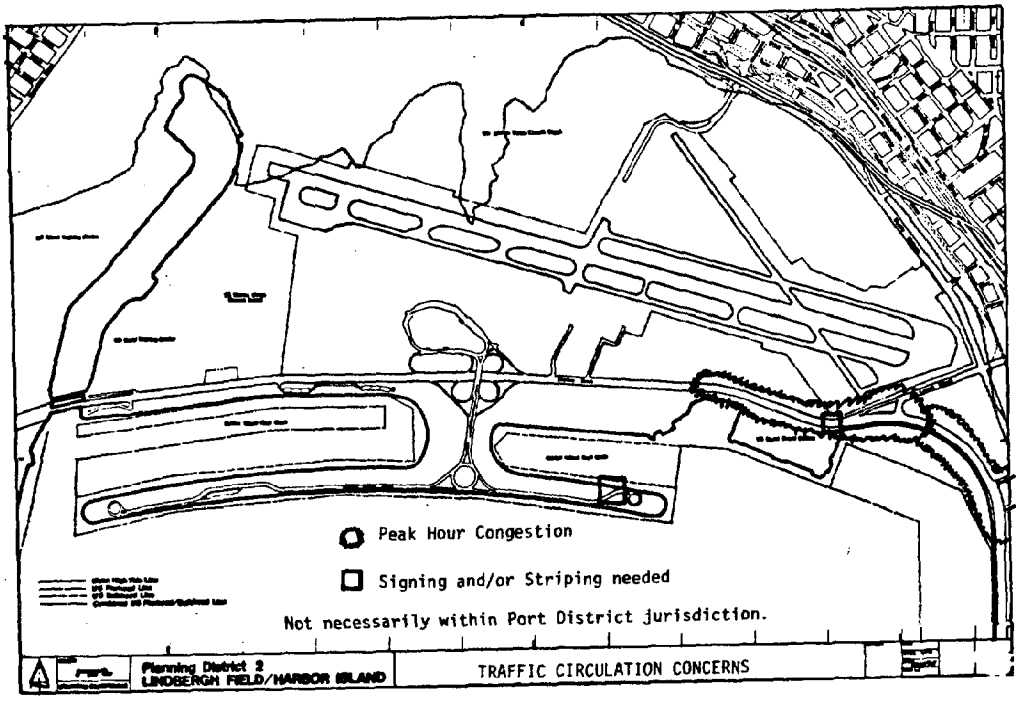


FIGURE B-5

SPEED AND DELAY STUDIES

GRAPHICS INDICATE AN AVERAGE FROM RUNS OF EACH DIRECTION

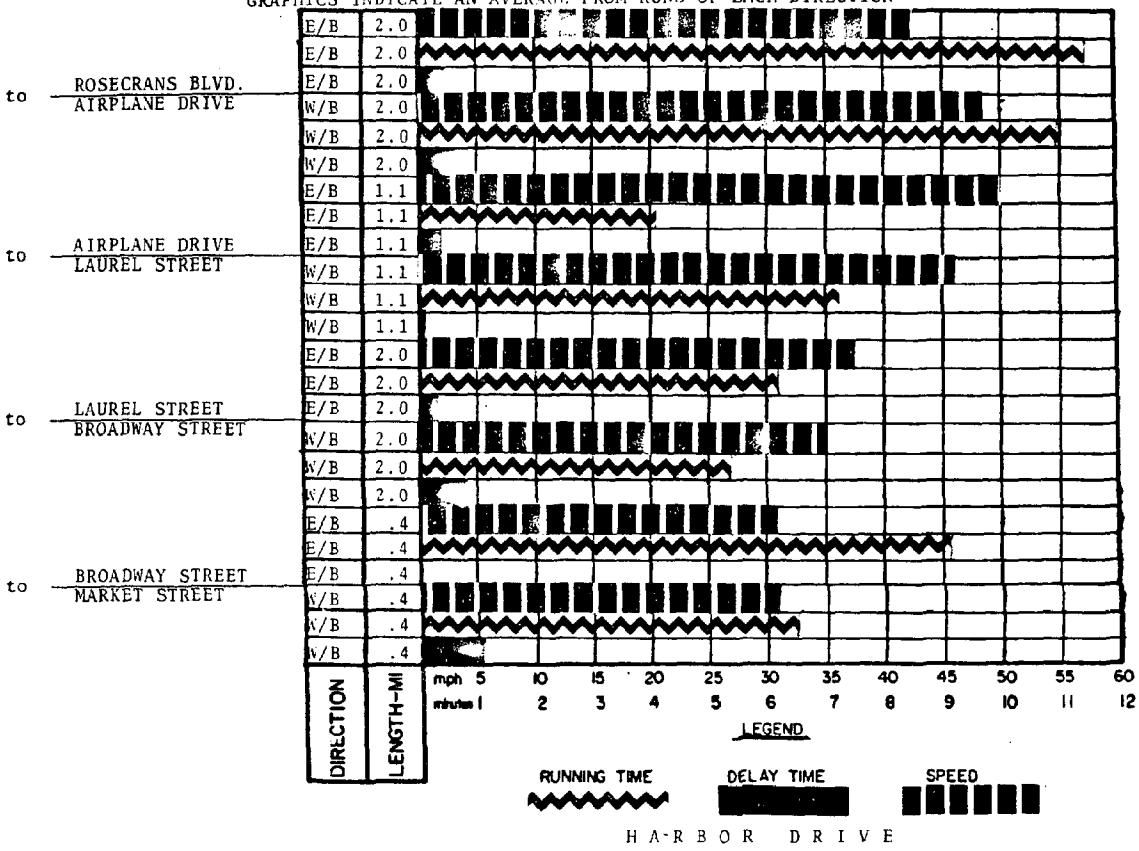


FIGURE B-6

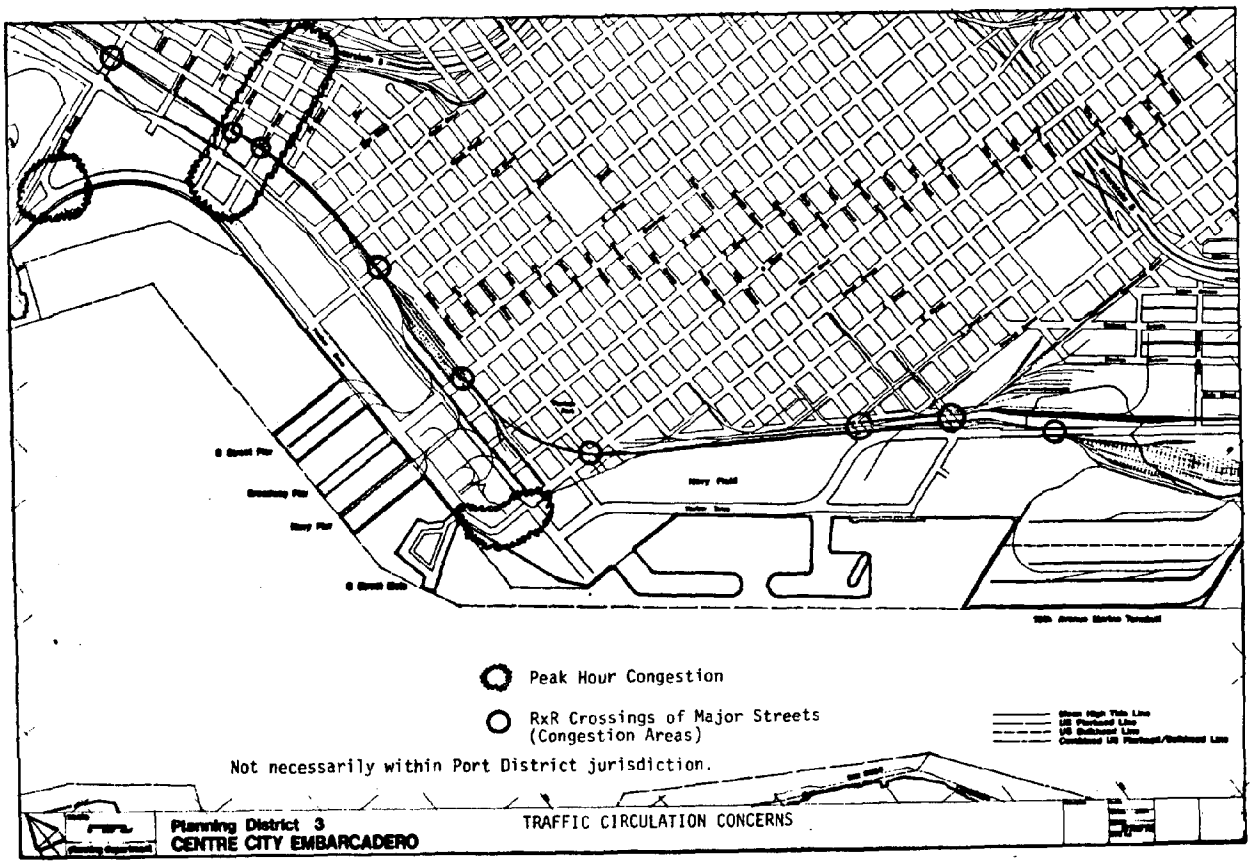
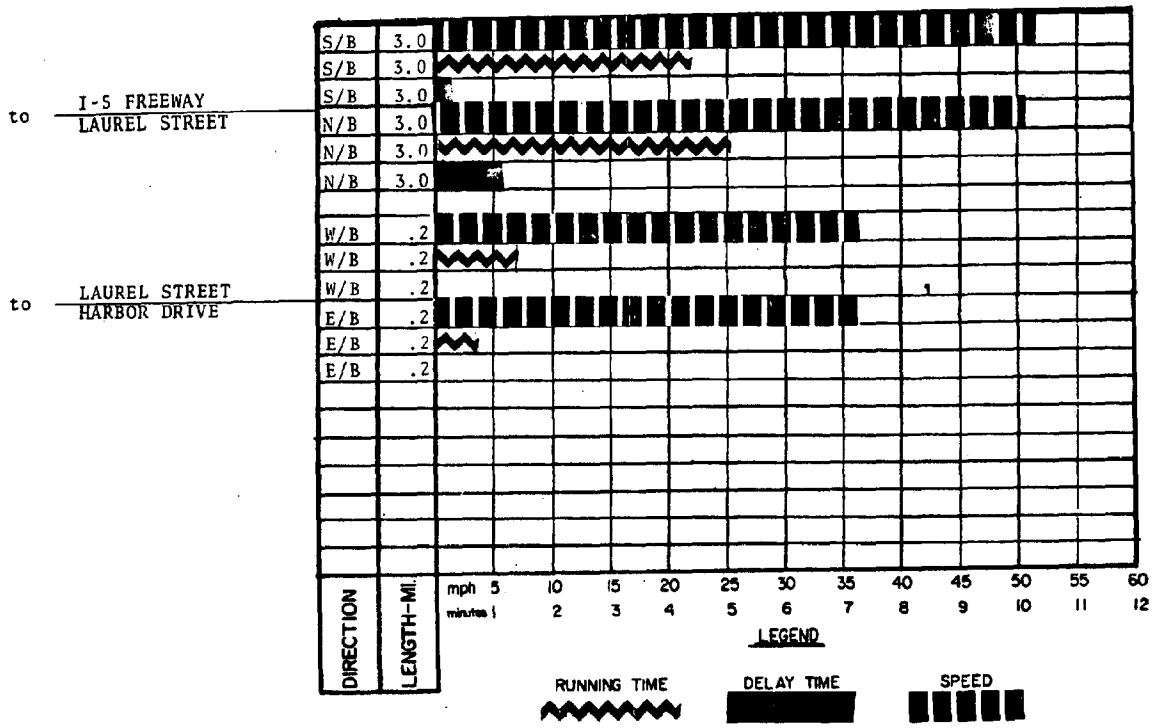


FIGURE B-7

SPEED AND DELAY STUDIES

GRAPHICS INDICATE AN AVERAGE FROM RUNS OF EACH DIRECTION

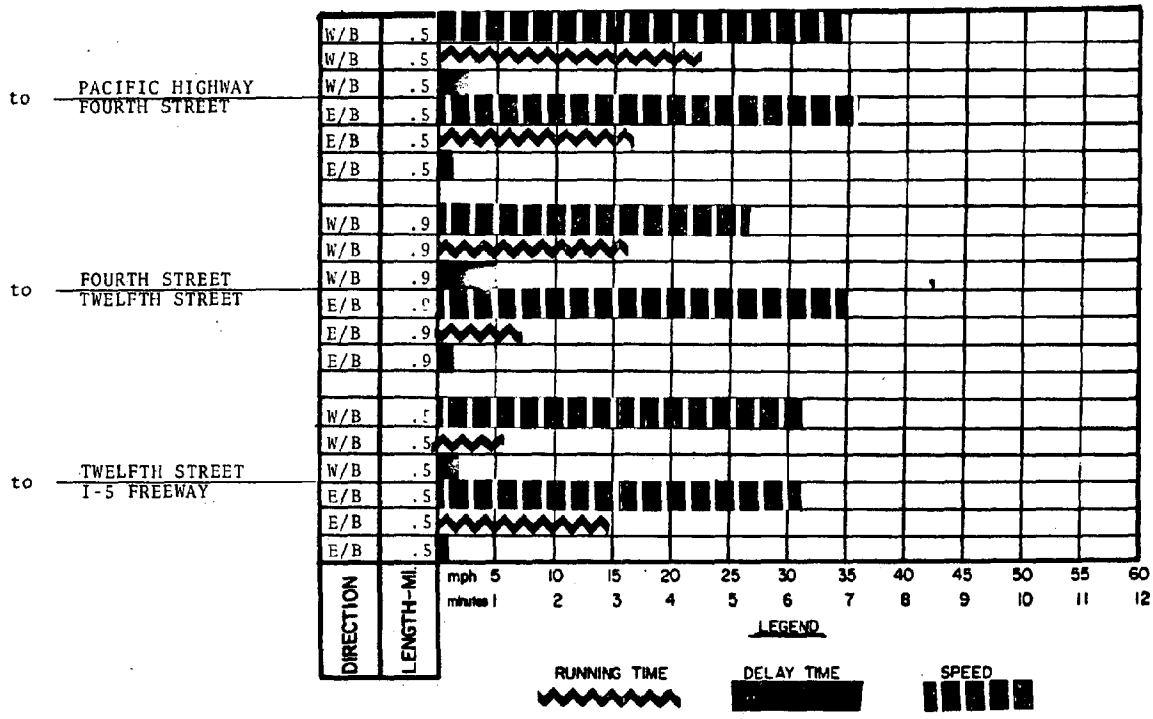


PACIFIC HIGHWAY

FIGURE B-8

SPEED AND DELAY STUDIES

GRAPHICS INDICATE AN AVERAGE FROM RUNS OF EACH DIRECTION



MARKET STREET

FIGURE B-9

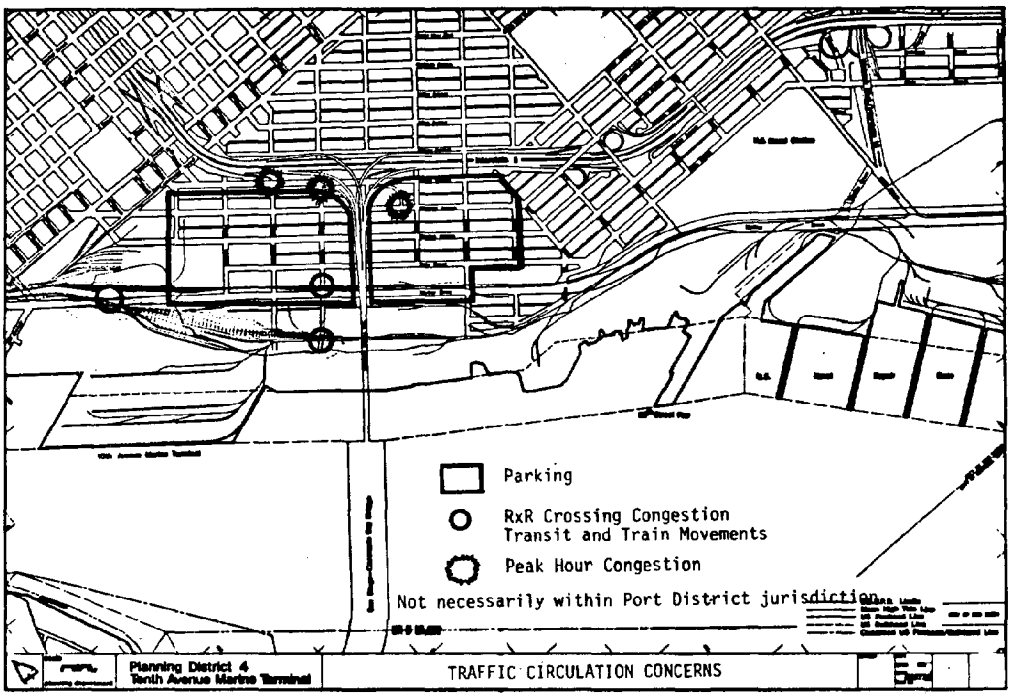


FIGURE B-10

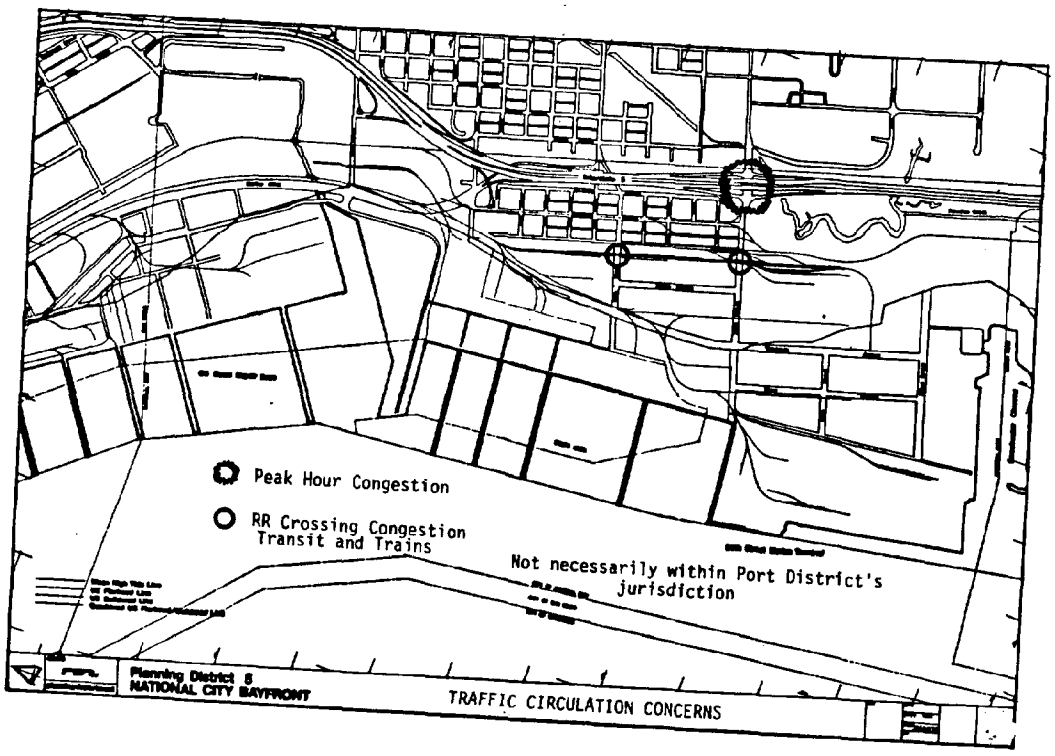


FIGURE B-11

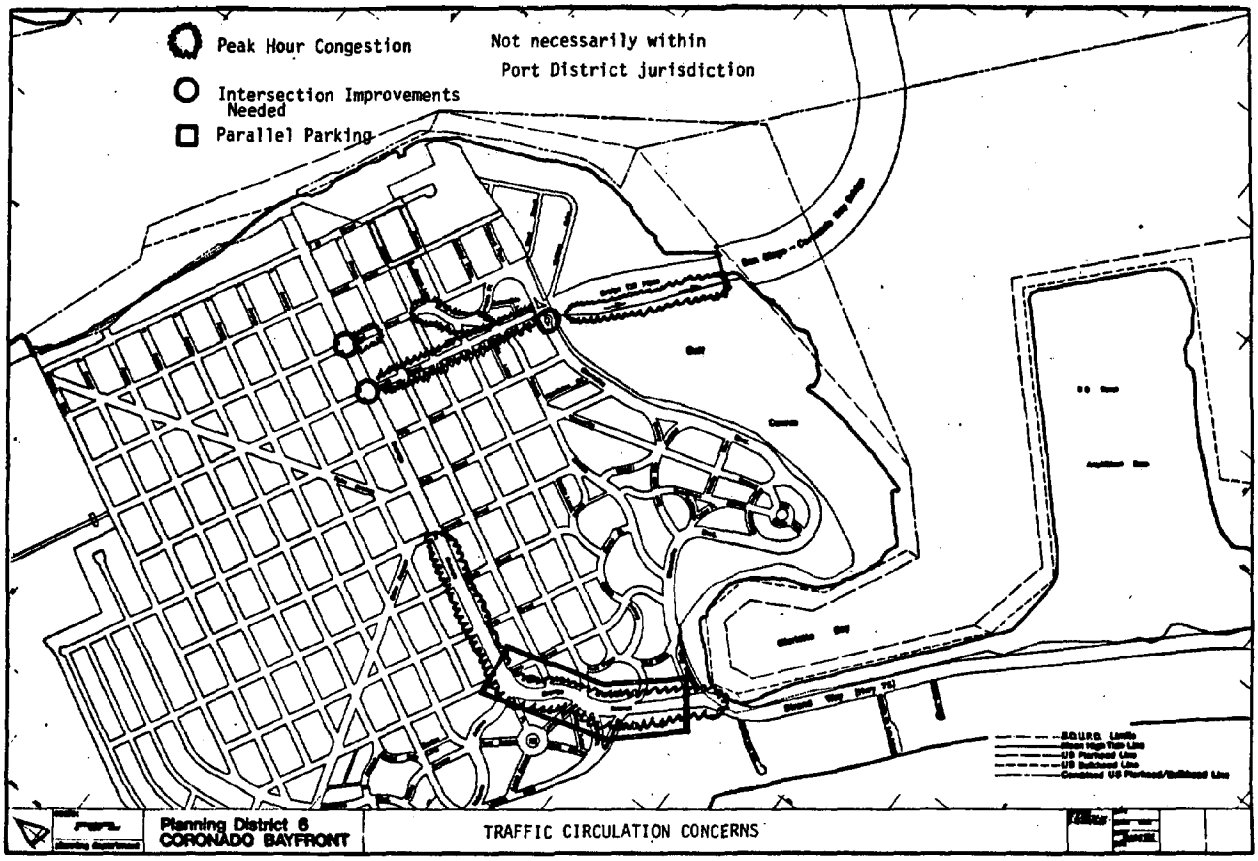
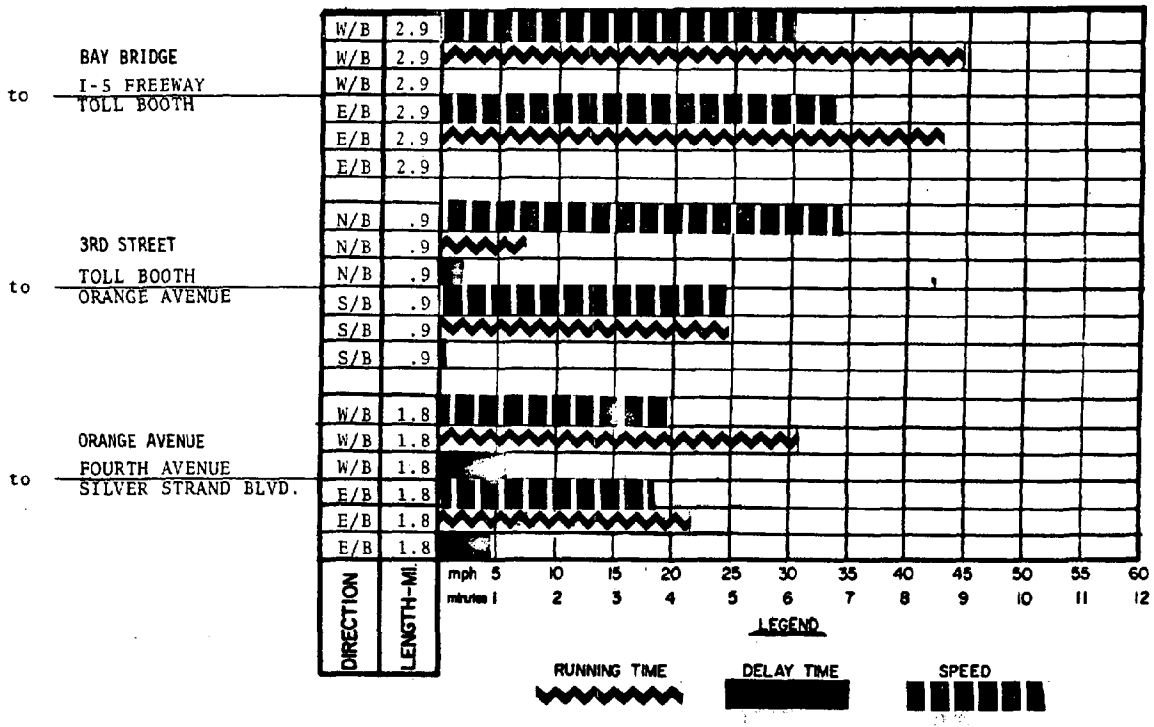


FIGURE B-12

SPEED AND DELAY STUDIES

GRAPHICS INDICATE AN AVERAGE FROM RUNS OF EACH DIRECTION

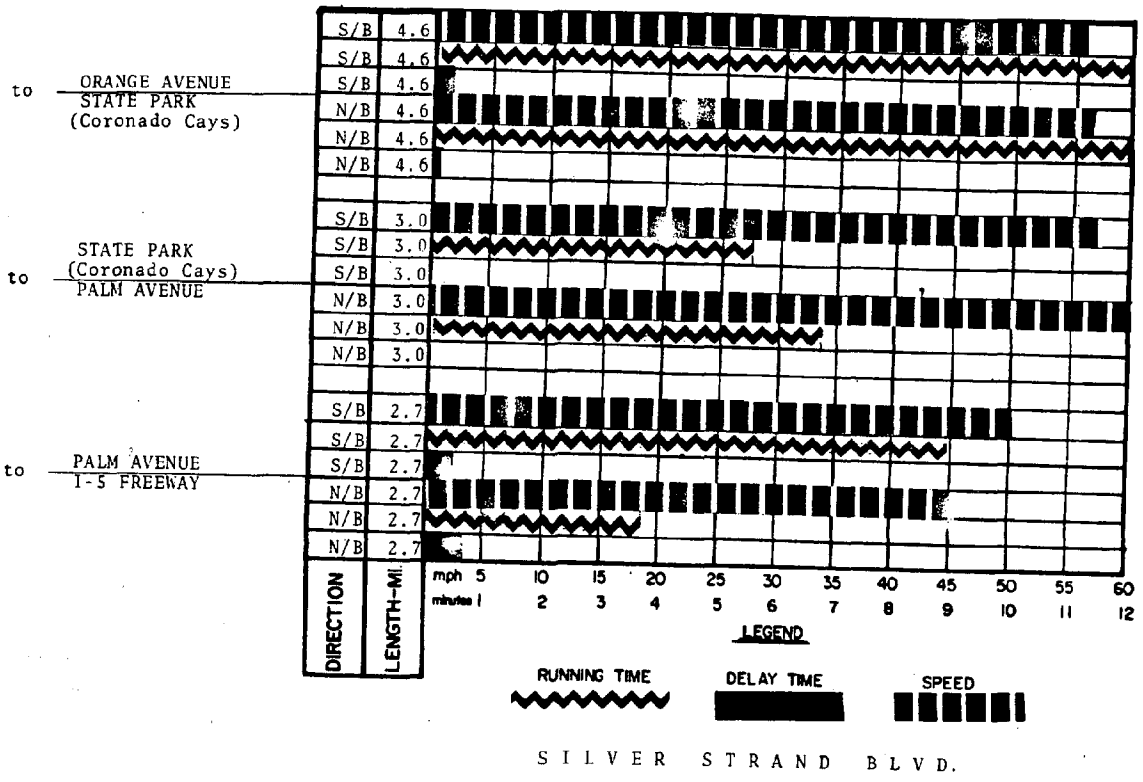


CORONADO

FIGURE B-13

SPEED AND DELAY STUDIES

GRAPHICS INDICATE AN AVERAGE FROM RUNS OF EACH DIRECTION



S I L V E R S T R A N D B L V D.

FIGURE B-14

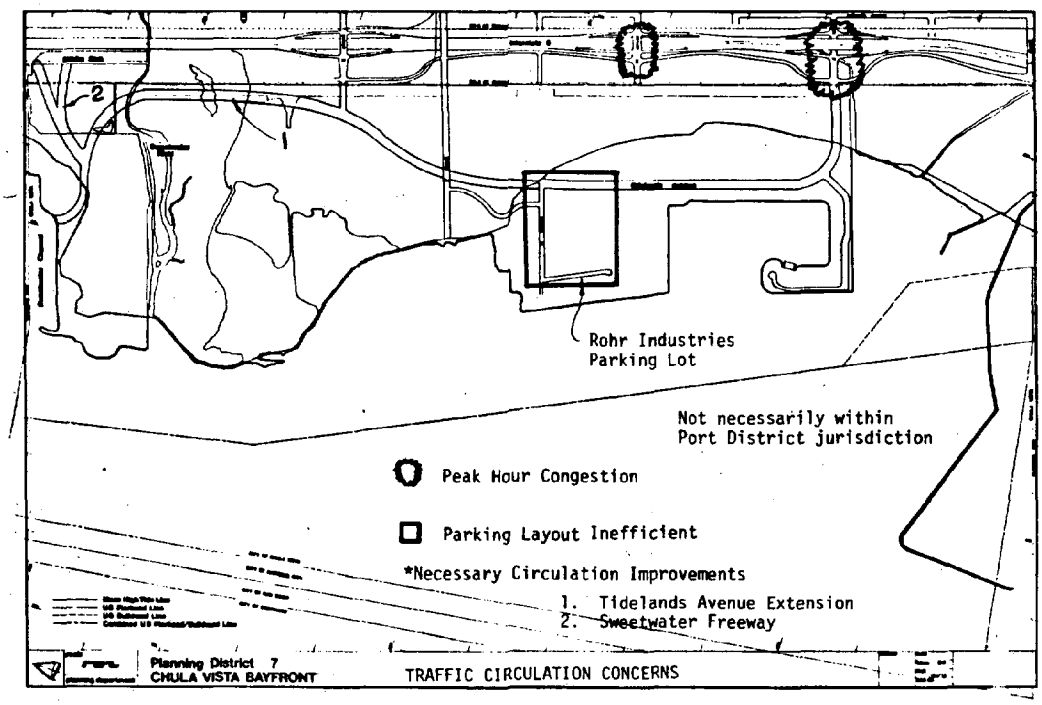


FIGURE B-15

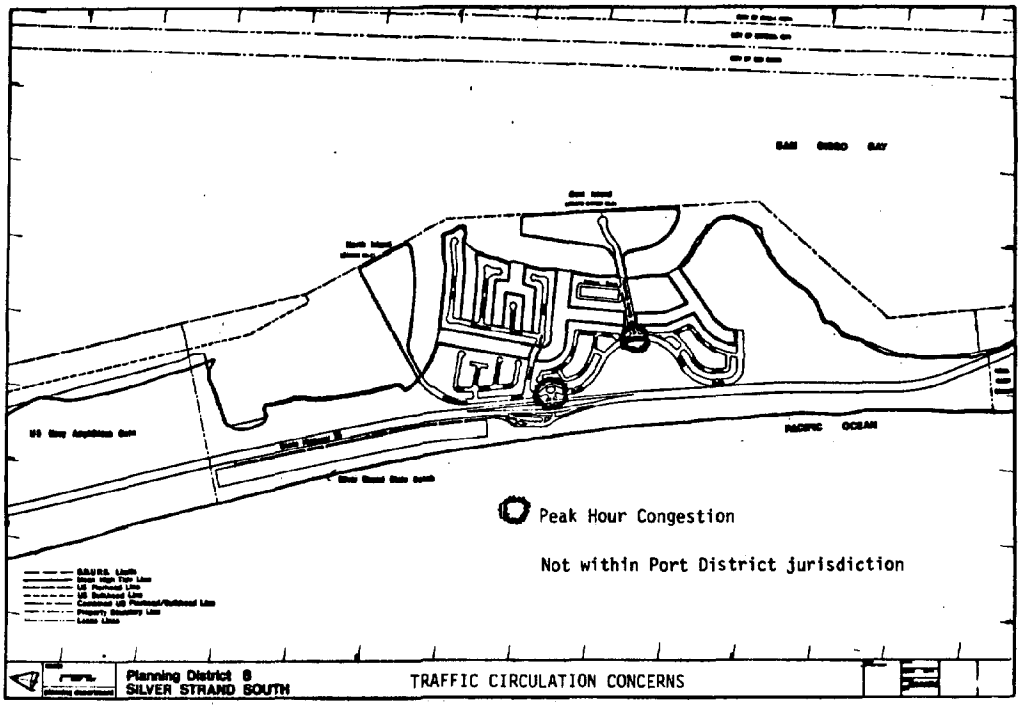


FIGURE B-16

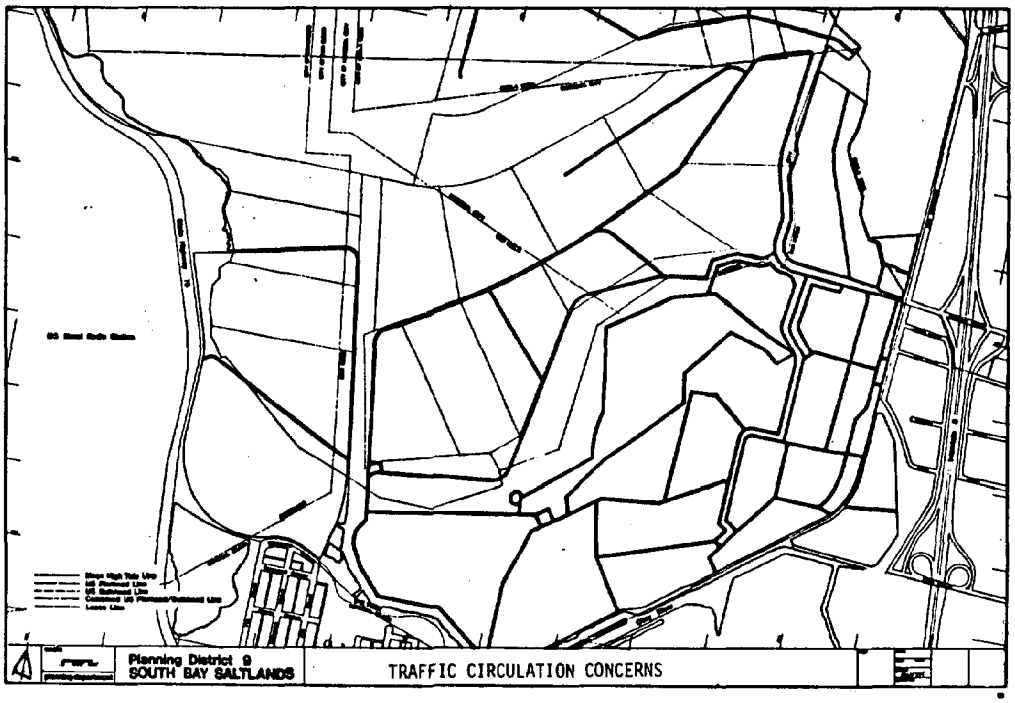
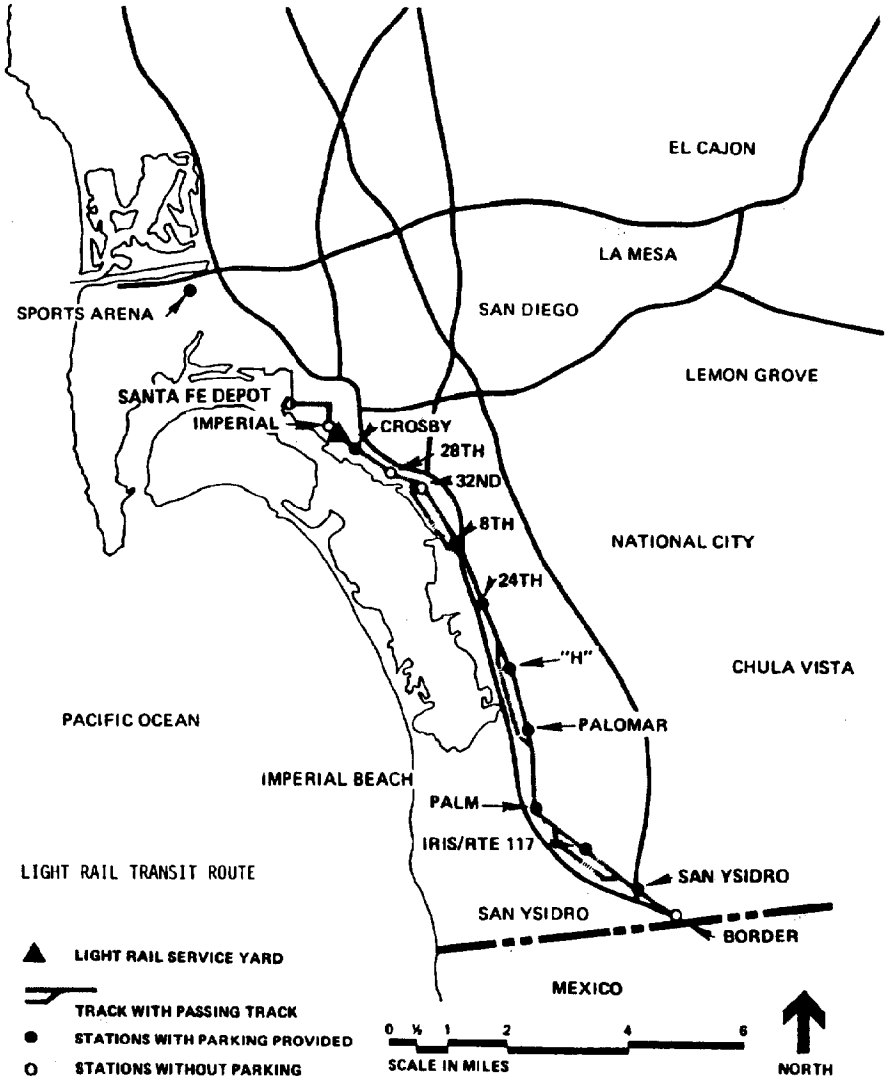


FIGURE B-17



LIGHT RAIL TRANSIT ROUTE

APPENDIX C

AIR QUALITY INFORMATION

FIGURE C-1

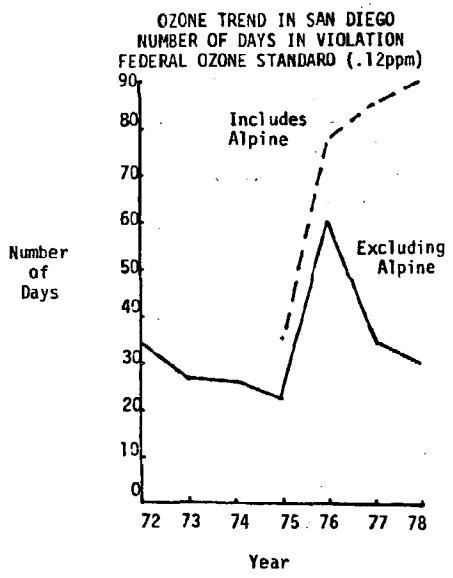


TABLE C-1

PHOTOCHEMICAL SMOG (OZONE)

San Diego County

Days and Hours Exceeding 8 PPHM*

1978, 1977

Station \ Year	Days 1-hr > 8 pphm (160 ug/m³)		Hours > 8 pphm		Maximum 1-hour pphm		Date of Maximum
	1978	1977	1978	1977	1978	1977	1978
El Cajon	52	42	169	109	18	13	7/15/78
Chula Vista	51	52	170	179	20	21	9/26/78
Escondido	77	73	295	233	18	16	7/15/78
Alpine	148	164	845	770	24	18	7/15/78
S.D. Downtown	39	38	108	104	21	16	5/12/78
Oceanside	71	87	272	394	35	25	9/23/78
Kearny Mesa	60	64	211	240	18	18	5/8/78
Brown Field[a]	9	71	36	336	17	16	3/25/78
Solana Beach[b]	62	—	241	—	39	—	9/23/78
Basinwide	181	190	1190	1162	39	25	9/23/78

a) Monitoring discontinued at this site, March 27, 1978.
b) Station opened January, 1978.

pphm — Parts per hundred million

*See Table 8 for days and hours over new 12 pphm standard.

TABLE C-2

OZONE

CUMULATIVE NUMBER OF CALENDAR DAYS ON WHICH THE MAXIMUM HOURLY AVERAGE EQUALLED OR EXCEEDED CHOSEN CONCENTRATION
By Individual Stations
San Diego County
1978, 1977

Pollutant Concentration in parts per hundred million	5		6		7		8		9		10		13		15		20		25		30	
Year / Station	1977	1978	1977	1978	1977	1978	1977	1978	1977	1978	1977	1978	1977	1978	1977	1978	1977	1978	1977	1978	1977	1978
El Cajon	197	199	141	152	89	111	62	78	42	52	28	37	4	5	0	4	0	0	0	0	0	0
Chula Vista	201	224	144	170	96	119	70	78	52	51	39	37	13	7	5	6	1	1	0	0	0	0
Escondido	236	226	181	189	136	151	97	107	73	77	44	54	12	15	2	8	0	0	0	0	0	0
Downtown San Diego	200	200	128	139	89	95	63	59	38	39	26	24	7	8	2	3	0	2	0	0	0	0
Oceanside	271	216	213	173	160	133	124	97	87	71	61	51	22	20	16	10	2	5	1	1	0	1
Kearny Mesa	211	220	161	168	116	118	93	77	64	60	47	41	21	9	9	8	0	0	0	0	0	0
Alpine	291	254	253	220	210		185	167	164	148	134	123	58	65	17	34	0	4	0	0	0	
Solana Beach		219		173		130		87		62		42		17		10		2		2		1
BASIN DAYS	323	295	286	264	248	232	222	200	190	181	168	151	85	88	40	49	3	10	1	2	0	1

TABLE C-3

Annual Averages — San Diego County
1978, 1977, 1976

NITROGEN DIOXIDE

Annual Average — pphm — Standard Violation >5 pphm (100 ug/m³)

Station \ Year	1978	1977	1976
El Cajon	5	6	6
Chula Vista	3	3	4
Escondido	4	4	4
S.D. Downtown	5	6	6
Oceanside	3[b]	3	3
Kearny Mesa	4	4	3
Brown Field	2[a]	2	2[c]

a) Jan.-March, 1978
b) No monitoring Sept., 1978
c) Station opened May, 1976

SULFUR DIOXIDE

Annual Average — pphm[a] — Standard Violation >3 pphm (80 ug/m³)

Station \ Year	1978	1977	1976
El Cajon	0[b]	0	0
Chula Vista	0	0[e]	0
Escondido	0	0	0
S.D. Downtown	0	0	0
Oceanside	0[d]	0[f]	0
Kearny Mesa	0[c]	0[g]	0

a) Any value below 0.5 pphm is listed as zero (0).
b) No monitoring mid-Sept. thru mid-Dec., 1978
c) No monitoring Jan.-Aug. and Oct., 1978
d) No monitoring Jan. thru mid-Feb., 1978
e) No monitoring July thru mid-Nov., 1977
f) No monitoring June thru Dec., 1977
g) No monitoring May and July thru Dec., 1977

TABLE C-4

NITROGEN DIOXIDE
San Diego County
Days and Hours Exceeding Standards
1978, 1977

	Days 1-hr ≥ 25 pphm (470 ug/m³)		Hours >25 pphm		Maximum 1-hour pphm		Date of Maximum
Station \ Year	1978	1977	1978	1977	1978	1977	1978
El Cajon	1	4	1	7	27	27	10/19/78
Chula Vista	0	2	0	4	23	26	10/19/78
Escondido	0	0	0	0	22	22	1/26/78
S.D. Downtown	3	9	4	14	32	32	12/11/78
Oceanside	2[b]	2	2[b]	2	32[b]	36	10/19/78
Kearny Mesa	0	5	0	9	23	30	9/28/78
Brown Field	0[a]	0	0[a]	0	11[a]	16	1/26/78

a) Jan.-March, 1978
b) No monitoring Sept., 1978

TABLE C-5

SULFUR DIOXIDE

San Diego County
Days Exceeding Standards

1978, 1977

Station \ Year	Days 1-hr. ≥ 50 pphm (1305 ug/m³)		Days 3-hour >50 pphm		Days 24-hour ≥ 5 pphm (105 ug/m³)		Maximum 1-hour >pphm		Date of Maximum
	1978	1977	1978	1977	1978	1977	1978	1977	1978
El Cajon	0[a]	0	0[a]	0	0[a]	0	3[a]	3	5/08/78
Chula Vista	0	0[d]	0	0[d]	0	0[d]	7	9[d]	8/06/78
Escondido	0	0	0	0	0	0	6	4	11/08/78
S.D. Downtown	0	0	0	0	0	0	6	5	11/06/78
Oceanside	0[c]	0[e]	0[c]	0[e]	0[c]	0[e]	3[c]	0[e]	11/08/78
Kearny Mesa	0[b]	0[f]	0[b]	0[f]	0[b]	0[f]	3[b]	0[f]	9/23/78

a) No monitoring Sept. 19 - Dec. 20, 1978
b) No monitoring Jan.-Aug. and no monitoring in Oct., 1978
c) No monitoring Jan. - Feb. 22, 1978
d) No monitoring July - mid Nov., 1977
e) No monitoring June-Dec., 1977
f) No monitoring May and July thru Dec., 1977

TABLE C-6

HYDROCARBONS
(Corrected for Methane)

San Diego County
Days Exceeding Standards

1978, 1977

Station \ Year	Days 6-9 am > 24 pphm (160ug/m³)		Maximum 1-hour pptm		Date of Maximum
	1978	1977	1978	1977	1978
El Cajon	268	280[a]	62	89[a]	2/21/78
Chula Vista	232	311	20	34	12/18/78
Escondido	306	256	48	44	2/03/78
S.D. Downtown	292	284[a]	54	80[a]	1/27/78
Oceanside	211[c]	243	40[c]	45	2/04/78
Kearny Mesa	103	132	20	45	10/10/78
Brown Field	15[b]	81	10[b]	16	1/11/78

a) No monitoring November, 1977
b) Jan.-March, 1978
c) No monitoring June, 1978

pptm — Parts per ten million

TABLE C-7

CARBON MONOXIDE
San Diego County
Days Exceeding Standards
1978, 1977

Station \ Year	1-Hour Avg. > 35 ppm (40 ug/m³)		8-Hour Avg. > 9 ppm (10 ug/m³)		12-Hour Avg. > 10 ppm (11 ug/m³)		Maximum 1-hour ppm		Date of Maximum
	1978	1977	1978	1977	1978	1977	1978	1977	1978
El Cajon	0	0	0	6	0	0	14	16	12/14/78
Chula Vista	0	0	0	0	0	0	8	9	10/19/78
Escondido	0	0	0	0	0	0	15	19	2/03/78
S.D. Downtown	0	0[b]	1	3[b]	0	0[b]	16	17[b]	1/27/78
Oceanside	0	0	0	0	0	0	9	8	2/04/78
Kearny Mesa	0	0	0	0	0	0	6	7	9/27/78
Brown Field	0[a]	0	0[a]	0	0[a]	0	2[a]	3	1/21/78

a) Jan.-Mar., 1978
b) Only 3 days monitoring in Oct.-Nov., 1977

TABLE C-8

TOTAL SUSPENDED PARTICULATES
San Diego County
1978, 1977

Station \ Year	% Samples ≥ 100 ug/m³		% Samples >150 ug/m³		% Samples >260 ug/m³		Maximum 24-Hour		Date of Maximum
	1978	1977	1978	1977	1978	1977	1978	1977	1978
El Cajon	38	25	0	2	0	0	141	152	1/26/78
Chula Vista	0	2	0	0	0	0	97	106	10/23/78
Escondido	29	41	2	7	0	0	167	168	12/22/78
S.D. Downtown	17	12	0	4	0	0	143	169	1/26/78
Oceanside	40	21	3	2	0	0	219	173	9/5/78
Kearny Mesa	21	2	9	0	3	0	345	100	10/23/78
Alpine	5	0	2	0	0	0	153	99	1/26/78
Brown Field[a]	---	2	---	0	---	0	---	115	---

a) Monitoring ended in 1977.

TABLE C-9

AMBIENT AIR QUALITY STANDARDS APPLICABLE IN CALIFORNIA

Pollutant	Averaging Time	California Standards	Federal Standards	
		Concentration	Primary	Secondary
Photochemical Oxidants (Measured as Ozone)	1 Hour	0.10 ppm (200 ug/m³)	160 ug/m³* (0.08 ppm)	Same as Primary Standard
Carbon Monoxide	12 Hours	10 ppm (11 mg/m³)	---	Same as Primary Standard
	8 Hours	---	10 mg/m³ (9 ppm)	
	1 Hour	40 ppm (46 mg/m³)	40 mg/m³ (35 ppm)	
Nitrogen Dioxide	Annual Average	---	100 ug/m³ (0.05 ppm)	Same as Primary Standard
	1 Hour	0.25 ppm (470 ug/m³)	---	---
Sulfur Dioxide	Annual Average	---	80 ug/m³ (0.03 ppm)	---
	24 Hours	.05 ppm in comb. w/ .10 ppm Ox or 100 ug/m³ TSP	365 ug/m³ (0.14 ppm)	---
	3 Hours	---	---	1300 ug/m³ (0.5 ppm)
	1 Hour	0.5 ppm (1310 ug/m³)	---	---
Suspended Particulate Matter	Annual Geometric Mean	60 ug/m³	75 ug/m³	60 ug/m³
	24 Hours	100 ug/m³	260 ug/m³	150 ug/m³
Lead (Particulate)	30-Day Average	1.5 ug/m³	1.5 ug/m³	---
Hydrogen Sulfide	1 Hour	0.03 ppm (42 ug/m³)	---	---
Hydrocarbons (Corrected for Methane)	3 Hours (6-9 a.m.)	---	160 ug/m³ (0.24 ppm)	Same as Primary Standard
Ethylene	8 Hour	0.1 ppm	---	---
	1 Hour	0.5 ppm	---	---
Visibility-Reducing Particles	1 observation	In sufficient amount to reduce the prevailing visibility to 10 miles when the relative humidity is less than 70%	---	---

*Federal standard changed in 1979 to 0.12 ppm.
ppm — Parts per million
ug/m³ — Micrograms per cubic meter

C-5

AIR QUALITY INFORMATION
PORT MASTER PLAN AREA
AQMP REGIONAL EMISSIONS TRENDS PROJECTIONS

PORT PLAN LAND USES IN AQMP

The Comprehensive Planning Organization (CPO) has developed a San Diego Air Quality Maintenance Plan (AQMP) adopted by CPO, the County and San Diego area cities, to achieve and maintain federal and state air quality standards throughout the San Diego Air Basin. For the preparation of the AQMP the Port District submitted to CPO the 1972 Port Master Plan land use designations. CPO utilized these land use designations from the Port and other jurisdictions, as well as population estimates from cities and the county, to determine activity centers and related air emissions projections for the AQMP. The intensity and distribution of the various land uses designated in the Port's proposed Master Plan have not substantially changed. The emissions projections for Port developments have therefore already been incorporated into the AQMP Emission Source Categories. The AQMP is available at the CPO reference library:

Comprehensive Planning Organization
1200 3rd Avenue
San Diego, CA 92101

The proposed Port Master Plan is fully accounted for in the AQMP. Project specific proposals need only be examined during subsequent environmental review, as appropriate, for "hot spots", or developments which are anticipated to be considerably higher than the standard emissions assumptions expressed in the AQMP.

DEVELOPMENT ASSUMPTIONS

The AQMP accounted for air emissions for specific activities anticipated to develop as generally allowed under various land use designations using the Regional Emissions Trends Projections. These projections identify five major Emission Source Categories including:

-Process Losses
-Fuel Combustion
-Air, Water, Rail Transportation
-Motor Vehicles
-Miscellaneous Sources

and corresponding Activity Indicator Assignments based upon:

-CPO Series IVB employment and population data
-California Department of Motor Vehicles registration projections
-CALTRANS transportation models ADT and VMT data
-CPO Regional Energy Plan gasoline consumption data
-CPO SANPAT annual operations data
-SDG&E energy sales and requirements forecasts

The proposed Port Master Plan includes 39 different uses which could generate air emissions at various levels from a variety of sources. All have been addressed for the San Diego Air Basin, in the five major Emission Source Categories and corresponding Activity Indicators of the AQMP, specifically in Table C-10, as follows:

Table C-10

PORT MASTER PLAN AREA
AQMP EMISSIONS SOURCE CATEGORIES
AND ACTIVITY INDICATORS

Emissions Source Category (and AQMP Identification Number)		Activity Indicator (and AQMP Indicator Code)	
PROCESS LOSSES			
ORGANIC LOSSES			
Industrical Surface Coating	(01)	Basic Employment	(11)
Architectural Surface Coating	(02)	Total Population	(13)
Marine Surface Coating	(03)	Shipbuilding	(03)
Surface Cleaning (Halogenated)	(04)	Shipbuilding, Aircraft	(03)
Surface Cleaning (Non-Halogenated)	(05)	Shipbuilding, Aircraft	(03)
INDUSTRIAL PROCESSES			
Commercial Manufacturing	(11)	Basic Employment	(11)
MINERAL PRODUCTS			
Abrasive Blasting Facility	(18)	Miscellaneous Non-Durables Employment	(05)
WOOD PRODUCTS			
Wood Products	(20)	Lumber	(10)
PETROLEUM PRODUCTS			
Fixed and Floating Roof Storage	(21)	Gasoline Consumption (gallons)	(29)
Marketing/Transfer	(22)	Gasoline Consumption (gallons)	(29)
FUEL COMBUSTION			
ENERGY GENERATION			
Electric Generation (Steam)	(23)	Electric Generation-Fossil Fuel	(34)
Electric Generation (Gas Turbine)	(24)	Electric Generation-Fossil Fuel	(34)
Boilers (Industrial)	(25)	Non-Residential Fossil Fuel Sales	(35)
(Commercial/Institutional)	(26)	Non-Residential Fossil Fuel Sales	(35)
Engine Testing	(27)	Aircraft, Shipbuilding	(03)

Table C-10 Continued

Emissions Source Category (and AQMP Identification Number)		Activity Indicator (and AQMP Indicator Code)	
AIR, WATER, AND RAIL TRANSPORTATION			
AIRCRAFT			
Commercial	(35)	Commerical Aircraft Annual Operations	(31)
General Aviation (Exhaust)	(36)	General Aviation Annual Operations	(32)
General Aviation (Evaporative)	(37)	General Aviation Annual Operations	(32)
SHIPS/BOATS			
Ships/Boats	(40)	Water Transportation Employment	(09)
MOTOR VEHICLES			
All Subcategories for Motor Vehicles	(41-62)	All Indicators for Motor Vehicles	(11,13,14-28)
MISCELLANEOUS SOURCES			
Structural Fires	(65)	Constant	(30)
Utility Equipment	(66)	Total Population	(13)
Construction/Demolition (Fugitive Dust)	(68)	Constant	(30)
Paved Roads (Fugitive Dust)	(69)	Constant	(30)

APPENDIX D

BIOLOGICAL RECONNAISSANCE SUMMARY

TECHNICAL REPORT

BIOLOGICAL RECONNAISSANCE OF SELECTED SITES OF SAN DIEGO BAY

SUBMITTED TO

SAN DIEGO UNIFIED PORT DISTRICT
ENVIRONMENTAL MANAGEMENT DEPARTMENT
P.O. BOX 488
SAN DIEGO, CALIFORNIA
ATTENTION: MR. TOMAS FIRLE

BY

LOCKHEED CENTER FOR MARINE RESEARCH
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CARLSBAD, CALIFORNIA 92008

MARCH 1979

D-1

EXECUTIVE SUMMARY

A biological reconnaissance study was conducted at six selected sites in San Diego Bay during January and February 1979. Sampling was primarily done with observations recorded by divers using SCUBA. Additional information was gathered on the biological organisms including fish, plankton (microscopic organisms living in the water), benthic organisms (organisms living on the bottom), and intertidal organisms (organisms living on the area exposed by low tides and covered by high tides) and on the physical characteristics including dissolved oxygen (amount of oxygen available for organisms in the water), pH (acidity or alkalinity of the water), temperature, salinity, turbidity (measured by the distance an oceanographic Secchi disc can be seen from the surface of the water), current speed and direction, and general observations of the area using appropriate sampling gear. The six study sites (Twenty-Fourth Street Marine Terminal, Chula Vista Boat Basin, Coronado Cays East Island, Coronado Bayfront, South San Diego Bay, and Commercial Basin) were selected by the San Diego Unified Port District as areas either sensitive to future development or where limited knowledge of the area exists. Within each site, sensitive resources such as fish populations, macrobiotic benthic communities, avifauna, and habitat areas were examined.

A total of 105 invertebrate, 13 algal, 1 marine flowering plant, 14 fish, 16 planktonic and 49 bird taxa were observed during this survey for all sites combined. The results for each specific site are summarized below following a general summarization of all sites.

The biological reconnaissance identified several areas of thriving eel grass (*Zostera marina*) beds which are used as feeding areas for avifauna and are potential fish nursery areas. The most extensive eel grass beds observed were found in the southern area at Coronado Bayfront (Figure 2) in the southern area of San Diego Bay near the western and southern shores (Figure 1), in the Sweetwater delta area south of the 24th Street Channel, and in the Crown Cove area.

Size ranges of fish caught in otter trawls and beach seines (Table 4) show the presence of few juvenile or small fish in any area, although the South Bay plankton tows showed that small fish larvae (gobiid) were present. These results are expected since this survey was conducted during winter when recruitmen to populations is usually at its lowest, although some fish such as gobies spawn throughout the year. For the most part, abundances of each species captured were low with the exception of abundances for the round stingray (*Urolophus halleri*) in two trawls, the slough anchovy (*Anchoa delicatissima*) in three trawls, and the topsmelt (*Athernops affinis*) in two beach seines. In general, the commercially important species encountered were the atherinids (*Athernops affinis* and *Atherinopsis californiensis*), the anchovies (*Engraulis mordax, Anchoa delicatissima,* and *Anchoa compressa*), and the queenfish (*Seriphus politus*) as baitfish. Recreationally favored species captured were the spotted sand bass (*Paralabrax maculatofasciatus*), the barred sand bass (*Paralabrax nebulifer*), the California halibut (*Paralichthys californicus*), and the California grunion (*Leuresthes tenuis*), none in high abundances.

Several areas showed moderate to heavy use by avifauna. These were primarily found in the southern reaches of San Diego Bay. In general, the areas of highest abundance of avifauna appeared to be associated with eelgrass beds. For example, the southern San Diego Bay area had large areas of eelgrass and birds appeared to be associated with it. Similar observations were seen in the area south of the 24th Street channel and the Coronado Bayfront area immediately north of the Coronado Bridge.

The physical water parameters recorded in each of the sites indicated that temperature increased from the northern areas of the bay to South Bay probably due to warming from the sun in the shallows with some additional thermal input from the SDG&E power plant. Turbidity was variable throughout the bay. Dissolved oxygen levels were fairly high with no evidence of oxygen deficient areas. Salinity was low, undoubtedly due to the heavy rains in the area prior to and during the survey. In general, these parameteres were not unusual for a bay study conducted during the weather conditions such as those experienced.

The Twenty-Fourth Street site (Site I) was physically characterized by two different areas: the area adjacent to the marine terminal, north of the Twenty-Fourth Street Channel, and the area south of the Twenty-Fourth Street Channel, including adjacent areas in the Bay. Biological study areas north of the Channel were generally considered disturbed despite the presence of eelgrass (*Zostera marina*) beds in the area. These beds were limited to their present size by a steeply sloping bottom which reduces the acceptable habitat area. Otter trawl species composition in the area was similar to that in other areas of San Diego Bay during this study. Few avifauna were noted in the northern area during the investigation.

The area south of the Twenty-Fourth Street Channel was characterized by intertidal and subtidal mudflats. It was considered a prime area for usage by waterfowl as a foraging and resting area. The Sweetwater River Delta area appeared to be the only eastern bayshore area with extensive patches of eelgrass. Biological fauna were abundant in this area. Also observed were the potentially disruptive influences of offroad vehicle activity in the upper intertidal areas.

The Chula Vista Boat Basin site (Site II) was composed of soft mud bottom intertidal and subtidal areas, except for the dredged channels and the existing dikes of the boat basin. Avifauna utilized the area in a manner similar to the Sweetwater delta area near Twenty-Fourth Street Channel, but the observed numbers

were lower. Feeding activity was particularly evident in the eelgrass beds west and south of the basin. Eelgrass was abundant at only one of the four benthic stations sampled. Reconnaissance of the site identified additional patches of eelgrass. Otter trawls and beach seines captured species similar to those collected elsewhere in South Bay. The overwhelming abundance of the round stingray (*Urolophus halleri*) in the trawl taken in the J Street channel was different from the other South Bay trawls except the trawl conducted in the SDG&E intake channel. The cause of their high abundance is not known.

The Coronado Bayfront site (Site III) also was composed of two different types of areas. The southern area consisted of shallow mudflats while the northern had an increased slope to deeper water. Only slight usage of the shoreline by avifauna was noted. Offshore, the southern area was characterized by large amounts of the eelgrass *Zostera marina* which were utilized by shorebirds and waterfowl. The northern area showed evidence of site disturbance by dredging and habitat alteration by the addition of manmade debris such as submerged boat and pier wreckage. Fish caught by one beach seine and one otter trawl were similar to those caught in the south San Diego Bay sampling. High abundances of some species indicate that the southern area may be important as a feeding ground for fish. The importance of this area, with respect to value as a nursery, cannot be evaluated from this data alone. Sampling for plankton populations, particularly during the spring, in conjunction with continued and increased fish investigations would provide a better basis for such an evaluation.

The Coronado Cays East Island site (Site IV) had deeper nearshore water than other areas in South Bay. Consequently, little eelgrass was observed. The small areas of eelgrass present were used by avifauna for feeding, but overall the area was used by few species. The water in the marina was found to offer

a sheltered resting location for a small number of ducks (Lesser scaup, *Aytha affinis*). The otter trawl taken in South Bay in close proximity to Site IV was similar to other trawls taken along the western side of South Bay with respect to species composition and abundance.

The South San Diego Bay site (Site V) was the largest of the sites studied. It included extensive tidal mudflats and large areas of shallow subtidal areas. The physical characteristics were similar to those normally expected in this type of area when the weather is taken into account. Recent heavy rains undoubtedly caused a drop in the salinity of the bay water and a higher than normal turbidity level during the survey period. Temperatures in the southernmost areas of the bay were found to be higher than elsewhere in the bay. This was apparently caused by the thermal discharge from the SDG&E power plant. The discharge also causes an artificial current in the areas near the discharge channel mouth.

Several navigational hazards were located during reconnaissance. The most visible was the presence of the tuna vessel, "Renown," in the northern area of South Bay. Several derelict barges were present along the SDG&E dike. These were submerged at tides higher than 0.0 MLLW.

This site, in particular the south end of San Diego Bay, is extensively used for foraging and resting by large numbers of birds. Of the areas surveyed, this is regarded as the best available avifaunal habitat. Large areas of eelgrass are available for feeding. It is adjacent to the salt ponds immediately to the south, which serve as a protected area for retreat. Adjacent to the South Bay site are areas of recognized biological significance: the County of San Diego South Bay Marine Biology Study area nesting area for the endangered Belding's Savannah Sparrow (*Passerculus sandwichensis beldingii*) and Western Salt Company's evaporation ponds which include dikes used seasonally as habitat by the endangered California Least Tern, *Sterna albifrons browni*. Neither of these endangered birds was observed during the study.

The South San Diego Bay site encompassed a large number of eelgrass beds. Areas of particularly heavy eelgrass growth were the shallow subtidal areas around the Sweetwater River delta, the southernmost area of South Bay to the west of the Emory Channel, the Crown Cover area, the southern South Bay area near the County's South Bay Marine Biology study area, and an area north of Coronado Cays and east of the adjacent boat channel (Figure 1).

The marine macrofauna (larger marine animals) was similar to that reported in previous studies (MBC 1976). No subtidal infaunal (marine animals living within the bottom sediment) observations were made and thus the infaunal composition is not known. This area has been extensively sampled in the past in relation to the SDG&E power plant (Ford 1970, Ford 1973, LCMR 1977, LCMR 1978).

Fish species, sampled by otter trawl, were similar throughout South Bay. The most abundant species were the round stingray (*Urolophus halleri*) and the slough anchovy (*Anchoa delicatissima*). Several species of recreational interest were caught in moderate to low abundances. These were the California halibut (*Paralichthys californicus*), the barred sand bass (*Paralabrax nebulifer*), and the spotted sand bass (*Paralabrax maculatofasciatus*).

Midwater plankton tows (fine mesh pulled behind) did not capture any fish eggs although some larval (just hatched) fish were caught. The most abundant icthyoplankton (fish eggs and larvae) was a complex of gobiid (tiny pencil shaped bottom fishes) fish larvae which included cheekspot goby (*Ilypnus gilberti*), arrow goby (*Clevelandia ios*), and shadow goby (*Quietula y-cauda*). No larvae of recreationally and commercially important species were collected during this survey (January 1979).

The Commercial Basin (Site VI) differs considerably from the other sites. It is characterized by piers used primarily for boat maintenance and construction. Macrofauna (larger marine animals) were present in low numbers in both the intertidal and the subtidal soft substrate areas. Solid substrate, such as the

broken concrete intertidal seawall and the pier pilings, exhibited some macrobiotic organisms. Among those observed were the gastropods (marine snails) which included the rough limpet *Collisella scabra* and a tube worm attached to rocks and pilings *Serpulorbis squamigerus*, the brown alga *Sargassum* (*Sargassum muticim*), and a diatom film. Subtidal reconnaissance indicated that the bottom areas were nearly devoid of surface macrofauna near the piers, but as the mouth of the Commercial Basin was approached, a brown alga *Pachydictyon* sp. increased in abundance and size, and the bottom graded to sand/mud rather than mud, and additional species such as the whelk *Kelletia kelletii* and gobiid fish became more abundant.

The pier pilings investigated did not exhibit evidence of complete deterioration, although shipworm damage did appear on some of the older wooden pilings. It must be noted that only a small number of pilings were investigated for damage because the primary purpose of this study was to conduct a biological reconnaissance of the area. Avifaunal observations in the commercial basin indicate that the area habitat value for most species of birds is generally limited as the majority of species were gulls (*Laurus* spp.).

TABLE D-1

Select physical parameters measured at each site for the San Diego Bay biological reconnaissance study.

SITE	STATION	DATE	TIME	DEPTH (m)	SURFACE TEMP.(°C)	DO.(ppm)	SURFACE SALINITY (ppt)	TURBIDITY SECCHI(m)	CURRENT SPEED KTS.	CURRENT DIRECTION °M	TIDAL STAGE
24th Street Channel	24-2-B	1-24-79	1415	11	15.0	8.3	32.8	2.0	0.10	250°	rising
24th Street Channel	24-1-B	1-24-79	0840	5	15.4	7.1	32.7	3.3	0.50	160°	falling
24th Street Channel	24-3-B	2-9-79	0903	2.2	14.3	8.4	31.0	1.5	0.32	360°	falling
24th Street	24-4-B	2-9-79	0845	2.8	14.3	8.5	30.6	1.5	0.14	360°	falling
Sweetwater Delta	24-5-B	2-9-79	0833	2.3	14.6	8.5	31.7	1.5	0.14	360°	falling
Commercial Basin	CB-2-B	2-6-79	0800	3.5	12.8	8.8	31.6	4.5	0.12	280°	falling
Commercial Basin	CB-1-B	2-6-79	0835	1.2	12.8	8.4	31.7	2.0	0.30	70°	falling
Chula Vista	CV-1-B	1-22-79	1030	1.3	14.9	7.3	32.8	1.3	0.20	90°	1-23-79 1335 incoming
Chula Vista	CV-2-B	1-22-79	0800	2.5	14.9	7.6	33.3	1.6	0.10	140°	1-23-79 1345 incoming
Chula Vista	CV-3-B	1-22-79	0815	2.0	15.3	8.2	33.3	1.5	0.04	180°	1-23-79 1350 incoming
Chula Vista	CV-4-B	1-23-79	0845	1.6	15.1	7.3	33.3	1.3	0.15	160°	1400 hrs incoming
Coronado Bay Front	CBF-3-B	2-6-79	0935	4.0	13.0	8.9	31.6	2.5	0.35	305°	falling

TABLE D-1 CONTINUED

Select physical parameters measured at each site for the San Diego Bay biological reconnaissance study. (continued)

SITE	STATION	DATE	TIME	DEPTH (m)	SURFACE TEMP.(°C)	DO (ppm)	SURFACE SALINITY (ppt)	TURBIDITY SECCHI(m)	CURRENT SPEED(KTS)	CURRENT DIRECTION (°M)	TIDAL STAGE
Coronado Bay Front	CBF-2-B	2-6-79	1015	1.3	13.0	9.1	31.4	1.3	0.12	305°	falling
Coronado Bay Front	CBF-1-B	2-6-79	1040	1.3	13.1	8.8	31.5	1.3	0.06	180°	falling
Crown Point	CR-1-B	2-9-79	0913	2.1	14.2	8.4	30.9	1.75	0.14	030°	falling
Crown Point	CR-2-B	2-9-79	0920	2.3	14.2	8.4		1.75	0.06	290°	falling
Coronado Cays	CC-1-B	1-23-79	1440	2.8	15.5	7.9	31.1	1.6	0.16	140°	rising
Coronado Cays	CC-2-B	1-24-79	1650	2.8	15.3	7.8	33.3	1.5	0.0	NA	rising
South Bay West	SB-West	2-9-79	0940	2.1	16.5	8.3	30.2	1.5	.08	340°	falling
South Bay Mid-depth	SBM-1-B	2-9-79	1030	1.8	18.5	7.5	32.1	1.5	.17	350°	falling
South Bay Mid-depth	SBM-2-B	2-9-79	1015	2.2	18.3	7.5	32.0	1.5	.25	335°	falling
SDG&E Intake	SDGE-I-B	2-7-79	0955	2.5	15.1	8.4	29.9	1.5	.20	270°	falling
SDG&E Discharge	SDGE-D-2	2-7-79	1042	2.6	22.6	5.3	30.9	1.2	.60	260°	falling
SDG&E Discharge	SDGE-D-1	2-7-79	1030	3	23.0	5.2	30.8	1.5	.60	250°	falling

TABLE D-2

Benthic macrofauna present in greater than 50% of the quadrats at each of the 15 m benthic band transects.

	Site 1					Site 2				Site 3			Site 4		Site 5					Site 6	
	Twenty-Fourth Street					Chula Vista Boat Basin				Coronado Bayfront			Coronado Cays		Crown Cove		South Bay		SDG&E Intake	Commercial Basin	
TAXA	1	2	3	4	5	1	2	3	4	1	2	3	1	2	1	2	1	2		1	2
Algae																					
Chaetomorpha spp.																+		+	+		
Gracilaria spp.		+	+	+		+	+	+	+									+	+		
Sargassum muticum											+										+
Ulva spp.	+		+		+	+	+									+	+	+			
Filamentous red, unident			+			+	+						+		+	+					
Parvosilvosa	+																				
Marine Grasses																					
Zostera marina				+					+	+	+				+	+		+			
Zostera marina (drift)													+								
Diatoms, unident	+	+	+						+	+	+					+	+	+			
Cnidaria																					
Diadumene ? leucolena	+					+	+	+					+		+	+	+	+			
Cerianthid, unident													+								
Porifera																					
Poriferan, unident									+							+					
Annelida																					
Onuphid, unident											+										
Sabellid, unident		+			+							+						+			
Serpulid, unident		+																			
Polychaete, unident												+									
Arthropoda																					
?Jassa spp. (tubes)																			+		
Caprellids, unident																		+	+		
Mysids, unident		+							+												
Mollusca																					
Adula diegensis	+			+				+		+		+									
Bulla spp.								+					+								
Crepidula spp.	+																				
Mytilus edulis	+																				
Nassarius spp.											+										
Urochordata																					
Styela clava																			+		
Unidentifiable																					
Maintained holes										+	+	+				+	+	+	+	+	+

TABLE D-3

Species and their respective abundances and size ranges (mm)
captured in otter trawls conducted in the Twenty-fourth Street Channel,
Chula Vista Boat Basin, Coronado Bayfront, Coronado Cays and South Bay Sites.

Area Location	2 CV-South	2 CV-North	5 SDG&E Channel	5 Emory Channel	5 Crown Cove	4 Coronado Cays	3 Coronado Bayfront	1 24th Street Channel
Depth	2.5-3m	5m			3m	2.5-3m	5-7m	11m
Date	1-25-79	1-26-79	1-26-79	1-26-79	1-25-79	1-25-79	1-25-79	
Time	1120	1253	0757	0720	0924	1013	0829	
Atherinops affinis - topsmelt	2(150-160)							
Anchoa delicatissima -slough anchovy	37(42-58)	244(34-57)	24(35-60)	11(33-50)				14(49-56)
Anchoa compressa- deep body anchovy			1(98)					
Engraulis mordax - northern anchovy			1(62)					
Cymatogaster aggregata - white surf-perch		2(78-112)	2(34-111)			1(115)		10(80-120)
Seriphus politus - Queenfish	3(177-195)	2(187-190)	3(85-100)	2(85-90)				
Peprilus simillimus - Pacific Butterfish				9(85-100)	2(85-90)			

TABLE D-3 CONTINUED

Area Location	2 CV-South	2 CV-North	5 SDG&E Channel	5 Emory Channel	5 Crown Cove	4 Coronado Cays	3 Coronado Bayfront	1 24th Street Channel
Depth	2.5-3m	5m			3m	2.5-3m	5-7m	11m
Date	1-25-79	1-26-79	1-26-79	1-25-79	1-25-79	1-25-79	1-25-79	
Time	1120	1253	0757	0720	0924	1013	0829	
Quietula y-cauda - Shadow Goby	5(39-45)	3(28-31)	2(28-35)					
Porichthys myriaster - slim midshipman-		5(30-49)						2(210-48)
Chlorophyta - green algae			+	+				
Rhodophyta - red algae			+	+	+	+		
Porifera - sponges						+	+	
Annelida - segmented worms							+	
Arthropoda -	+	+	+	+	+		+	+
Mollusca -	+	+	+	+		+	+	+
Urochordata - Tunicates							+	

TABLE D-3 CONTINUED

Area Location Depth Date Time	2 CV-South 2.5-3m 1-25-79 1120	2 CV-North 5m 1-25-79 1253	5 SDG&E Channel 1-26-79 0757	5 Emory Channel 1-26-79 0720	5 Crown Cove 3m 1-25-79 0924	4 Coronado Cays 2.5-3m 1-25-79 1013	3 Coronado Bayfront 5-7m 1-25-79 0829	1 24th Street Channel 11m
Cheilotrema saturnum - black croaker						1(285)		
Genyonemus lineatus - white croaker								2(226-203)
Paralabrax maculatofasiatus -spotted sand bass	4(185-290)		2(204-235)	3(157-175)	9(122-180)	1(275)	2(180-220)	1(45)
Paralabrax nebulifer barred sand bass	1(168)	2(105-205)	2(134-293)	3(53-155)	2(160-190)	1(150)		3(65-180)
Paralichthys californicus - California halibut	8(124-266)	5(75-185)	3(129-216)	3(155-200)	6(165-240)	6(150-210)	1(240)	6(30-228)
Hypsopsetta guttulata- Diamond Turbot	2(185-220)		7(141-195)		3(195-230)	1(225)	2(170-185)	
Ilypnus gilberti- checkspot goby		2(20-28)						11(21-34)
Urolophus halleri - round stingray	208(120-403)	1(280)	126(131-378)	1(300)	10(130-325)	5(190-270)	1(280)	7(110-153)

TABLE D-4

Species composition and abundance of avifauna observed at each of six sites in San Diego Bay (Site 1 - Twenty-Fourth Street Marine Terminal and areas adjacent to the Twenty-Fourth Streedt Channel, Site 2 - Chula Vista Boat Basin, Site 3 - Coronada Bay Front, Site 4 - Coronado Cays East Island, Site 5 - South San Diego Bay, Site 6 - Commercial Basin).

SPECIES		AREA					
Common Name	Scientific Name	1	2	3	4	5	6
Common Loon	-*Gavia immer*						2
Artic Loon	-*Gavia arctica*						1
Horned Grebe	-*Podiceps auritus*		1				1
Eared Grebe	-*Podiceps nigricollis*	10	3	1		40	24
Western Grebe	-*Aechmophorus occidentalis*	8				150	2
Brown Pelican	-*Pelecanus occidentalis*			2			
Double-crested Cormorant	-*Phalacrocorax auritus*	5		2		10	2
Great Blue Heron	-*Ardea herodias*	1				1	
Great Egret	-*Casmerodius albus*						1
Snowy Egret	-*Egretta thula*	2	2	1			1
Brant	-*Branta bernicla nigricans*	125	75				
Pintail	-*Anas acuta*		10			60	
Cinnamon Teal	-*Anas cyanoptera*	10				6	
Lesser Scaup	-*Aythya affinis*	400	175	220	35	450	
Common Goldeneye	-*Bucephala clangula*	2					
Bufflehead	-*Bucephala albeola*	8	6	10	1	250	3
Surf Scoter	-*Melanitta perspicillata*	1200	175	210		800	75
Ruddy Duck	-*Oxyura jamaicensis*		9				25
Red-breasted Merganser	-*Mergus serrator*	1					3
Osprey	-*Pandion haliaetus*	1				1	
American Coot	-*Fulica americana*	25	12			140	
American Avocet	-*Recurvirostra americana*	10					
Semi-palmated Plover	-*Charadrius semipalmatus*	20	6			24	
Snowy Plover	-*Charadrius alexandrinus*	37					
Killdeer	-*Charadrius vociferus*	18	3			12	
Black-bellied Plover	-*Pluvialis squatarola*	180	6	6	1		
Marbled Godwit	-*Limosa haemastica*	300	45	80	7	35	
Whimbrel	-*Numenius phaeopus*	6	1				

TABLE D-4 CONTINUED

SPECIES		AREA					
Common Name	Scientific Name	1	2	3	4	5	6
Long-billed Curlew	*-Numenius americanus*	12	1	3			
Greater Yellowlegs	*-Tringa melanoleucus*			1			
Willet	*-Catoptrophorus semipalmatus*	150	45	30	1	100	1
Ruddy Turnstone	*-Arenaria interpres*	6		1			
Black Turnstone	*-Arenaria melanocephala*	30	1		1	30	
Long-billed Dowitcher	*-Limnodromus scolopaceus*	450	120			75	
Red Knot	*-Calidris canutus*	25				1	
Sanderling	*-Calidris alba*	60	35	60		30	
Western Sandpiper	*-Calidris mauri*	350	160			275	
Least Sandpiper	*-Calidris minutilla*	150	20			18	
Dunlin	*-Calidris alpina*	60	12			23	
Western Gull	*-Larus occidentalis*	30	55	6	1	20	30
California Gull	*-Larus californicus*	60	10				
Ring-billed Gull	*-Larus delawarensis*	475	230	18	3	140	2
Bonaparte's Gull	*-Larus philadelphia*	30	7	2			
Forster's Tern	*-Sterna forsteri*	10	4	2	1	12	
Royal Tern	*-Thalasseus maximus*	10		4		3	
Caspian Tern	*-Hydroprogne caspia*	1	3				1
Black Skimmer	*-Rynchops nigra*					1	
Belted Kingfisher	*-Magaceryle alcyon*	2	1			2	
Savannah Sparrow	*-Passerculus sandwichensis*			8			

TABLE D-5

Species of fish captured by beach seines and their abundances and size ranges within three sites: Chula Vista Boat Basin (2), Coronado Bayfront (3), and South San Diego Bay (5).

Species - Common Name	Site 2 Chula Vista-South	Site 2 Chula Vista-North	Site 3 Coronado Bayfront	Site 5 South Bay Emory Channel	Site 5 South Bay Crown Cove
Atherinops affinis - topsmelt	130 (20-141 mm)	13 (32-74 mm)	370 (28-157 mm)	8 (103-156 mm)	10 (27-51 mm)
Atherinopsis californiensis - jacksmelt				6 (45-306 mm)	8 (57-202 mm)
Leuresthes tenuis - California grunion	3 (62-78 mm)		11 (37-114 mm)		
Engraulis mordax - northern anchovy			1 (89 mm)		
Hypsopsetta guttulata - diamond turbot			1 (118 mm)		
Syngnathus spp. - pipefish	2 (104-107 mm)		1 (111 mm)		1 (81 mm)
Mugil cephalus - mullet			1 (34 mm)	2 (385-469 mm)	
Quietula y-cauda - shadow goby			3 (32-38 mm)		3 (24-35 mm)

TABLE D-6
Icthyo- and zooplankton species and estimated abundances for three bongo tows taken in South San Diego Bay on January 26, 1979.

	CHULA VISTA SOUTH		SOUTH BAY MID		SOUTH BAY WEST	
SIZE	<5mm	5-10mm	<5mm	>5mm	<5mm	5-10mm
Icthyoplankton						
Gobiid species complex	544.0	16.0	3,248.0	557.0	510.0	134.0
Hypsoblennius spp.	4.0					
Gillichthys mirabilis	4.0		8.0			
Genyonemus lineatus			24.0			
Clinid, unident.			8.0			
	$\bar{x}$	SE	$\bar{x}$	SE		
Zooplankton						
Acartia californiensis	52,139.3	35,200.7	5,032.4	273.9	9,066.5	790.5
Acartia clausi	87.3	87.3				
Labidocera trispinosa copepodites			60.9	24.4		
Paracalanus parvus			12.0	12.0		
Podon polyphemoides			12.0	12.0		
Sagitta spp.	87.3	87.3	48.5	12.0		
Tortanus discaudatus	175.7	100.6	60.9	32.1		
Decapod zoea	13,101.0	559.8	1,887.2	22.4	216.5	44.0
Decapod larvae	616.7	352.0	3,063.2	44.9	616.5	44.0
Mysids, unident.	616.7	177.3			233.5	16.5
Amphipods, unident.	265.0	153.5	109.4	42.0	200.0	29.0

APPENDIX E

SPECIES LISTS

BIOLOGICAL HABITAT INFORMATION

TABLE E-1

LIST OF PLANTS AND MARINE ANIMALS
SAN DIEGO BAY

Source: A Proximate Biological Survey of San Diego Bay, Ca. T.J. Peeling, NUC TP 389, 1974, p. 52-54

A. Algae and Salt Marsh Plants

Amblyapappus pusillus (coast weed)
Antithamnion sp. (red algae)
Artemisia californica (California sagebrush)
Atriplex canescens (salt bush)
A. lindleyi (salt bush)
A. semibaccata (Australian salt bush)
A. (nr) truncata (salt bush)
A. watsonii (Watson salt bush)
Baccharis sarothroides (chaparral broom)
B. viminea (mule fat)
Bassia hyssopifolia (bassia)
Batis maritimun (saltwart)
Bromus rubens (red brome)
Cardionema ramossisima (tread lightly)
Centaurea melitensis (star thistle)
Ceramium catonian (red algae)
C. spp. (red algae)
Chaetomorpha sp. (green algae)
Chrysanthemum (nr) carinatum (tricolar chrysanthemum)
Cladophora sp. (green algae)
Colpomenia sinusa (brown algae)
Cotula coronopifolia (brass buttons)
Cressa truxillensis (alkali weed)
Cuscuta salina (salt marsh dodder)
Dasya pacifica (red algae)
Derbesia marina (green algae)
Distichlis spicata (salt grass)
Ectocarpus spp. (brown algae)
Egregia laevigata (brown algae)
Enteromorpha spp. (filamentous green algae)
Eriogonum fasciculatum (coastal buckwheat)
Foeniculum vulgare (sweet fennel)
Frankenia palmeri (yerba reuma)
F. grandifolia (alkali health)
Gigartina spp. (red algae)
Gracilaria verrucosa (red algae)
Griffithsia sp. (red algae)
Haplopappus venetus (golden bush)
Hardeum murinum (sterile barley)
Heliotropium curassavicum (Chinese parsley)
Heterotheca grandiflora (telegraph weed)
Honanthochloe littoralis (salt cedar)
Hutchinsia procumbens
Hypnea valentiae (red algae)
Jaumea carnosa (jaumea)
Juncus acutis (spiny rush)
Limonium californicum (sea lavender)
Lobularia maritima (sweet allypsum)
Lotus nuttallianus (beach lotus)
Mesembryanthemum chilense (sea fig)
M. crystallinum (ice plant)
M. nodiflorum (little ice plant)
Nemocaulis denudata (thread stem)
Nicotiana glauca (tree tobacco)
Oenothera cheiranthifolia (beach evening primrose)
Parafolis incurva (sickle grass)
Pluchea sericea (arrow weed)
Polygonum aviculare (common knot weed)
Polypogon monspeliensis (rabbit foot grass)
Polysiphonia pacifica (red algae)
Rhizoclonium sp. (green algae)
Rhodymenia spp. (red algae)
Rumex crispus (curley dock)
Ruppia maritima (ditch grass)
Salicornia bigelovii (animal pickleweed)
S. europea (saltflat annual pickleweed)
S. subterminalis (glasswart)
S. virginica (pickleweed)
Salix lasiolepis (arroyo willow)
Salsola kali (Russian thistle)
Salvia mellifera (black sage)
Saueda torreyana (torry seablite)
S. californica (California seablite)
Sargassum muticum (brown algae)
S. agarhianum (brown algae)
Schinus molle (California pepper tree)
Spartina foliosa (cordgrass)
Spergularia marina (salt marsh sand spurry)
Tamarix sp. (tamarisk)
Tillaea erecta (pigmy weed)
Triglochin maritima (arrow grass)
Typha latifolia (common cattail)
Ulothrix sp. (green algae)
Ulva latissima (sea lettuce)
Yucca schidigera (Mohave yucca)
Zostera marina (eelgrass)

B. Marine Invertebrates

Porifera
Tetilla mutabilis (wandering sponge)

Coelenterates
Aglaophenia sp. (ostrich plume hydroid)
Cerianthus (nr) aestuari (burrowing anemone)
Corymorpha palma (white hydroid)
Edwardsiella californica (burrowing anemone)
Epiactis prolifera (anemone)
Obelia sp. (hydroid)
Tubularia sp. (naked hydroid)

Bryozoans
Bugula neritina (bryozoan)
Zoobotryon verticillatum (bryozoan)

Echinoderms
Ophiuroids
Amphiodia (nr) occidentalis (brittle star)
Holothuroids
Leptosynapata albicans (Southern California sea cucumber)

TABLE E-1 CONTINUED

B. Marine Invertebrates (cont.)

Annelids

Armandia bioculata (polychaete)
Capitata ambiseta (polychaete)
Glycera americana (polychaete)
Haploscolopos elongatus (polychaete)
Lumbrineris californiensis (polychaete)
L. zonata (polychaete)
Megalomma sp. (polychaete)
Neanthes caudata (polychaete)
Polydora sp. (polychaete)

Molluscs

Pelecypods

Adula diegensis (San Diego peapod)
Chione californiensis (banded cockle)
C. fluctifraga (smooth cockle)
C. undatella (wavy cockle)
Chionista sp.
Cyclocardia sp. (cardita)
Diplodonta sp. (diplodon)
Laevicardium substriatum (eggshell clam)
Leptopecten sp. (scallop)
Lyonsia californica (California lyonsia)
Macoma nasuta (bent-nosed clam)
Mactra californica (California dish clam)
Modiolus demissus (ribbed mussel)
Mytilus edulis (bay mussel)
Protothaca staminea (common littleneck)
Solen rosaceus (rosy razor clam)
Tagelus californianus (jackknife clam)
T. subteres (jackknife clam)
Tapes semidecussata (Japanese littleneck)
Tellina bodegensis (tellin)
Tivela sp. (venus clam)
Schizothaerus nuttalli (gaper)

Gastropods

Acteocina mazdalenensis (glassy bubble)
A. inculta (bubble shell)
Barleela sp.
Bulla gouldiana (Gould's bubble)
Caecum californicum (California caecum)
Cerithidea californica (California horn shell)
Crepidula onyx (onyx slipper shell)
Crucibulum spinosum (cup and saucer limpet)
Fartulum occidentale (caecid)
Haminaea vesicula (blister paper bubble)
Lacuna marmorata (chink shell)
Mitrella carinata (dove shell)
Nassarius tegulus (mud-dog whelk)
Odostomia sp. (odostome)
Olivella sp. (olive shell)
Ophiodermella ophioderma (penciled turret shell)
Tachyrhynchus sp. (turret shell)
Vitrinella oldroydi (vitrinella)
Vitrinorbis diegensis (vitrinorbis)

Crustaceans

Amphipods

Ericthonius brasiliensis (corophid amphipod)

Isopods

Cilicaea sculpta (sphaeromid isopod)
Sertolis carinata (isopod)

Decapods

Cancer antennarius (common rock crab)
C. anthonyi (rock crab)
Hemigrapsus oregonensis (mudflat crab)
Hippolyte californiensis (grass shrimp)
Lophopanopeus sp. (xanthid crab)
Panulirus interruptus (California spiny lobster)
Processa canaliculata (crangonid shrimp)
Pugettia producta (kelp crab)
Pyromaia tuberculata (spider crab)
Speocarcinus californiensis (mudflat crab)
Spirontocaris sp. (shrimp)

Stomatopods

Pseudosquilla sp. (mantis shrimp)
Squilla polita (mantis shrimp)

Cirripeds

Balanus amphitrite (acorn barnacle)
Chthamalus sp. (barnacle)

Tunicates

Botryllus sp. (tunicate)
Clona intestinalis (tunicate)
Styela barnharti (tunicate)
S. plicata (tunicate)

C. Vertebrates

Sharks and Rays

Heterodontidae

Heterodontus francisci (horn shark)

Triakidae

Triakis semifasciata (leopard shark)
Rhinotriacis henlei (brown smoothhound)
Mustelus californicus (gray smoothhound)
M. lunulatus (sicklefin smoothhound)

Carcharhinidae

Galeorhinus zyopterus (soupfin shark)
Prionace glauca (blue shark)

Sphyrnidae

Sphyrna zygaena (hammerhead shark)

Squalidae

Squalus acanthias (dogfish)

Squatidae

Squatina squatina (angel shark)

Rhinobatidae

Rhinobatus productus (shovelnose guitarfish)
R. exasperatus (guitarfish)
R. triseriatus (guitarfish)

Dasyatidae

Urolophus halleri (round stingray)

Teleost Fishes

Engraulidae

Anchoa compressa (deepbody anchovy)
A. delicatissima (slough anchovy)

Belonidae

Strongylura exilis (California needlefish)

TABLE E-1 CONTINUED

C. Vertebrates (cont.)

Cyprinodontidae
- *Fundulus parvipinnis* (killifish)

Hemiramphidae
- *Hyporhamphus rosae* (California halfbeak)

Syngnathidae
- *Syngnathus auliscus* (barred pipefish)
- *S. griseolineatus* (bay pipefish)

Sphyraenidae
- *Sphyraena argentea* (California barracuda)

Mugilidae
- *Mugil cephalus* (mullet)

Atherinidae
- *Atherinops affinis* (topsmelt)
- *Atherinopsis californiensis* (jacksmelt)
- *Leuresthes tenuis* (grunion)

Serranidae
- *Paralabrax clathratus* (kelp bass)
- *P. maculatofasciatus* (spotted bass)
- *P. nebulifer* (sand bass)

Haemulidae
- *Anisotremus davidsonii* (sargo)

Sciaenidae
- *Cheilotrema saturnum* (black croaker)
- *Cynoscion nobilis* (white seabass)
- *Genyonemus lineatus* (white croaker)
- *Menticirrhus undulatus* (California corbina)
- *Roncador stearnsii* (spotted croaker)
- *Seriphus politus* (queenfish)
- *Umbrina roncador* (yellowfin croaker)

Kyphosidae
- *Hermosilla azurea* (zebraperch)

Girellidae
- *Girella nigricans* (opaleye)

Scorpididae
- *Medialuna californiensis* (halfmoon)

Embiotocidae
- *Cymatogaster aggregata* (shiner surfperch)
- *Embiotoca jacksoni* (black surfperch)
- *Hyperprosopon argenteum* (walleye surfperch)
- *Phanerodon furcatus* (white surfperch)
- *Rhacochilus toxotes* (rubberlip surfperch)
- *R. vacca* (pile surfperch)

Carangidae
- *Trachurus symmetricus* (jack mackerel)

Scombridae
- *Sarda chiliensis* (Pacific bonito)

Stromateidae
- *Peprilus semillimus* (Pacific butterfish)

Blenniidae
- *Hypsoblennius gentilis* (bay blenny)

Gobiidae
- *Clevelandia ios* (arrow goby)
- *Gillichthys mirabilis* (longjaw mudsucker)
- *Ilypnus gilberti* (checkspot goby)
- *Quietula y-cauda* (shadow goby)

Clinidae
- *Heterostichus rostratus* (giant kelpfish)

Scorpaenidae
- *Scorpaena guttata* (sculpin)

Cottidae
- *Leptocottus armatus* (staghorn sculpin)
- *Scorpaenichthys marmoratus* (cabezon)

Bothidae
- *Paralichthys californicus* (California halibut)
- *Xystreurys liolepis* (fantail sole)

Pleuronectidae
- *Hypsopsetta guttulata* (diamond turbot)

Batrachoididae
- *Porichthys myriaster* (specklefin midshipman)

TABLE E-2

LIST OF BIRDS
SAN DIEGO BAY

Source: A Proximate Biological Survey of San Diego Bay, Ca. T.J. Peeling, NUC TP 389, 1974, p. 55-60.

Gavia immer (common loon)	M, WR. Uncommon. Feeds largely on fish in shallow to moderate depths.
G. artica (Arctic loon)	M, WR. Uncommon in bay, abundant offshore. Feeding habits similar to common loon.
G. stellata (red-throated loon)	M, WR. Occurs annually in small numbers but only at mouth of bay; prefers open ocean.
Podiceps auritus (horned grebe)	M, WR. Occurs annually in small numbers. Feeds on fish and invertebrates in shallow waters.
P. caspicus (eared grebe)	M, WR. Abundant. Feeds on fish and invertebrates in shallow to moderately deep waters. Largely dependent on sheltered waters, though some feeding may be done offshore.
Aechmophorus occidentalis (western grebe)	M, WR. Abundant offshore where it feeds, but uncommon in bay.
Podilymbus podiceps (pied-billed grebe)	M, WR. Uncommon in bay but totally dependent on shallow water habitats, where it feeds on invertebrates. Prefers small ponds, creeks, marshes.
Pelecanus erythrorhynchos (white pelican)	M. Rare migrant and occasional winter resident, not occurring annually.
P. occidentalis (brown pelican)	R. Endangered. Feeds in north bay and in open sea; rests on sandbars in south bay.
Phalacrocorax auritus (double-crested cormorant)	R. Breeds locally, found in bay throughout year, particularly in winter. Feeds on fish in moderately deep water and restricted largely to channel areas and mouth of bay.
P. penicillatus (Brandt's cormorant)	R. Breeds locally, found in bay throughout year, particularly in winter. Feeds on fish in moderately deep water and restricted largely to channel areas and mouth of bay.
Ardea herodias (great blue heron)	Common to abundant all year, particularly in winter. Feeds on mudflats and in shallow water areas. Totally dependent on aquatic habitats. A few pairs may still breed in Point Loma area.

NOTE: M = migrant, R = resident, W = winter, S = summer.

TABLE E-2 CONTINUED

Casmerodius albus (common egret)	M, WR. Totally dependent upon shallow water habitats. Occurs annually in small numbers, particularly at south end of bay.
Leucophoyx thula (snowy egret)	M, WR. Common to abundant in many areas of bay. Feeds largely on fish.
Bubulcus ibis (cattle egret)	M, WR. This bird, although exotic to the area, has been observed in the south bay. It resembles the common egret in its habits.
Branta nigricans (black brant)	M. Rare. Feeds on eel-grass in shallow, sheltered waters.
Dabbling Ducks *Anas platyrhynchos* (mallard) *A. strepera* (gadwall) *A. acuta* (pintail) *A. carolininensis* (green-winged teal) *A. crecca* (teal) *A. discors* (blue-winged teal) *A. cyanoptera* (cinnamon teal) *Mareca americana* (American widgeon) *Spatula clypeata* (shoveler)	M, WR. These "dabbling ducks" prefer fresh water habitats and are generally uncommon or rare on the bay. They appear to use the bay mainly as a refuge and do little feeding there. All may occur as migrants or winter residents.
Diving Ducks *Aythya americana* (redhead) *A. valisineria* (canvas-back) *A. marila* (greater scaup) *Clangula hyemalis* (oldsquaw)	M, WR. These "diving ducks" prefer shallow salt water habitats, but all are rare locally because San Diego is beyond their normal range.
Aythya affinis (lesser scaup)	M, WR. Common to abundant. Feeds in shallow water areas.
Bucephala clangula (common goldeneye)	M, WR. Very uncommon in San Diego area. Rarely visits bay.

NOTE: M = migrant, R = resident, W = winter, S = summer.

TABLE E-2 CONTINUED

Bucephala albeola (bufflehead)	M, WR. Fairly common on bay. Dives for food in shallow to moderate depths.
Melanitta deglandi (white-winged scoter), *Oldemia nigra* (common scoter)	M, WR. Rare in San Diego area, which is beyond normal wintering range. Occasionally visits bay; feeds on bottom fauna.
Melanitta perspicillata (surf scoter)	M, WR. Most common waterfowl on bay. Feeds in bay and along beaches.
Oxyura jamaicensis (ruddy duck)	M, WR. Breeds in some local lagoons, though not in bay area. Fairly common but seems to prefer more sheltered waters, such as San Diego River flood control channel, lagoons, Mission Bay. Dives for food in shallow waters.
Mergus serrator (red-breasted merganser)	M, WR. Common fish-eating duck; can feed in shallow or deep water areas.
Falco peregrinus (peregrine falcon)	R. Endangered. Feeds in marshes, along cliffed shorelines, and in inland areas.
Rallus longirostris (clapper rail)	R and M. Endangered. Feeds in salt marshes and on mudflats.
Laterallus jamaicensis (black rail)	M. Rare. Feeds in salt marshes.
Fullca americana (coot)	M. Coots are not uncommon on the bay in winter and during migration. They feed in shallow water areas and often graze in parks. A few breed in marshes at the south end of the bay.
Himantopus mexicanus (black-necked stilt)	Breeds commonly at south end of bay in salt works. Feeds largely in salt ponds. Numbers increase in winter.
Recurvirostra americana (avocet)	M, WR. In fair numbers. Feeds in tidal creeks, shallow water areas, on small fish. May breed at south end of bay.
Charadrius semipalmatus (semi-palmated plover)	M, WR. In fair numbers. Feeds on mudflats.
C. vociferus (killdeer)	R. A resident species, breeding in fill areas along bay. Numbers increase in winter. Prefers to feed in areas above tidal influence, though does occur on mudflats.
C. alexandrinus (snowy plover)	R. A resident species, breeding in small numbers along bay shore, particularly at salt works. Becoming rarer as undistrubed habitats decrease.

NOTE: M = migrant, R = resident, W = winter, S = summer.

TABLE E-2 CONTINUED

Pluvialis dominica (golden plover)	M. Rare visitor to bay in migration; prefers upland habitats.
Squatarola squatarola (black-bellied plover)	W. Abundant in winter and during migration. The San Diego bay area is apparently a major wintering ground for this species. Feeds mainly on mudflats.
Limosa fedoa (marbled godwit)	W. Abundant in winter and during migration. Feeds on invertebrates on mudflats.
Numenius phaeopus (Hudsonian curlew, whimbrel)	Occasional in bay; prefers outer beaches.
N. americanus (long-billed curlew)	M, WR. Fairly common migrant and winter resident. Feeds on soft mudflats.
Totanus melanoleucus (greater yellowlegs), *T. flavipes* (lesser yellowlegs)	M, WR. Both species of yellowlegs are fairly common during migration, less so in winter. They require mudflats and shallow water (ponds, pools) for feeding.
Catoptrophorus semipalmatus (willet)	M, WR. Abundant on mudflats and also on sandy outer beaches.
Arenaria interpres (ruddy turnstone)	M, WR. Common, sometimes abundant migrant on mudflats, occasionally outer beaches.
A. melanocephala (black turnstone)	M, WR. Prefers rocky beaches, rarely straying to mudflats of the bay.
Limnodromus griseus (short-billed dowitcher), *L. scolopaceus* (long-billed dowitcher)	M, WR. These closely similar species are difficult to identify in the field. The short-billed dowitcher is common to abundant on the bay mudflats. Long-bills prefer pond habitats.
Calidris canutus (knot)	M, WR. Common on mudflats in migration.
Crocethia alba (sanderling)	M, WR. Common on mudflats but prefers outer beaches.
Ereunetes mauri (western sandpiper)	M, WR. Abundant migrant and winter resident. Requires mudflat areas. Some individuals return to San Diego area each year in migration.
Erolia alpina (dunlin)	M, WR. Abundant from late fall through early spring. One of the most common shorebirds in the area, found almost exclusively on mudflats.
E. minutilla (least sandpiper)	M, WR. Common on mudflats but more likely to be found at edge of marsh vegetation.

NOTE: M = migrant, R = resident, W = winter, S = summer.

TABLE E-2 CONTINUED

Steganopus tricolor (Wilson's phalarope)	M. Common in migration, absent in winter. Prefers salt ponds.
Lobipes lobatus (northern phalarope)	M, WR. Virtually confined to salt ponds, where it is often in great abundance.
Phalaropus fulicarius (red phalarope)	M, WR. Status varies greatly from year to year. When present, it is found with above species in salt works.
Larus occidentalis, Larus spp. (western gull)	Nine species of gulls frequent the bay waters. Only one, the western gull, breeds locally; a few birds nest in sheltered areas of the bay; thousands nest on Los Coronados. The remaining species are migrants and/or winter residents, arriving in late October and departing in March.
	Thousands of gulls of several species (glaucous, winged, western, herring, California, Thayer's, ring-billed) winter in the San Diego area, attracted by the availability of food at refuse dumps. These species use the bay area largely for roosting, and few individuals feed there to any great extent. Heermann's and Bonaparte's gulls do remain in the bay and in-shore areas, where they feed on small fish. Mew gulls, also, are rarely found far from open water, and they often occur near sewer outfalls.
Sterna forsteri (Forster's tern)	SR. This tern is largely a summer resident of the bay, although some individuals do winter locally. It nests commonly on the salt works property and feeds to a large extent on small fishes within the bay.
S. hirundo (common tern)	M. Fairly common at times; feeds in bay and on open ocean.
S. albifrons (least tern)	SR. Endangered. Nests in south bay; feeds in sheltered bay waters.
Thalasseus maximus (royal tern)	M. Fairly common offshore but uncommon in bay area.
T. elegans (elegant tern)	SR. Rare. Nests in south bay; feeds in open sea.
Hydroprogne caspia (Caspian tern)	R. Breeds on salt works in south bay; many birds winter locally. Feeds on fresh water and bay fishes, less commonly offshore.

NOTE: M = migrant, R = resident, W = winter, S = summer.

TABLE E-2 CONTINUED

Chlidonias niger (black tern)	Occasional migrant; prefers lagoons, ponds.
Passerculus sandwichensis (Savannah sparrow)	R. Common resident of salt marsh areas; numbers increase in winter with addition of migrant birds. Totally dependent upon this habitat.

NOTE: M = migrant, R = resident, W = winter, S = summer.

APPENDIX F

HISTORICAL SITE DESCRIPTIONS

APPENDIX F

HISTORICAL SITE DESCRIPTIONS
SAN DIEGO BAY AREA

Source: California Inventory of Historic Resources. 1976.
California Department of Parks and Recreation.

SANTA FE DEPOT
San Diego, San Diego County. 1914. Bakewell and Brown, architects. Brick and hollow Tile, stuccoed, 1 high story, modified rectangle, tile gabled roof, corner towers with polychrome domes and lanterns, enormous round arched center entrance into loggia, decorative panels on towers, arcaded side loggia 650 ft long, connecting to freight building, open interior with large round transverse arches, multicolor moorish tile designs, and original furnishings, orginal front exterior waiting room or courtyard and surrounding arcades removed. Spinish colonial revival. Large, well-preserved station built in style of the 1915 Panama-California exposition buildings in San Diego. National Register. Ownership: Private.

HOTEL DEL CORONADO
Coronado, San Diego County. 1887-1890. James and Merritt Reid, architects. Frame, grooved flush siding and shingling, 4-5 stories, modified hollow rectangle, gabled roof sections, numerous dormers and projecting gables, large round corner pavilion with pyramidal roof, cupola, surrounding shed loggia, and dormers, other turrets and towers, verandas around inside of courtyard and facade, ornate spacious rooms, altered. Queen Anne elements. Extravagant late-19th C. resort hotel, whose guests have included 6 presidents, first electrically lighted hotel with lighting stalled under direction of Thomas Edison. National register. Ownership: Private.

CABRILLIO NATIONAL MONUMENT (OLD POINT LOMA LIGHTHOUSE)
San Diego, San Diego County. 1854. Stone, painted, 1-½ stories, rectangular, gabled roof, interior end chimneys, central round light tower with balustraded deck and glass enclosed lantern renovated, 1935. One of the first of 8 lighthouses built on the Pacific coast, represents nation's initial effort to obtain navigational aids for newly acquired west coast. National register. Ownership: Federal.

DERBY DIKE
San Diego County. The San Diego Herald, September 24, 1853: 'Improvement of San Diego River. This work was commenced by lieutenant Derby, U.S. Corps of topographical engineers . . . .his orders were 'to excavate the former channel of the river discharging into flase bay and to build a levee . . . from a point near the old town to . . . the opposite high land . . . to counteract the action of subsequent freshets . . .' Derby Dike does not exist anymore because of land development. California historical landmark. Ownership: Federal.

EL DESEMBARCADERO SITE ('OLD LANDMARK')
San Diego, San Diego County. The landing place used by small boats coming from La Playa and other Point Loma places, which were able to penetrate at high tide close to the residences at San Diego Viejo. California historical landmark. Ownership: Federal.

LINDBERGH FIELD
San Diego County. This was Charles A. Lindbergh's departure point from San Diego en route to New York for his dramatic solo flight across the Atlantic to Paris in May 1927. Ownership: City.

QUARANTINE STATION (OLD LA PLAYA)
San Diego, San Diego County. On this site stood 'Hide Park' (La Playa) trading station and hide storage depot for the Pacific coast. This also was the scene of Richard Henry Dana Jr.'s hide droghing operations as described in two years before the mast; and the hide house 'brookline,' where in 1829 the American flag was first unofficially raised in California. Calfornia historical landmark. Ownership: Federal.

SAN DIEGO WHALING STATION SITE
San Diego, San Diego County. The packard brothers and Johnson brothers of New England during the middle years of the 19th centruy maintained whaling companies here. To this spot they towed their catch, cut up the whales, tried out the blubber, coopered the oil, and shipped it. California historical landmark. Ownership: Federal.

STAR OF INDIA
San Diego, San Diego County. 1863. Iron-hulled, 3-masted bark, restored 1959-1963. Built at Ramsey, isle of man, as full-rigged ship named euterpe, sailed as general trader to India, then carried emigrants and cargo to New Zealand and Australia for 35 years. Name changed to Star of India, 1906, carried cannery employees and fishermen to and from Alaska, Museum since 1926. National historical landmark. Ownership: Private.

BALLAST POINT
San Diego, San Diego County. in 1542 Juan Rodriguez Cabrillo landed, discovered, and took prossession of upper California in the name of Spain. He applied the name San Miguel to this port. in 1602 Sebastian Vizcaino landed, at which time the name of San Diego was first applied to this port. California historical landmark. Ownership: Federal.

PANTOJA PLAZA
San Diego, San Diego County. Established 1850, the first 'open space' set aside in New Town, the forerunner of New San Diego. It was named for the pilot who first charted San Diego Bay.

FIRST MILITARY FLYING SCHOOL IN AMERICA
Coronado, San Diego County. These flat lands have been a part of aviation history since Glenn Curtiss founded the First Military Flying School America on January 17, 1911. The Army operated Rockwell Field until January 31, 1939. The Navy commissioned the present airstation november 8, 1917. California historical landmark. Ownership: City.

FORT GUIJARROS SITE
San Diego, San Diego County. The plans for this Spanish fort were drawn by Alberto De Cordoba in 1795. The actual work on Fort Guijarros was completed around 1800. Corporal Jose Velasquez was in command at the time of the battle of San Diego, when American brig, Lelia Byrd, was fired upon March 22, 1803. California historical landmark. Ownership: Federal.

FORT ROSECRANS NATIONAL CEMETERY
San Diego, San Diego County. Shortly after the boundaries of Fort Rosecrans were established at this site in 1852, this military cemetery, overlooking a number of earlier and wholly obliterated burial places of white man, was established. The name 'Bennington' commemorates, as does the obelisk, the death of about 60 men and boys on duty aboard the USS Gunboat-Bennington in San Diego Harbor July 21, 1905. Most of these victims were buried here. California historical landmark. Ownership: Feferal.

FORT ROSECRANS
San Diego, San Diego County. U.S. Military reservation established on Point Loma, February 28, 1870. Named in honor of General William S. Rosecrans who visited San Diego in 1867. California historical landmark. Ownership: Federal.

FORT STOCKTON
San Diego, San Diego County. This fortification dates from about 1838 when San Diegans threw up earthworks here in preparation for an offensive from Los Angeles. It was rebuilt in 1846 as an U.S. Army fortification. It was here on January 29, 1847, that the Mormon Battalion ended their march from council bluffs. California historical landmark. Ownership: City.

LA PUNTA DE LOS MUERTOS
San Diego, San Diego County. Burial site of sailors and marines in 1872 when San Diego Bay was surveyed and charted by Don Juan Pantoja Y. Arriaga, pilot, and Don Jose Tovar, mate of the royal frigates La Princesa and La Favorita under command of Don Augustin De Echeverria. California historical landmark. Ownership: Federal.

SAN DIEGO BARRACKS
San Diego, San Diego County. New San Diego was established in 1850-51 as a quartermaster depot by Captain Nathaniel Lyon, 2d U.S. Infantry, for the supply of military establishments in southern California. The name of the post was changed from New San Diego to San Diego Barracks by General orders No. 2, military division of the Pacific, San Francisco, April 5, 1879. San Diego Barracks continued to operate as a subpost of Fort Rosecrans until abandoned December 15, 1921. California historical landmark. Ownership: City.

*NATIONAL REGISTER SITE
**Locations and many descriptions of archaelological sites are not given to protect these resources. County archaeological site counts based on the records on file with cultural resources section of the California Department of Parks and Recreation.

SAN DIEGO COUNTY - 89 SITES (ALSO 2655 ARCHAEOLOGICAL SITES)**

BALLAST POINT
Fort Rosecrans Military Reservation, Point Loma, San Diego. Theme: Exploration/ Settlement.

*CABRILLIO NATIONAL MONUMENT (OLD POINT LOMA LIGHTHOUSE)
End of Catalina Boulevard. (Cabrillo Memorial Drive), San Diego. Theme: Economic/ Industrial.

DERBY DIKE
San Diego River flood control channel. Theme: Economic/Industrial.

EL DESEMBARCADERO SITE ('OLD LANDMARK')
U.S. Naval Training Center, San Diego. Theme: Economic/Industrial.

FIRST MILITARY FLYING SCHOOL IN AMERICA
Naval Air Station, North Island, Coronado. Theme: Military.

FORT GUIJARROS SITE
Near base of Ballast Point, Point Loma, San Diego. Theme: Military.

FORT ROSECRANS
Point Loma, San Diego. Theme: Military.

*HOTEL DEL CORONADO
1500 Orange Ave., Coronado. Theme: Arts/Leisure.

LA PUNTA DE LOS MUERTOS
U.S. Highway 101 and Market Street, San Diego. Theme: Military.

LINDBERGH FIELD
San Diego International Airport. Theme: Economic/Industrial.

QUARANTINE STATION (OLD LA PLAYA)
Naval Electronic Laboratory, San Diego. Theme: Economic/Industrial.

SAN DIEGO BARRACKS
Block bounded by Kettner Boulevard, California, G, and Market Street., San Diego. Theme: Military.

SAN DIEGO WHALING STATION SITE
Near Ballast Point, San Diego. Theme: Economic/Industrial.

*SANTA FE DEPOT
1050 Kettner, San Diego. Theme: Architecture.

*STAR OF INDIA
San Diego Embarcadero, San Diego. Theme: Economic/Industrial.

APPENDIX G

ARCHAEOLOGICAL SITE RECORDS AND SUMMARY

SAN DIEGO STATE UNIVERSITY
SAN DIEGO, CALIFORNIA 92182

Department of Anthropology

January 23, 1979

Michael V. Needham
San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92112

RECEIVED
JAN 2[illegible] 1979
ENVIRONMENTAL MANAGEMENT

Dear Mr. Needham,

Of the sixteen archaeological sites located within and in the vicinity of the project area eight have no recordation date. These sites, SDI-50, 51, 55, 57, 58, 59, 65, and 66, were probably recorded previous to 1950, and it is very likely that they were recorded as early as the 1920's. The majority of these sites are located in highly impacted residential zones. Most of them were recorded as shell middens with no artifactual remains which might aid in the identification of cultural or chronological affiliation.

These eight sites may conceivably be the remains of groups existing as early as 12,000 years ago or they may be very recent as the silver strand area is known to be a favorite site for historic aboriginal use and Native Americans continued to use the bay area until the early part of this century (Shipeck 1968:The Autobiography of Delfina Cuero).

Three sites, SDI-5512, 5513, and 5514 are currently under investigation by a San Diego State graduate student, Roy Pettus, for the California, Department of Transportation. This study is en lieu of a proposed bikeway route and it is now in an extended phase I stage which entails limited testing. This report will be on file at San Diego State Anthropology Lab and at CALTRANS.

I am not sure of the condition of site SDI-5454. This site seems to extend from the La Jollan period and according to the site record the midden remains intact despite such historic activities as might occur during use by a United States Cavalry unit and the United States Navy. May, who recorded this site may be reached at the County, Environmental Analysis Division.

No pottery is mentioned in the descriptions of any of these sites. This does not negate the possibility that these sites are recent. It only establishes the necessity for further study in order to definitely place the materials in a chronological frame.

We have no record of off shore sites in the project vicinity. Reference to a site off the coast near Imperial Beach has been made, however, I have no further information. Little work off the coast has been done. You might try getting ahold of Dr. James Moriarty at the University of San Diego. He is in the history department and has done some underwater studies.

I hope this has been some help. If you have any questions please call.

Sincerely,

Melissa J. Johnson
Cultural Resource Management Center
Anthropology Lab

G-1

DEPARTMENT OF ANTHROPOLOGY

San Diego State University
San Diego, CA 92182
(714) 286-6300

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

ource of Request PORT OF SAN DIEGO

ate of Request January 11, 1979 (x) Letter ( ) Telephone ( ) In Person

ate Request Received January 15, 1979 (x) Map Received (x) Map Returned

ame of Project Port Master Plan EIR (UPD #78102-EIR-1)

( ) The San Diego State University files show no recorded site for the project area.

(X) The San Diego State University files show the following sites ( ) within (X) in the vicinity of the project area.

ite No. SDI-50 Culture(s): Unknown
Description: "Traces of a camp site." (Nelson, nd)

ite No. SDI-51 Culture(s): Unknown
Description: "Traces of a camp site." (Nelson, nd)

ite No. SDI-55 Culture(s): Unknown
Description: "Traces of a refuse heap containing shell, charcoal, etc." (Nelson, nd)

No. SDI-57 Culture(s): Unknown
Description: "Faint indications of a former temporary camp site." (Nelson, nd)

ite No. SDI-58 Culture(s): Unknown
Description: "Traces of a camp site, marked by a quantity of thinly scattered sea shells." (Nelson, nd)

ite No. SDI-59 Culture(s): Unknown
Description: A shell and refuse mound, abundant on surface, no more than 3 to 4 inches in depth. Burned stones and charcoal approx. 50 x 200 feet. (Welty, nd)

Note: This report includes only that information available from the San Diego State University files and may not include data on file at other institutions. A lack of sites recorded in our files cannot be taken as assurance of the absence of archaeological materials. If it should occur that any cultural remains are encountered during the course of construction, a qualified archaeologist should be notified.

Record check by Melissa Johnson

Date Jan 16, 1979 Signed Larry L. Lauk

G-2

DEPARTMENT OF ANTHROPOLOGY

San Diego State University
San Diego, CA 92182
(714) 286-6300

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request _____

Date of Request _____ ( ) Letter ( ) Telephone ( ) In Person

Date Request Received _____ ( ) Map Received ( ) Map Returned

Name of Project _____

( ) The San Diego State University files show no recorded site for the project area.

( ) The San Diego State University files show the following sites ( ) within ( ) in the vicinity of the project area.

Site No. SDI-65 Culture(s): Unknown
Description: Shell heap, scattered irregularly for several hundred feet. (Welty, nd)

Site No. SDI-66 Culture(s): Unknown
Description: Shell and refuse deposit, small amount of shell and charcoal. (Welty, nd)

Site No. SDI-4886 Culture(s): Unknown
Description: Isolated scraper, possibly of chert. (Toren, 1977)

Site No. SDI-5454 Culture(s): "Coastal La Jollan"
Description: Ca. 10 acres of midden seems intact, also occupied by the US Navy and the US Cavalry. Scattered lithics-flakes and tools, shell and hearths. (May, 1978)

Site No. SDI-5512 Culture(s): Unknown
Description: Flakes, flake tools, core tools, and some shell, largely disturbed, ca. 15m x 100m. (Corum, 1978)

Site No. SDI-5513 Culture(s): Unknown
Description: Flakes and flake tools along the bank of the river, a large cobble chopper found at edge of tomato field. (Corum, 1978)

Note: This report includes only that information available from the San Diego State University files and may not include data on file at other institutions. A lack of sites recorded in our files cannot be taken as assurance of the absence of archaeological materials. If it should occur that any cultural remains are encountered during the course of construction, a qualified archaeologist should be notified.

Record check by _____

Date _____ Signed _____

DEPARTMENT OF ANTHROPOLOGY

San Diego State University
San Diego, CA 92182
(714) 286-6300

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request _____

Date of Request _____ ( ) Letter ( ) Telephone ( ) In Person

Date Request Received _____ ( ) Map Received ( ) Map Returned

Name of Project _____

( ) The San Diego State University files show no recorded site for the project area.

( ) The San Diego State University files show the following sites ( ) within ( ) in the vicinity of the project area.

Site No. SDI-5514 Culture(s): Unknown "Southern Diegueno"

Description: Shell midden and scattered metavolcanic flakes, disturbed by the construction and maintenance of Hwy 75. (Corum, 1978)

Site No. SDI-5931 Culture(s): Unknown

Description: Scattered artifacts, flakes, hammerstone pounder and a blade fragment. Ref: Cultural Resources Recon. of the S. D. fixed Guideway Project Center City to San Ysidro. Carrico, 1978. (Eckhardt, 1978)

Site No. _____ Culture(s): _____

Description: _____

Site No. SDI-4958 Culture(s): Unknown

Description: A temporary campsite containing stone tools, manos and shellfish, 61 x 60 meters in area. (Carrico, 1977)

Site No. SDI-6025 Culture(s): Unknown

Description: Highly disturbed shell midden, some scattered felsite flakes, glazed potsherds, 4250 sq. meters in area. (Franklin, 1978)

Site No. _____ Culture(s): _____

Description: _____

Note: This report includes only that information available from the San Diego State University files and may not include data on file at other institutions. A lack of sites recorded in our files cannot be taken as assurance of the absence of archaeological materials. If it should occur that any cultural remains are encountered during the course of construction, a qualified archaeologist should be notified.

Record check by _____

Date _____ Signed _____

G13

DEPARTMENT OF ANTHROPOLOGY

San Diego State University
San Diego, CA 92182
(714) 286-6300

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request Port of San Diego

Date of Request January 11, 1979 ( ) Letter ( ) Telephone ( ) In Person

Date Request Received Jan. this is a continuation) Map Received ( ) Map Returned

Name of Project Port Master plan EIR (UPD #78102-EIR-1)

( ) The San Diego State University files show no recorded site for the project area.

( ) The San Diego State University files show the following sites ( ) within ( ) in the vicinity of the project area.

Site No. SDI-53 Culture(s): Not recorded

Description: "Traces of probable campsites" (Nelson, nd)

Site No. SDI-54 Culture(s): Not recorded

Description: "Traces of a refuse heap." (Nelson, nd)

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

Note: This report includes only that information available from the San Diego State University files and may not include data on file at other institutions. A lack of sites recorded in our files cannot be taken as assurance of the absence of archaeological materials. If it should occur that any cultural remains are encountered during the course of construction, a qualified archaeologist should be notified.

Record check by Melissa J Johnson

Date 4-4-79 Signed _____

SAN DIEGO MUSEUM OF MAN

An educational, non-profit corporation founded in 1915, collecting for posterity and displaying the life and history of man.

RECEIVED
JAN 24 1979
ENVIRONMENTAL MANAGEMENT

18 January 1979

Mr. Michael V. Needham
Assistant Environmental Management Coordinator
San Diego Unified Port District
P. O. Box 488
San Diego, California 92112

Dear Mike,

We have completed the Archaeological Site Files Record Search for your Port Master Plan (UPD #78102-EIR-1). The results of that Record Search and the invoice are enclosed.

Per your request, this letter provides a brief summary statement, based solely on the Record Search results and information regarding bay margin disturbance provided by you in our telephone conversation of 10 January.

The Record Search results show a total of 25 recorded sites in your area of interest. As can be seen from the maps, most of these sites are in locations which have been destroyed or seriously impacted. The absence of recorded sites in much of the South Bay area, in the vicinity of the Otay River, reflects a lack of archaeological survey activity. Since this is also the area, according to information provided by you, where the least dredge and fill disturbance has occurred, this would tend to reinforce your observation that the southeast bay area is a likely area for future archaeological discoveries, particularly with the presence of a major ethnohistorically-recorded village in the area. Of course, all of this would have to be confirmed by field investigation.

I would also like to thank you for the information you provided on planned future south bay developments in archaeologically sensitive areas. We will be happy to provide input to the appropriate governmental bodies as these projects develop.

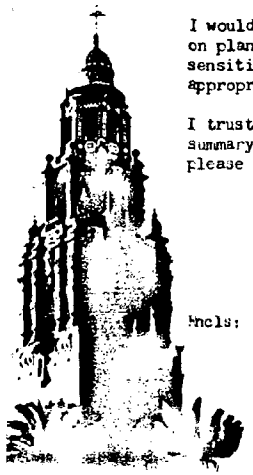
I trust that the above comments will provide the necessary summary for your current project. If you have further questions, please do not hesitate to contact me.

Sincerely,

Ken

Ken Hedges
Curator

Encls: Maps
Record Search
Invoice



1350 El Prado, Balboa Park, San Diego, California 92101, Telephone (714) 239-2001

G-4

SAN DIEGO MUSEUM OF MAN

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: San Diego Unified Port District - Michael V. Needham

Date of Request: 11 January 1979 (X)Letter ( )Telephone ( ) In Person

Date Request Received: 12 January 1979 (X)Map Received (X)Map Returned

Name of Project: Port Master Plan EIR (UPD #78102-EIR-1)

( ) The Museum of Man files show no recorded sites for the project area.

(X) The Museum of Man files show the following sites (X)within (X)in the vicinity of the project area.

Site No. W-152 Culture(s): San Dieguito II; La Jolla II

Description: Highland intermittent camping; shell.

Recorded by: M.Rogers

Site No. W-161 Culture(s): San Dieguito II (trace); La Jolla II; Yuman III (trace)

Description: Highland temporary camping; cobble hearths; flakes; sherds; arrowpoints; metates; manos; shell middens. This site number covers the entire highland area from the end of Point Loma north to U.S. Military Res. Fence.

Recorded by: M.Rogers

Site No. W-163 Culture(s): La Jolla II

Description: Bay margin accretion midden; cobble hearths; shell.

Recorded by: M.Rogers

Site No. W-164 Culture(s): La Jolla II

Description: Bay terrace intermittent camping; cobble hearths.

Recorded by: M.Rogers

Site No. W-192 Culture(s): San Dieguito II or III; La Jolla II

Description: Slough terrace camping; cobble hearths; midden; flaking; metates; manos.

Recorded by: M.Rogers

Site No. W-193A Culture(s): La Jolla

Description: Large shell midden; blades; flakes; tools; manos; metates; hearths.

Recorded by: M.Rogers, D.Kalderburg 1975

Please note: The project area may contain archaeological resources in addition to those noted above. This report is made from San Diego Museum of Man files only and may not include data pertaining to localities other than those covered in previous Museum of Man surveys or gathered by other institutions or by individuals.

Record check by: Grace Johnson

Date: 17 January 1979

Signed: Lowell E. English

SAN DIEGO MUSEUM OF MAN

1350 El Prado, Balboa Park, San Diego, California 92101, Telephone (714) 239-2001 Page 2 of 4

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: San Diego Unified Port District - Michael W. Needham

Name of Project: Port Master Plan EIR (UPD #79102-EIR-1)

Site No. W-193 Culture(s): La Jolla II; Kumeyaay

Description: Occupation site; cobble hearths; midden; worked felsite.

Recorded by: M.Rogers, E.Shipek 1976

Site No. W-194 Culture(s): La Jolla II

Description: Slough margin intermittent camping; hearths; midden.

Recorded by: M.Rogers

Site No. W-195 Culture(s): La Jolla II; Yuman III

Description: Periodic camping; cobble hearths; flaking; midden.

Recorded by: M.Rogers

Site No. W-291 Culture(s): La Jolla I and II

Description: Shell midden; cobble hearths.

Recorded by: M.Rogers

Site No. W-1003 Culture(s): Unknown

Description: Scatter of flaking debris.

Recorded by: P.Ainsworth 1976

Site No. W-1004 Culture(s): Unknown

Description: Scatter of flaking debris.

Recorded by: P.Ainsworth 1976

Site No. W-1110 Culture(s): Kumeyaay

Description: Part of the village site of La Punta; occupied when Spanish arrived and until 1850. This site is recorded from ethnohistorical data (only), not archaeologically defined.

Recorded by: E.Shipek 1976

Site No. W-1211 Culture(s): Unknown

Description: Discovery site of small sandstone mortar.

Recorded by: D.Burgett 1977

Site No. W-1307 Culture(s): Blade and Core

Description: Occupation site; choppers; chopping tools; cores.

Recorded by: R.Minshall 1977

SAN DIEGO MUSEUM OF MAN

1350 El Prado, Balboa Park, San Diego, California 92101, Telephone (714) 239-2001 Page 3 of 4

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: San Diego Unified Port District - Michael W. Needham

Name of Project: Port Master Plan EIR (UPD #79102-EIR-1)

Site No. W-1323 Culture(s): Prehistoric

Description: Temporary camp site; tools; manos; shell; hammerstones; scraper; cores; flakes/debitage; thermal fractured rock; retouched tools.

Recorded by: R.Carrico 1977, C.Hall 1977

Site No. W-1503 Culture(s): Unknown

Description: Flaking station with lithic scatter; core; flakes.

Recorded by: S.Berryman

Site No. W-1583 Culture(s): Diegueno(?)

Description: Shell and lithic scatters.

Recorded by: C.Drover 1977

Site No. W-1627 Culture(s): Prehistoric

Description: Scatter of cultural debris; flakes; flaking waste; hammerstone-pounder; blade fragment.

Recorded by: L.Eckhardt 1978

Site No. W-1634 Culture(s): Historic; Early Milling

Description: Camp site; midden; cores; flakes/debitage; scrapers; blades; thermal fractured rock; shell. Prehistoric occupation replaced by U.S. Cavalry-cobble foundations; brick; ceramics; glass; U.S. Navy replaced cavalry occupation.

Recorded by: R.May 1978

Site No. W-1653 Culture(s): Not noted

Description: Artifact scatter; flakes; flake tools; core tools; shell.

Recorded by: J.Corum 1978

Site No. W-1654 Culture(s): Not noted

Description: Flakes; flake tools; core tool; cobble chopper.

Recorded by: J.Corum 1978

Site No. W-1675 Culture(s): Diegueno

Description: Shell midden; flakes.

Recorded by: J.Corum 1978

Site No. W-1676 Culture(s): Kumeyaay

Description: Shell midden; flakes.

Recorded by: J.Corum 1978

SAN DIEGO MUSEUM OF MAN

1350 El Prado, Balboa Park, San Diego, California 92101, Telephone (714) 239-2001

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: San Diego Unified Port District - Michael R. [illegible]

Name of Project: Port Master Plan EIR (UPD #78102-EIR-1)

Site No. W-1840 Culture(s): Prehistoric

Description: Shell midden; flakes; sherds.

Recorded by: R.Franklin 1978

Site No. _____ Culture(s): _____

Description:

Recorded by: _____

Site No. _____ Culture(s): _____

Description:

Recorded by: _____

Site No. _____ Culture(s): _____

Description:

Recorded by: _____

Site No. _____ Culture(s): _____

Description:

Recorded by: _____

Site No. _____ Culture(s): _____

Description:

Recorded by: _____

Site No. _____ Culture(s): _____

Description:

Recorded by: _____

Site No. _____ Culture(s): _____

Description:

Recorded by: _____

Site No. _____ Culture(s): _____

Description:

Recorded by: _____

TABLE G-1

ARCHAEOLOGICAL SITE RECORDS
SUMMARY OF SITE INFORMATION
SAN DIEGO BAY, SHORELINE, AND VICINITY

Map Callout Number	Official Site Number *	On Port Jurisdictic	Recordation Date	Recorder	Site Disturbances Cause of Disturbanc (approx. date) **	Cultures	Historic Use (post 1769)	Permanent Occupation Camp	Temporary Intermittent Camp	Area of Site (in sq. meters)	Midden (refuse hear	Depth of Midden (in centimeters)	Shells	Charcoal	Hearths (Heat-fractured rocks)	Lithics, Flakes, Tool	Core Tools	Flake Tools	Hammerstones (pounders)	Choppers	Scrapers	Blades	Arrow Points	Pelates (grinding surface stone)	Manos (hand-held grinding stone)	Potsherds (pottery implements
1	SDI-50	x		Nelson	Parking Lot (1971)			x																		
2	SDI-51			Nelson	Residences (1978)			x																		
3	SDI-55	x		Nelson	Fill (1937)						x		x	x												
4	SDI-57			Nelson	Highway (ca. 1920)			x																		
5	SDI-58			Nelson	Residences (1974)			x					x													
6	SDI-59			Welty	Highway (ca. 1920)					929	x	7-10	x	x												
7	SDI-65			Welty	Residences (ca. 1920)					3,700	x		x													
8	SDI-66	x		Welty	Fill (1941)						x		x	x												
9	SDI-4886		1977	Toren																	x					
10	SDI-5454(W-1634)		1978	May	Radio Sta (ca. 1945)	Coastal La Jolla				40,467	x		x		x	x										
11	SDI-5512(W-1653,55,56)		1978	Corum	Railroad (ca. 1920)								x			x	x	x								
12	SDI-5513(W-1654)		1978	Corum												x		x		x						
13	SDI-5514		1978	Corum	Highway (ca. 1920)	Southern Diegueno					x		x			x										
14	SDI-5931(W-1627)		1978	Carrico Eckhardt	Railroad (ca. 1920)											x			x			x				
15	SDI-4958(W-1323)		1977	Carrico	Agriculture (ca. 1920)					3,660						x										
	SDI-6025(W-1840)		1978	Franklin	Agriculture (ca. 1920)					4,250	x		x			x										x
17	W-159			Rogers	Park (ca. 1920)	S.Diegueito II La Jolla II			x				x													
18	W-161			Rogers	U.S. Navy (ca. 1920)	S.Diegueito La Jolla II Luiseno			x	57,598	x		x		x	x							x	x	x	x
19	W-163			Rogers	U.S. Navy (ca. 1920)	La Jolla II					x		x		x											
20	W-164			Rogers	U.S.C.G. (ca. 1920)	La Jolla II			x						x											
21	W-162			Rogers	Residences (ca. 1920)	S.Diegueito II,III La Jolla II		x			x				x	x								x	x	
22	W-1924		1975	Rogers Baldenberg		La Jolla					x		x		x	x								x	x	
23	W-193		1976	Rogers Shipek	U.S. Navy (ca. 1920)	La Jolla II Kumeyaay		x			x				x	x								x	x	
24	W-194			Rogers	Fill (1930)	La Jolla II			x		x				x											
25	W-195	x		Rogers	Fill (1941-45)	La Jolla II Tuman III			x		x				x	x										
26	W-291			Rogers	Highway (ca. 1920)	La Jolla I La Jolla II					x		x		x											
27	W-1003		1976	Ainsworth	Residences (ca. 1976)											x										
28	W-1004		1976	Ainsworth	Residences (ca. 1976)											x										
29	W-1142		1976	Shipek	Residences (ca. 1976)	Kumeyaay	La Punta (ca. 1850)	x																		
30	W-1211		1977	Burger																				x		
31	W-1307		1977	Minshall		Blade & Core		x									x			x		x				
32	W-1323(SDI-4958)		1977	Carrico Bull	Agriculture (ca. 1920)	Prehistoric			x				x		x	x	x		x		x				x	
33	W-1503			Berryman	Residences (ca. 1975)											x	x									
34	W-1583		1977	Drover	Highway (ca. 1975)	Diegueno							x			x										
35	W-1627(SDI-5931)		1978	Eckhardt	Railroad (ca. 1920)	Prehistoric										x				x			x			
36	W-1634(SDI-5454)		1978	May	Radio Sta (ca. 1945)	Historic Early Milling	U.S Cavalry U.S. Navy	x			x		x		x	x	x				x	x				
37	W-1653(SDI-5512)		1978	Corum	Railroad (ca. 1920)																					
38	W-1654(SDI-5513)		1978	Corum												x	x			x						
39	W-1655(SDI-5454)		1978	Corum	Radio Sta (ca. 1945)	Diegueno					x		x			x										
40	W-1656(SDI-5454)		1978	Corum	Radio Sta (ca. 1945)	Kumeyaay					x		x			x										
41	W-1840(SDI-6025)		1978	Franklin	Agriculture (ca. 1920)	Prehistoric					x		x			x										x

SOURCES: San Diego Museum of Man
San Diego State University Authropology Laboratory

NOTES: *Site numbers in parentheses have recordation numbers from both the San Diego Museum of Man and the San Diego State University Anthropology Laboratory.

**Extent of disturbances to sites varies. Some sites have been obliterated; others have been only slightly disturbed.

APPENDIX H

NOTICE OF PREPARATION

AND COMMENTS

PORT OF SAN DIEGO
AND LINDBERGH FIELD AIR TERMINAL

(714) 291-3900 • P.O. Box 488, San Diego 92112

TO: California Coastal Commission
631 Howard Street
San Francisco, CA 94105

NOTICE OF PREPARATION

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

PROJECT TITLE: "AMENDMENT OF SAN DIEGO UNIFIED PORT DISTRICT MASTER PLAN"

UPD #: 78XY-EIR-1

APPLICANT: San Diego Unified Port District

LOCATION: San Diego, CA

The San Diego Unified Port District will be the Lead Agency and will prepare an environmental impact report for the project identified above. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

H-1

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study ◯ is, (X) is not, attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 45 days after receipt of this notice.

Please send your response by Certified Mail to Mr. Tomas E. Firle, Environmental Management Coordinator, at the address shown above. We will need the name for a contact person in your agency.

TOMAS E. FIRLE, Coordinator
Environmental Management

Date: February 15, 1978

Telephone: (714)291-3900 X288

TEF:pm
Enclosure: 1) San Diego Unified Port District Master Plan
2) Request to Determine Scope of EIR

cc: State Clearinghouse, Certified Mail Return Receipt Requested

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Reference: California Administrative Code, Title 14, Sections 15035.7, 15054.3, 15066.

(em 02/15/78)

State of California
GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814
(916) 445-0613

EDMUND G. BROWN JR.
GOVERNOR

RECEIVED
APR 10 1978
ENVIRONMENTAL MANAGEMENT

April 5, 1978

Mr. Thomas Firle
Environmental Management
Coordinator
San Diego Unified Port
District
P.O. Box 488
San Diego, CA 92112

SUBJECT: NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT ON THE AMENDMENT TO THE SAN DIEGO UNIFIED PORT DISTRICT MASTER PLAN SCH 78030604

Dear Tom:

On March 6, 1978, the Office of Planning and Research (OPR) distributed the Port District's Notice of Preparation of an Environmental Impact Report (EIR) on amending the Port Master Plan. Per our understanding, OPR sent the Notice to the following agencies and departments: the Department of Water Resources; the State Water Resources Control Board; CalTrans; the Air Resources Board; the Department of Navigation and Ocean Development; the State Lands Commission; and, the Department of Fish and Game. The review period is now complete, and these agencies should have notified you directly of their concerns. For your convenience, OPR has attached copies of the agencies concerns which we received.

When complete, please submit 15 copies of the Draft EIR for state agency review. Please refer to the State Clearinghouse number on all subsequent correspondence to this project.

If you have any questions, do not hesitate to contact Judy Warburg of my staff at (916) 445-0613.

Thank you for your cooperation.

Sincerely,

Deni Greene

Deni Greene
Director
State Clearinghouse

C-11

STATE OF CALIFORNIA—THE RESOURCES AGENCY
EDMUND G. BROWN JR., Governor
STATE WATER RESOURCES CONTROL BOARD
P.O. BOX 100
SACRAMENTO, CA 95801
(916) 322-4501

March 22, 1978

IN REPLY, PLEASE REFER TO: 420:DD

RECEIVED
MAR 27 1978
ENVIRONMENTAL MANAGEMENT

Mr. Tomas E. Firle, Coordinator
Environmental Management
Port of San Diego and
Lindbergh Field Air Terminal
P. O. Box 488
San Diego, Ca 92112

NOTICE OF PREPARATION - EIA 03027801 - Amendment of San Diego Unified Port District Master Plan

Thank you for the opportunity to review the Notice of Preparation of an Environmental Impact Report for the subject project.

In accordance with your request for information, the attached list contains the items germane to the State Water Resources Control Board's statutory responsibilities as a responsible agency or to other major water resources control concerns. A discussion of each listed item should be included in the draft environmental document.

RESPONSIVE N.O.P. TEF

If you have any further questions, please contact Dave Deckman at (916) 322-4517.

T E Bailey
Thomas E. Bailey
Assistant Chief

Attachment

TS-6 (3/78)

- 78102 - EIR - 1

TEF

THIS STANDARD FORM IS NOT RESPONSIVE TO THE PURPOSE OF N.O.P.

RECEIVED
MAR 27 1978
ENVIRONMENTAL MANAGEMENT

LIST OF INFORMATION SUBJECTS
FOR ENVIRONMENTAL DOCUMENTS

I. Description of Project

The description should provide sufficient information to allow an understanding of the relationships of the project to the surrounding area, and to provide a clear background for determining how the project affects the area. Specific items to be included are as follows:

A. Purpose of and need for the project (specific problem and its significance related to development, health, and the biotic and social environment).

B. Applications, permits required (name of agencies, status of permits).

C. A detailed discussion of:

1. Kinds and quantities of materials to be treated, transported, discharged, or released to the environment.

2. Methods of treatment, transport, and disposal.

D. Maps, photographs, charts, or figures to show location and interrelationships of project components.

E. Methods which will be incorporated in the project to conserve and reclaim water and to reduce waste.

For water supply projects, this section should contain an adequate description of the uses of the water in the place of use and the water supply and wastewater disposal systems, including a detailed description of the water rights that are being applied for by the applicant. Any prior water rights

that the project proponent holds should be discussed if they are related to the project being proposed. A detailed discussion of the method of diversion, conveyance, and storage facilities should also be included in this section.

For wastewater treatment projects, this section should also include a description of the wastewater facilities, service area boundaries, the type of treatment, the facilities capacity, any bypasses and overflows, the sources and character of influent and effluent, source controls, and the existing waste disposal method, including sludge.

II. Description of Environmental Setting

The environmental description should provide sufficient information to allow an understanding of the interactions between the area (both local and regional) and the project. The description should include the present setting without the project, and the probable future setting if the project is not built. Emphasis should be placed on those items related to potential effects of the project. Specific items to be included are as follows:

A. Physical setting

1. Location (map and description) including the immediate vicinity of the project and the regional setting.
2. Geology (soil type, erodability, permeability).

3. Topography (slopes, hills, creeks, marshes, swamps, drainage ways).
4. Climate (precipitation, winds, seasonal variation).

B. Water

1. Watershed area and physiography (bays, estuaries, lakes, streams, ocean).
2. Hydrology--surface runoff and groundwater.
   a. Quantities, seasonal variations, trends, uses, recharge.
   b. Status (e.g., water-short area? overdraft?)
3. Uses of the water (water supply, receiving water, recreation, and other instream uses), occurrence, quantities, value or importance.
4. Quality of surface waters and groundwater, including existing problems and constraints(chemical and physical condition).
   a. Domestic water sources--their quality, quantity, and per capita consumption including large water-using industries and amount of their consumption.
   b. Receiving waters--characterize, chemically and physically, the existing receiving waters. Indicate whether the receiving waters are a bay, estuary, or the ocean. State how the present discharge complies with or violates the SWRCB's Water Quality Control Plan for Ocean Waters of California or Water Quality Control Policy for the Enclosed Bays and Estuaries of California.

C. Biota--aquatic and terrestrial (emphasis should be placed on those items which may be affected by changes in the quantity or quality of water resulting from the project)

1. Habitat types
   a. Locations
   b. Quantities
   c. Condition (carrying capacity, stress, etc.)
2. Plant and animal species
   a. Locations
   b. Abundance and condition
3. Sensitive species or habitat
   a. Rare and endangered plant or animal species (occurrence, locations, abundance, condition).
   b. Sensitive or special use habitat (e.g., migration routes, spawning or nursery areas, marsh land), occurrence, locations, abundance, and condition.

D. Social

1. Land use patterns (agricultural, urban, industrial, etc.)
2. Zoning and other special requirements (e.g., coastal zone, flood plain, wild and scenic rivers, watershed, local plans, ocean plan, bays and estuaries policy).
3. Population density and trends
4. Recreation, esthetic areas
5. Housing and economy
6. Relationships to State and Regional Board policies and plans, including but not limited to the following:
   a. Basin Plans

   b. Water Quality Control Policy for the Enclosed Bays and Estuaries of California
   c. Water Quality Control Plans for Ocean Waters of California

III. Impacts

Impacts should be discussed in relation to those items included in the project and environmental description sections. Generally, concerns of the State and Regional Boards relate to effects on the quantity and quality of surface and groundwaters. Construction activities, as well as the effects of the project, must be discussed. Impact discussions should include description of direct and indirect effects of normal and worst case situations (e.g., project failures or accidents) and anticipated durations of impacts. Specific items to be included are as follows:

A. Changes in surface and groundwater quantity (total quantities and changes in seasonal variations).
   1. Effects on other users.
   2. Effects on surface water instream uses (fish and wildlife, riparian vegetation, recreation, esthetics).
   3. Effects on groundwater uses (water supply, saltwater barrier, ground subsidence, phreatophytes).

B. Changes in surface and groundwater quality (degree of change, seasonal variations, and effects).
   1. Physical changes
      a. Wastewater
      b. Drainage patterns

c. Temperature

d. Turbidity

2. Chemical changes (volumes, constituents, and concentrations)

a. Biostimulants

b. Toxic chemicals (acute and chronic)

c. Total dissolved solids

d. Dissolved oxygen

e. Oxygen demanding substances

3. Potential impacts from accidental releases of chemicals

a. Identity and properties including any hazards associated with chemical or physical properties

b. Proposed mode of transport

c. Expected transport routes and destinations, with identification of locations of vulnerable areas along route

d. Risk analysis for significant accidents during transport

e. Volume of material capable of being released into the environment at each stage of loading and transport

f. The forms of life or resources which might be affected by the release of materials

g. Countermeasures, including alternatives, which might be employed to prevent significant damage or reduce risk

C. Social and land use changes

1. Effects on special use areas (flood plain, wild or scenic rivers, prime agricultural land, and other special or protected areas)

2. Social effects (land use, cultural resources, energy, zoning, and other social/political restrictions or controls)

3. Conflicts with State or Regional Board policies or plans (see I.D.6.)

4. Population changes

5. Effects on regional and local services

a. Water supply

b. Waste disposal

c. Cumulative effects

6. Project related safety and health hazards

7. Energy relationships of project

8. Effects on cultural resources

D. Effects on aquatic and terrestrial biota

1. Vegetation, invertebrates, fish, and wildlife

2. Sensitive habitats

3. Rare or endangered species

IV. Alternatives

All project alternatives must be briefly described, including relationships to the environment, potential significant impacts, and reasons for rejecting each alternative. In addition, future options associated with each alternative should be discussed (e.g., reclamation, regionalization, etc.)

V. Mitigation measures for adverse impacts (methods to eliminate or minimize impacts, the levels to which impacts would be reduced, and the basis for selecting levels as acceptable). Where alternative mitigations are available, each should be discussed and the basis for selection of a specific alternative should be given. Water conservation measures and wastewater reclamation must always be discussed. Contingency plans in the event of accidents or project malfunctions should also be included, especially if the project has a potential for accidental releases of chemicals. EIRs for projects with a significant potential for chemical spills shall include a spill prevention and control plan, to prevent or limit damage. In addition, mitigation should be discussed in relation to specific binding measures to ensure their implementation as part of the project, and reasons for not implementing proposed mitigation measures should also be given.

H-6

7102-EIR-1

STATE OF CALIFORNIA -- BUSINESS AND TRANSPORTATION — EDMUND G. BROWN JR., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 11, P.O. BOX 81406, SAN DIEGO 92138

March 31, 1978

11-SD-75

RECEIVED
APR 5 1978
ENVIRONMENTAL MANAGEMENT

Mr. Tomas E. Firle
Environmental Management Coordinator
San Diego Unified Port District
P.O. Box 488
San Diego, CA 92112

Dear Mr. Firle:

Notice of Preparation of Draft EIR On The San Diego Unified Port District's Master Plan (SCH #78030604)

While we will continue to be interested in the Master Plan, we have concluded that CALTRANS District 11 probably does not have a responsible-agency role in preparation of this EIR. CALTRANS could have discretionary approval power for subsequent projects such as a possible second entrance bridge, but it seems unlikely that the Master Plan EIR would be used for those purposes.

We are assuming that a Master Plan EIR will focus on broad concepts and that separate documents will be needed for specific projects. CALTRANS will appreciate an opportunity to review the Master Plan EIR and may become a responsible agency for subsequent projects within the Unified Port District.

Sincerely,

Jacob Dekema
District Director of Transportation

By James T. Cheshire
James T. Cheshire
Chief, Environmental Planning Branch

JTC:ec

38

STATE OF CALIFORNIA—RESOURCES AGENCY EDMUND G. BROWN JR., Governor

DEPARTMENT OF NAVIGATION AND OCEAN DEVELOPMENT

1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445-6281

March 30, 1978

Mr. Tomas E. Firle, Port of San Diego
Environmental Management Coordinator
P. O. Box 488
San Diego, CA 92112

RECEIVED
APR 3 1978
ENVIRONMENTAL MANAGEMENT

Dear Mr. Firle:

SCH No. 78030604
San Diego Port Master Plan

The Department of Navigation and Ocean Development is not a regulatory agency and therefore does not issue permits of any kind. However, we do review and may comment upon U. S. Corps of Engineer public notices for proposed projects which are subject to that federal agency's jurisdiction. We review and may comment on environmental documents which are submitted to us by the State Clearinghouse. For review purposes on both environmental documents and Corps public notices, the department's interests lie in the following areas:

1. Potential for navigation hazards - to what extent might the proposed project affect safe navigation in California's waterways?

2. Beach erosion - to what extent might the proposed project affect the stability of coastal as well as inland beaches?

3. Boating and boating facilities - to what extent might the proposed project affect existing or planned small craft harbors, launching facilities, and other boating facilities? To what extent might recreational boating activities be affected?

If you have further questions concerning our role in project review processes, please contact the Environmental Unit (916/322-4165) of the Department of Navigation and Ocean Development.

Sincerely,

MARTY MERCADO
Director

cc: Office of Planning and Research

H-7

STATE OF CALIFORNIA—RESOURCES AGENCY EDMUND G. BROWN JR., Governor

DEPARTMENT OF FISH AND GAME
MARINE RESOURCES REGION
350 Golden Shore
Long Beach, CA 90802
(213) 590-5140

RECEIVED
APR 10 1978
ENVIRONMENTAL MANAGEMENT

7 April 1978

Mr. Thomas E. Firle, Coordinator
Environmental Management
San Diego Unified Port District
P.O. Box 488
San Diego, CA 92112

Dear Mr. Firle:

SCH 78030604 - Notice of Preparation San Diego Unified Port District (UPD) Master Plan Amendment
(UPD #78102-EIR-1)

We have reviewed the 1972 UPD Port Master Plan and find that it is a statement of objectives and guidelines for developing various segments of San Diego Bay that are under the jurisdiction of the Port District.

We believe that preparation of the proposed Amendment to the Port Master Plan provides an opportunity for the Port District to document the biological resources and water quality parameters of San Diego Bay within its jurisdiction and thus serve as a baseline informational document for the evaluation of future port projects.

Of particular concern to the Department are those areas of habitat, especially those located in south San Diego Bay, which have remained relatively undisturbed by developments within and adjacent to the bay.

With that in mind, we offer the following informational outline which we would like to see developed for inclusion in your Port Master Plan:

I. Description of Environmental Setting

The environmental description should provide sufficient information to allow an understanding of the interactions between the area (both local and regional) and the project. The description should include the present setting without the project, and the probable future setting if the project is not built. Emphasis should be placed on those items related to potential effects of the project on fish and wildlife. Specific items to be included are as follows:

1. Water

a. Uses of the water (water supply, receiving water, recreation and other uses.

b. Quality of the water, including existing problems and constraints.

With regard to water quality, parameters we believe should be examined include the following:

(1) Dissolved oxygen profile of the bay.

(2) Location and characteristic of present bay discharges. We are especially concerned with the following constitutents:

(a) Oil and grease

(b) Phenols - particularly PCB chlorinated benzenes and total identifiable hydrocarbons.

(c) Metals - particularly lead, chromium, zinc, copper and cadmium.

(3) Current circulation patterns and tidal flushing rates within the bay.

(4) History of red tide problems and algal blooms within the bay.

(5) Nutrient budget of the bay.

A thorough discussion of proposed port projects relative to the above items should prove valuable when considering:

(1) Dredging and landfill projects as they relate to circulation and tidal flushing.

(2) Nonpoint and point source discharges upon the water quality of the bay in terms of incremental increases or decreases of those discharge parameters.

In addition, the relationship of the various port projects to the water quality aspects of the 208 planning program should also be explored.

2. Biota - Aquatic and Terrestrial

a. Habitat types

1. Locations

2. Quantities (acres, lineal feet, etc.)

We recommend the use of the following habitat classification system:

(a) Subtidal

(1) Rock bottom (boulder or bedrock)

(2) Unconsolidated bottom (organic mud, sand, cobble/gravel, excavated)

(3) Aquatic bed (submergent vascular and algal)

(b) Intertidal

(1) Aquatic bed (submergent vascular and algal)

(2) Flat (mud, sand, cobble/gravel)

(3) Rocky shore (boulder, bedrock, artificial)

(4) Beach/bar (sand, cobble/gravel)

(c) Emergent wetland

(d) Scrub/shrub wetland

b. Plant and animal species

1. Geographical distribution

2. Abundance and condition

c. Sensitive species and sensitive or critical habitat

1. Threatened and endangered animal species (occurrence, locations, abundance, condition).

2. Sensitive, critical, or special use habitat--e.g. spawning and nursery areas, wetlands, (occurrences, locations, abundance, condition).

d. A discussion of any habitat enhancement projects undertaken and the success of such projects.

II. Impacts

Impacts should be discussed in relation to those items included in the project and environmental description sections. Generally, concerns of the California Department of Fish and Game relate to effects on fish and wildlife and associated aquatic and terrestrial habitat. Construction activities, as well as the effects of the project, must be discussed. Impact discussions should include descriptions of direct and indirect effects of normal and worst case situations (e.g. project failures or accidents, impacts at full buildout) anticipated durations of impacts, cumulative impacts, and unavoidable adverse impacts that cannot be mitigated.

III. Alternatives

All project alternatives including the no project alternative must be described. Include such things as the relationship to the environment, potential significant impacts, and reasons for rejecting or accepting each alternative. In addition, future options associated with each alternative should be discussed (e.g., expansion, reclamation, regionalization, etc.).

IV. Mitigation Measures

Mitigation measures for adverse impacts (methods to eliminate or minimize impacts, the levels to which impacts would be reduced, and the basis for selecting levels as acceptable). Where alternative mitigations are available, each should be discussed and the basis for selection of a specific alternative should be given. Mitigation should be discussed in relation to specific binding measures to ensure their implementation as part of the project, and reasons for not implementing proposed mitigation measures should also be given.

If you have any questions please contact Mr. Rolf E. Mall, Environmental Services Supervisor. He will be able to provide you with further consultation or assistance in regards to your plan amendment. His phone number is (213) 590-5140.

Thank you for the opportunity to discuss our concerns and provide early input into your planning process.

Sincerely,

Rolf E. Mall for

Robert C. Kaneen
Regional Manager

cc: State Clearinghouse (SCH 78030604)
Office of Planning and Research
1400 Tenth St.
Sacramento, CA 95814

STATE OF CALIFORNIA EDMUND G. BROWN JR., Governor
CALIFORNIA COASTAL COMMISSION
631 HOWARD STREET, 4th FLOOR
SAN FRANCISCO, CALIFORNIA 94105

March 13, 1978

RECEIVED
MAR 16 19
ENVIRONMENTAL MANAGEMENT

Tomas E. Firle
Environmental Management Coordinator
Port of San Diego
P.O. Box 488
San Diego, CA 92112

Dear Mr. Firle:

SUBJECT: Amendments to San Diego Unified Port District Master Plan, Ref. No. 78XY-EIR-1

This letter will outline the Coastal Commission staff comments on the scope and content of an amended Port of San Diego Master Plan. The California Coastal Act of 1976 as administered by the Coastal Commission, governs the preparation, submission, review and certification of port master plans and the procedures governing developments appealable to the Commission following implementation of a certified port master plan.

PORT MASTER PLAN

We would suggest that an identification of coastal conservation and development issues be made as the first step in the preparation of an amended port master plan. The purposes of the issue identification would be to: (1) determine the extent to which the existing Port of San Diego Master Plan is adequate to meet Coastal Act requirements; (2) determine the policies of the Coastal Act that apply in each Port planning district; and (3) delineate any potential conflicts between existing plans and development proposals and policies of the Coastal Act.

Following the identification of coastal planning issues, the Port should include the following in the scope of its Port Master Plan:

(a) The policies of Chapters 3 and 8 of the California Coastal Act of 1976 that apply to specific coastal resources, hazard areas, coastal access concerns, and use priorities, including consideration of public access and recommended uses of more than local importance, relating to the area of San Diego Bay governed by the Port Master Plan should be applied to determine the kind, location and intensity of port land and water uses that would be in conformity with the policies of the Act. This determination should include an analysis of the potential significant adverse cumulative impacts on coastal resources and of existing and potentially allowable development proposed in the Port Master Plan.

(b) The level and pattern of development by the Port should be reflected in land and water use plans, port tariff, zoning ordinances or zoning district maps and should include any other implementing actions for areas that are designated.

ENVIRONMENTAL IMPACT REPORT

The Port of San Diego Master Plan is intended to be a document providing guidance and objectives for future development of the Port. The purpose of an Environmental Impact Report for the Master Plan should be to indicate how the Plan would result in beneficial, adverse, or negligible impacts on the environment. An additional purpose of an EIR should be to suggest where modifications to the Plan be made to reduce or eliminate adverse impacts.

The Port Master Plan EIR may be prepared as a separate document or integrated into the Plan. The EIR should provide information on the Port Master Plan, a description of the environmental setting, the environmental impacts of implementation of the Plan, mitigating measures to minimize adverse impacts, and an analysis of alternatives to the Plan. The document should also include technical appendices (i.e. species lists, flora, etc.) to support the analysis, as well as the specific sections required by CEQA Guidelines.

EVALUATION CRITERIA

You have requested specific evaluation criteria to be used by the Coastal Commission in reviewing the Port Master Plan and EIR. The primary criterion are the goals objectives and policies of the Coastal Act of 1976.

H-10

In determining which of the Coastal Act policies should be given special attention, the Port should first prepare an inventory of coastal resources within the Port jurisdiction. A comparison of which resources would be most impacted by developments proposed in the Port Master Plan should follow with application of the relevant policies of the Coastal Act to the significant impacts.

The contact person for our agency on port planning matters is Michael Dadasovich (415) 543-8555, ext. 257. Please call if you desire clarification or need other Coastal Act interpretations.

Very truly yours,

MICHAEL DADASOVICH
Ports Coordinator

MD:lr

cc: State Clearinghouse

APPENDIX I

COASTAL COMMENTS ON

PORT'S PRELIMINARY MASTER PLAN

State of California, Edmund G. Brown Jr, Governor

California Coastal Commission
631 Howard Street, 4th floor
San Francisco, California 94105
(415) 543-8555

May 10, 1978

RECEIVED
MAY 11 1978
SAN DIEGO UNIFIED
PORT DISTRICT
PLANNING SERVICES

Frederick H. Trull
Planning Director
Port of San Diego
P.O. Box 488
San Diego, California 92112

Dear Fred:

The purpose of this letter is to help clarify the application of Coastal Act policies to Port of San Diego planning and permit activities which we discussed.

It is our understanding that the special port planning provisions of the Coastal Act were drafted to help maintain, promote, and modernize transportation, commercial, industrial, and manufacturing uses in the established ports of the State.

Chapter 8 policies were drafted to provide guidance for "port-related" developments, to protect such development from interference from non-port related development and to exempt port developments from Coastal Commission permit review after certification of a port master plan.

The Port of San Diego is unique from the other ports under jurisdiction of the Coastal Commission because large areas in the port are not generally associated with commercial port operations. These are areas which are not used to transport or store primary port cargoes or to provide support for port industrial, commercial or manufacturing activities. "Port-related developments" generally include transport and storage of containers, dry bulk, and liquid-bulk petroleum and other cargoes.

Chapter 8 of the Coastal Act excludes wetlands, estuaries and recreation areas and refers the planning for such resource areas to Chapter 3 of the Act for planning and permit policy guidance (Section 30700).

Also excluded from Chapter 8 review are appealable developments cited in Section 30715(a)-(f) and listed below:

(a) Developments for the storage, transmission, and processing of liquefied natural gas and crude oil in such quantities as would have a significant impact upon the oil and gas supply of the State or nation or both the State and nation. A development which has a significant impact shall be defined in the master plans.

(b) Waste water treatment facilities, except for such facilities, which process waste water discharged incidental to normal port activities or by vessels.

(c) Roads or highways which are not principally for internal circulation within the port boundaries.

(d) Office and residential buildings not principally devoted to administration of activities within the port: hotels, motels, and shopping facilities not principally devoted to the sale of commercial goods utilized for water oriental purposes: commercial fishing facilities and recreational small craft marina related facilities.

(e) Oil refineries.

(f) Petrochemical production plants.

So our "common sense" interpretation of the Act is that Chapter 8 policies refer to and protect commercial port developments associated with moving and storing waterborne cargoes and also provide for other beneficial uses consistent with the public trust where feasible, with Chapter 3 policies protecting the other categories of development that also appear in LCP's such as marinas, hotels, parks, etc.

It might be helpful to create a hypothetical development proposal and apply the appropriate Coastal Act policies. Our example would be development of the vacant land west of the ITT Facility at the National City Marine Terminal. The development could involve expansion of the existing container terminal located north of the site. Primary construction activities would involve paving, lighting, fencing, gantry crane, and rails, new wharf apron, and minor dredging adjacent to the site.

The shoreside portion of the site was not designated as an estuary, wetland or recreation area when the port jurisdictional maps were adopted by the Commission pursuant to Part IV of the Coastal Plan as provided for under Section 30700 of the Coastal Act. Chapter 8 policies of the Act would apply and in fact encourage primary port development.

The water area adjacent to the site is designated as estuarine on the port jurisdictional maps. Chapter 3 policies would be applied to the dredging and pile driving activities associated with the project. The Marine Environment policies of Section 30233 allow dredging of estuarine areas located in ports, if no feasible alternatives exist and where mitigation measures have been included.

If a primary port development cannot meet the primary Chapter 3 policies, "coastal dependent" industrial development may still be permitted under Section 30260 of the Act, again if alternatives are infeasible, public welfare is involved and mitigation measures have been included. This key section, has been used by the Commission to approve projects such as the Sohio crude oil terminal in Long Beach.

The port master plan you are developing should carefully assess future primary port needs and designate those areas anticipated for use or intensification of use for port-related development. Section 30708(c) of the Act gives highest priority to the use of existing land space within harbors for port purposes. Where major conflicts exist between Chapter 3 and Chapter 8 policy application, those policies most protective of port-related development should take precedence.

After the port master plan is certified by the Coastal Commission, port-related activities consistent with the certified plan may not be appealed to the Commission.

Developments which may be appealed include (1) those listed under Section 30715 of the Coastal Act; and (2) any development approved by the port governing body not designated as the principal permitted use or uses in the certified port master plan.

I hope this interpretation helps clarify the questions you have asked. I will be meeting with you shortly to discuss the port areas where Chapter 8 and Chapter 3 policies apply.

Very truly yours,

MICHAEL DADASOVICH
Ports Coordinator

MD:lr

cc: Bruce Warren
Jim Goff

I-2

December 29, 1978

TO: STATE COMMISSIONERS
SAN DIEGO REGIONAL COMMISSIONERS

FROM: MICHAEL FISCHER, EXECUTIVE DIRECTOR

SUBJECT: INFORMAL REVIEW OF PRELIMINARY DRAFT MASTER PLAN FOR THE SAN DIEGO UNIFIED PORT DISTRICT (for Regional Commission review on January 12, 1979 and for State Commission review on January 16, 1979).

Purpose of the Review

The San Diego Unified Port District has submitted a preliminary draft Master Plan to the Commission and has requested an informal review as permitted under Section 13629 of the regulations. The purpose of the informal review, which is a noticed public hearing, is to provide the District with an opportunity to hear Commission and public comments on the draft document before revising the plan and formally submitting the master plan for certification.

After the informal review, the port will conduct public hearings on the revised draft, prepare an environmental impact report on the plan and respond to comments received on the preliminary draft plan.

Formal submittal of the Master Plan is expected to occur sometime in the summer of 1979. Between now and the formal submittal, all interested parties are encouraged to review the draft plan and to submit comments directly to the Port and to the Commission. The Coastal Act provides for submission of Port Master Plans directly to the State Commission for certification. Regional Commissioners may advise the State Commission on port plans. Briefings and public hearings will be held before the Regional Commission to make public participation easier and to help develop the Regional Commission recommendation to the State Commission.

SYNOPSIS

Plan Summary

This is a preliminary draft master plan which the Port of San Diego intends to expand and revise over the next six months. The plan presents detailed intended uses of the land and water areas for nine planning areas of the Port. The proposed projects include nine or ten new hotels and a doubling of San Diego Bay's recreational boating slips by adding about 4,000 slips. The plan also calls for extensive new public parks, access and vista points, promenades, fishing places, and bike paths. There are not provisions for major new additions to marine related industrial activities in the Port. The major work yet to be done is the environmental impact report on the plan analysis of conformance of the plan with Coastal Act policies. This preliminary draft does present intended land and water uses in sufficient detail for Commission and public reaction and comment.

Major Issues and Recommended Guidance to the Port.

Staff recommends that the Commission provide the following guidance to the Port for revising and expanding the preliminary plan: (1) address the issue of access to the Bay for residents of the Barrio Logan district of the City of San Diego; (2) add specifics on proposed dredge and fill projects; (3) plan for increased public transit to serve the planned commercial and recreation areas; (4) study transportation and recreational boating carrying capacities and assure provision of adequate parking for land and water users; (5) coordinate Coronado Bayfront planning with the City; (6) justify or eliminate non-Bay related uses such as offices and non-marine related industrial uses; (7) consider boat launching ramps and dry boat storage as alternatives to added slip construction in open bay waters; (8) provide a more detailed analysis on the needs of the commercial fishing industry along with a program to satisfy those needs; and (9) provide a more active outreach for public participation in plan development.

INTRODUCTION

The San Diego Unified Port District was created by the legislature in 1962 and is governed by representatives of the cities of San Diego, Chula Vista, Coronado, National City and Imperial Beach. The jurisdiction of the District is the tidelands and submerged lands of San Diego Bay as well as the San Diego International Airport complex. The Board of Commissioners governs the actions of the District and is comprised of representatives appointed by the city council of each of the participating cities. The City of San Diego has 3 representatives and each of the other cities has one.

As part of the enabling legislation granting the State tidelands to the Port the port district was required to prepare a master plan for port developments. The first plan was adopted in 1964 and has been revised in 1972, 1975, and 1976. The passage of the Coastal Act of 1976 required further revisions to port master plans. This preliminary draft master plan is the latest refinement of the existing plan designed to include the special provisions of the Coastal Act.

The Coastal Commission review of the draft and final master plan is expected to extend over the next six to seven months (formal submittal of the plan is not anticipated before June of 1979). The public record will remain open for public

and other comments between this informal review of the preliminary draft plan and Final certification action by the State commission sometime this summer. Additional planning sessions and public hearings will be conducted by the port and the Commission over the next several months.

SUMMARY OF THE DRAFT PLAN

Purpose of the Master Plan

The port states that the preliminary draft master plan is intended to provide, after certification by the Commission and ADOPTION by the Board of Habor Commissioners, the official planning policies consistent with statewide interest for the development of the tide and submerged lands granted to the district as trustee of the State. The planning policies are expressed graphically on the offical Master Plan and Precise Plan Maps and in written form in the Preliminary Draft Master Plan. Eleven maps are included: a map of the entire bay illustrating Land and Water use allocations with provisions for commerical, industrial, recreation, public facilities, conservation and military uses; a bay map showing Circulation and Navigation systems involving highways, regionally significant arterial roads, belt line railroads, bridges, ship navigation corridor and terminals, and air terminal facilities; and nine maps for subareas of the bay illustrating Land and Water Use allocations as part of the precise plan for each district. More definitive planning policies are provided in those sections of the plan that deal with each of the nine Planning Districts (Figure 1).

Permitted Uses

Permitted uses for all Port District tidelands are identified in the Master Plan for all land and water areas. While specific uses are listed, the port's intent is to provide for uses in compatible use groups and not to exclude by design any particular use if similar in character and compatibility with other permitted uses. Permitted uses are grouped under the following main categories: Commercial Uses, Industrial Uses, Public Recreation Uses, Public Facilities, Circulation and Navigation System, and Conservation.

The Master Plan interpretation for each of the broad use designations is as follows:

Commercial Uses: Airport related commercial, commercial fishing, hotels and restaurants, pleasure craft marinas, sportfishing, marine sales and service, boat sales, boat building and repair, and specialty shopping.

Industrial Uses: Marine related industry, aviation related industry, and industrial business park.

Public Recreation Uses: Parks, promenades, open space, golf course, open bay, launching ramps, public fishing piers, public accessways, vista areas.

Public Facilities: Habor services, port administration, harbor police, fireboat stations, fire stations, maintenance yards, comfort stations, customs facilities.

Circulation and Navigation Systems: Regional arterial roads, local streets and parking, railroads, public transit, pedestrian and bicycle routes, airport, heliports, ship navigation corridors, main ship channels, second entrance to bay, ship anchorage areas, boat navigation corridors, and derelict craft storage.

Conservation: Wetlands, estuary, salt ponds, habitat replacement island.

Military: Navy fleet school, Navy small craft berthing, navy ship berthing.

Staff Note:

San Diego is unique from other ports under the Commission's jurisdiction because all of San Diego Bay was designated as an estuary in the 1975 Coastal Plan. Additionally the large number and extent of existing recreation developments and the highly sensitive south bay wetland areas cause most of the port jurisdiction to be governed by the policies of Chapter 3 of the Coastal Act rather than the special port planning provisions of Chapter 8.

Appealable developments proposed in port master plans are also governed by the policies of Chapter 3 of the Coastal Act. Under Section 30715 of the Act Appealable classes of development include: major developments for the handling of petroleum or LNG, wastewater treatment plants, major roadways, offices, hotels, non-water oriented shopping facilities, oil refineries and petrochemical production plants, commercial fishing facilities and recreational marina related facilities. Because of the large number of appealable developments proposed in the preliminary draft plan, very little of the document is related to the port planning provisions of Chapter 8 of the Coastal Act.

Planning Districts

The preliminary draft plan includes a precise plan for each of the port's nine planning districts. The precise plans are more detailed than the master land use plan and circulation and navigation plan maps. Anticipated projects are described for each of the planning districts covering the next five to ten years.

A summary of the major development proposals for each of the planning districts is included in the following discussion.

Shelter Island - District 1

The Shelter Island district has been developed over the past twenty-five years. The planned land and water uses for Shelter Island remain unchanged from existing uses which are predominately visitor serving commercial recreation. The major emphasis of the development program outlined in the precise plan is directed toward the relocation of non-compatible uses, the renovation of obsolete structures and improvement in the quality of landscaping.

Appealable projects listed for the district include renovation of the Shelter Cove marina building and landscaping; construction of a public access pier and construction of a new mooring facility in the commercial basin to include comfort station, landscaping, parking and new mooring buoys.

Figure 3 describes the sub-areas of the Shelter Island planning district and Figure 4 is a listing of the anticipated projects for the district.

Harbor Island/Lindbergh Field - District 2 (Figure 5)

Planning district 2 includes the San Diego International Airport transportation center with its industrial support activities and the Harbor Island recreation-commercial complex. The Precise plan retains Lindbergh Field in its present configuration with provision for improvements to parking and access.

Development on Harbor Island involves the expansion of an existing hotel and construction of a new hotel and marina complex in the east basin subarea. A new 600 room hotel, a 400-500 slip marina and a small aquatic center for use by the Sea Scouts are appealable developments listed in the precise plan.

The East Basin Industrial area (subarea 24 Figure 5) is recommended for redevelopment into light industrial/business park uses to include scientific laboratories, office space, marine oriented business and light manufacturing plants.

Figure 5 shows the planning subareas for this district and Figure 6 describes the anticipated projects.

Center City Embarcadero - District 3 (Figure 7)

The combined maritime activities of commercial fishing boats, merchant ships, Navy vessels and pleasure craft contribute to the dynamic fabric of the San Diego urban waterfront. The precise plan prepared for this district draws heavily on the Embarcadero Plan which was adopted by the City of San Diego and the Port District in 1976. Major development proposals for the district include renovation of existing marine terminal facilities to retain the active use of deep draft berthing and the functions of a working port. Improvements for the commercial fishing industry is given a major focus in the precise plan as well as provision for new visitor serving commercial recreation facilities overlooking the harbor and portions of the nearby downtown area.

Appealable developments include expansion of commercial fishing fleet berthing and construction of two new hotels and completion of the Embarcadero marina (400 slips). Little provision for expansion or development of primary port operations is provided for in this district plan.

Figure 8 lists the anticipated projects for this planning district.

Tenth Avenue Marine Terminal - District 4 (Figure 9)

The Tenth Avenue Marine Terminal is a developed marine related industrial area. Over 50,000 jobs are provided in the area, which is the major marine related industrial site in the County of San Diego. Channel depths of 40 feet provide access for large oceangoing vessels. The precise plan recognizes the severe lack of expansion area for marine related industry in this sector and the need to provide additional buffer areas between non-compatible uses on the perimeter of the district.

A public viewing area is proposed to provide a new public access point to the industrial waterfront.

Figure 10 describes the anticipated projects for the district, none of which are appealable.

National City Bayfront - District 5 (Figure 11)

The National City Bayfront is a developed and established marine related industrial area. Continued use and intensification of the marine related uses is projected for the planning period. Some commercial recreation is planned to cater to patrons of the industrial area. Bait and tackle shops, boat repair and equipment, water skiing and boating hardware are uses deemed appropriate. The Port states the market and development for this commercial area is dependent on the proposed extension of Tidelands Avenue and the construction of ramps connecting the area to Highway 54 and Interstate 5. Although not listed as such in the plan, the extension of Tidelands

Avenue would be an appealable development under Section 30715(c) of the Coastal Act as it would be a roadway not principally devoted to internal circulation within the port boundaries.

Anticipated projects are listed on Figure 12.

Coronado Bayfront - District 6 (Figure 13)

The plan identifies the following land use problems related to development of the remaining tidelands on Coronado: the existing heavy traffic volumes and concern that additional development will aggravate the problem; the highly visible aspects of the tidelands and the potential impacts of insensitive development on views and community appearance; and the competing demands on high-value land for commercial uses and for parks and community play fields. The plan describes development which would maintain significant vistas, create accessibility and linkages along the bay shoreline and continue uses which emphasize a low density development and an open space character. A dry storage marina and two hotels together with restaurants, speciality shopping, theater and landscaping are the major appealable developments in this planning area.

A list of anticipated projects is included as Figure 14.

Chula Vista Bayfront - District 7 (Figure 15)

Historically, development of this planning district has lagged behind the north bay because of the shallow water, distance from the harbor entrance, and the sensitive environmental attributes of the area. Eight planning subareas (Figure 15) have been delineated for the planning district.

A 33 acre portion of the northwest corner of the City of Chula Vista lies within the Port District jurisdiction. Under the Bayfront Plan the uplands are to be developed with medium density residential uses and the tidelands are reserved for maritime uses including the future expansion of the existing D Street fill.

The draft plan proposes to preserve a 2 acre portion of the Sweetwater Marsh between the D Street fill and the Rohr lease on G Street. About 52 acres in the planning district have been set aside for aviation related industry which includes the present industrial leases. Three major uses are projected for the H Street fill subarea to include a marine sales and service complex, a public park, and a hotel restaurant complex as the focal point of the developments.

The existing Chula Vista boat basin would be completed by adding approximately 1100 slips, and a peninsula would be created extending from the existing basin to provide for commercial recreation uses, an additional 1200 boat slips and public parkway. The creation of the peninsula would require dredging a new small craft entrance channel and filling approximately 60 acres of the south bay tidelands.

The Port is presently constructing a 55 acre island adjacent to one of San Diego Gas and Electric's power plant cooling water intake dikes to provide new habitat as a compensation for other projects which would cause adverse impacts on habitat areas.

Figure 16 is the project list for the Chula Vista Bayfront planning district.

Silver Strand South - District 8 (Figure 17)

This planning district is comprised of three areas: unleased submerged tidelands adjacent to Silver Strand State Beach, submerged tidelands leased to the Coronado

Cay Company, and unleased land on East Island. Two islands represent nearly all of the Port District administered land area, North Island has an area of 11.4 acres all designated for commercial recreation. East Island occupies 19.7 acres designated for commercial recreation and park uses. Water areas adjacent to the islands are set aside for recreational boat berthing.

A second entrance to San Diego Bay is shown on the Navigation and Circulation element of the preliminary plan. It would be constructed across the Naval Amphibious Base just north of this planning district. The Port District endorses and supports the second entrance but recognizes that it would be a federal project and that the likelihood of its construction in the near future is remote.

Figure 18 depicts the anticipated developments for this planning district.

South Bay Salt Lands - District 9 (Figure 19)

Planning District 9 comprises the land and water areas at the extreme southerly end of San Diego Bay. The land is uniformly flat and the water very shallow. Most of the planning district was leased prior to the formation of the Port District directly from the State of California by the Western Salt company. Existing State law provides that the salt ponds will revert to State control in 1984. The Department of Fish and Game will be given management of the area for the creation of a wildlife preserve. The plan proposes no changes for this planning district in the interim.

STAFF COMMENTS AND RECOMMENDED GUIDANCE TO THE PORT

Overview. The preliminary draft master plan for the San Diego Unified Port District gives heavy emphasis to visitor serving commercial/recreation developments, provides for a doubling of the existing recreational boating slips in the Bay, and provides for new public parks and access points together with public promonades and bikepaths. The degree of detail provided for the majority of the anticipated developments is excellent.

The preliminary draft plan does not anticipate large growth in the primary port or heavy industrial development categories. Much of the port related activity is centered around marine related or marine support uses. The plan does depict growth in the light industrial and general office use categories, which should be port related or water dependent to be justified under the port planning provisions of the Coastal Act.

The Port is presently working on the plan's/environmental impact report and the implementation procedures and guidelines for the plan. These will be provided in subsequent drafts of the plan.

Coastal Act Conformance

To be consistent with the requirements of the Coastal Act a port master plan is required to include the following elements:

(1) The proposed uses of land and water areas, where known.

(2) The projected design and location of port land areas, water areas, berthing and navigation ways and systems intended to serve commercial traffic within the area of jurisdiction of the port governing body.

(3) An estimate of the effect of development on habitat areas and the marine environment, a review of existing water quality, habitat areas, and quantitative and qualitative biological inventories and proposals to minimize and mitigate any substantial adverse impact.

(4) Proposed projects listed as appealable in Section 30715 in sufficient detail to be able to determine their consistency with the policies of Chapter 3 of the Coastal Act.

(5) Provisions for adequate public hearings and public participation in port planning and development decisions.

A port master plan is further required to present information in sufficient detail to allow the Commission to determine its adequacy and conformity with the applicable policies of the Coastal Act.

Land and Water Area Uses Permitted uses for all Port administered tidelands are identified by land and water use designations in the Preliminary Master Plan. The level of detail provided is greater than that developed for the Port of Long Beach certified Master Plan. The Port states that "the evolution of the plan is based on a sequence of studies and activities that consider the physical, environmental, social and economic and political determinants of land use."

One of the primary studies that should be used in preparing a plan is the environmental impact report for the project. The Port has not completed the plan EIR and thus that crucial element to the evolution of the master plan is not included in the analysis.

This is of particular concern when assessing the intensity of use or carrying capacity of the Bay given the projected buildout of commerical recreation and recreational boating activities depicted in the draft plan.

The requirement for design and location of port land and water areas and systems needs further clarification in the plan. For example, the plan calls for additional dredging in navigation channels to accommodate the larger anticipated oceangoing vessels without mention of the water depths or amounts of dredge spoil or disposal sites. Recognizing that any major dredging activity would be initiated by the Corps of Engineers, the port should nevertheless define in the master plan the anticipated depth requirements and disposal areas if within the Bay.

Port master plans are required under the provisions of Chapter 8 to "contain information in sufficient detail to allow the Commission to determine its adequacy and conformity with the applicable policies of [the Coastal Act]". San Diego is unique from the other ports under the Commission's jurisdiction because of the large commercial recreation areas and the estuarine and wetland qualities of the bay. Thus the majority of the port plan must show conformance with the policies of Chapter 3 of the Coastal Act. Section 30711(b) implies that the burden is on the Commission to determine the adequacy and conformity of the plan to the applicable policies. Unlike the Port of Long Beach Plan certified by the Commission, the Preliminary Port of San Diego Plan does not contain analysis of Coastal Act policies. The Port states that the applicable policies of both chapter 3 and 8 of the Act have been analysed in reaching the land and water use designations for the updated plan although not specifically stated or referenced in the document.

Effects of Development The preliminary draft master plan has not had an environmental impact statement prepared. Such a document is required under CEQA and must address Section 30711(a)(3) of the Coastal Act requiring measures to minimize and mitigate substantial adverse impacts associated with implementation of the master plan.

Appealable Projects A project list including appealable developments is included in the draft plan for each specific planning district. The list describes the type of project and who will do the development, the port or a tenant. The project lists contain only a limited description of the development and no substantiation of conformance with the policies of Chapter 3 of the Coastal Act is included in the draft plan. Such projects, which are for the most part hotels and marinas, need additional detail on conformance with the applicable policies of Chapter 3 and also performance standards developed for application by the Port to the development leases.

Major Issues Preliminary staff review of the draft plan together with comments received from interested parties suggest that the following areas of the draft plan are either not adequately covered or unresolved with respect to the requirements of the Coastal Act:

(1) Public access for the Barrio Logan district of the City of San Diego through primary port operations to the Bay; (2) lack of specifics on dredging and filling operations over the twenty year planning period; (3) provision for public transit or shuttle systems between existing transportation hubs and future commercial/recreation centers; (4) carrying capacity studies for the intensity of uses described in the plan; (5) resolution of development scenarios for the Coronado Bayfront using advice from the City coordinated with the LCP; (6) justification for non-port related or non-water-dependent uses, particularly office related uses as depicted in the present plan; (7) lack of consideration for additional small craft launching ramps or dry boat storage areas as an alternative to additional slip construction in open bay waters; (8) provide a more detailed analysis of the needs of the commercial fishing industry along with a program to satisfy those needs; and (9) provide a more active outreach for public participation in plan development.

1. Public Access for Barrio Logan. To summarize a very complicated issue, the Barrio Logan residents, supported by the City of San Diego in their draft LCP, would like access to the waters of the Bay for recreation purposes, a use which they historically had, but which has been eliminated by industrial developments created between the community and the Bay. The Port claims that access will be provided (Page 79 plan). However, the access will be limited because of the industrial character of the area and the conflict between recreation and primary port uses which are considered hazardous and not compatible with intensive recreation uses. Liability and Port security issues are associated with the port's concerns. Legislation has been introduced (AB47 Chacon) to remove certain tidelands form the Port administration and return them to the City of San Diego for the purpose of providing public recreation facilities. Access for the Barrio area through the Port is one of the areas described in the Chacon bill. The Commission must determine what is "reasonable access" given the competing uses in the area and to what extent the risk problems cited by the port are overriding.

2. Dredging and Filling. Three major projects require the placement of fill material in shallow water wetlands habitat. These projects include the expansion of the Chula Vista Boat Basin, the proposed marina just north of the Chula Vista Boat Basin, and the expansion of the J Street fill. Several comments have been received including those of the Fish and Wildlife Service questioning the need for such additional fill areas. The south bay is the last area for bay-esturaine habitat in San Diego Bay, a fact recognized by Section 30233 (c) of the Coastal Act. The south bay environs contain valuable wetlands, important to both fish and wildlife resources. The extensive mudflat and shallow water habitats are nursery grounds

for sport fishes as well as ecologically important fishes that are forage food for both commercial and sport fisheries. When exposed during low tides, the mudflats are heavily used by shorebirds as foraging area, while migratory waterfowl use the open water for both resting and foraging.

The preliminary draft master plan for the south bay environs would modify an existing bay estuarine habitat and may reduce the important nursery functions of San Diego Bay. The proposed second entrance to the bay would exacerbate the problem.

The environmental impact report being prepared by the Port to support the planning concepts presented for the south bay area should devote considerable attention to the adverse impacts associated with the additional Bay filling proposed as well as to exploring alternatives to the intensive commercial/recreation developments described in the present draft.

3. Public Transportation and Parking. The plan projects up to ten new hotels and approximately 4000 new recreational boating slips without mention of transportation impacts and alternatives to deal with parking and access problems. Some have suggested that the Port develop a shuttle bus system to serve existing commercial recreation complexes and to tie these facilities with transporation hubs such as the airport. The Act does not call for a detailed transportation plan to accompany port land use plans, but some discussion of potential problems and solutions to development induced transportation problems needs mention.

Existing industrial users in the port area are constrained by inadequate parking and public transportation facilities. The induced congestion from employee jockeying for the few available spaces creates impacts beyond the industries' normal sphere of influence. The problem is not one that can be solely solved by the Port. The City of San Diego in particular should, as part of the LCP program, work with the Port and industry to develop a traffic and parking management program.

I-7

4. Carrying Capacity. How much additional commercial recreation and marina development can San Diego Bay accommodate? The answer is not evident in the preliminary plan. Projections for an additional nine or ten hotels and some 4000 boat slips (approximately a doubling of the present number of slips) cannot be rationally discussed without some assessment of the carrying capacity of the infrastructure serving the Port District and the open water areas, given the competing uses of commercial fishing recreational boating and military traffic in the bay. The carrying capacity issue is key to the certification of the plan and is one which should be addressed in the plan EIR and the master plan document.

5. Coronado Bayfront Development. Letters have been received by the Commission on the issue of the development of the Coronado bayfront tidelands and concerns over both the intensity and scale of development as well as the opportunities for public participation in development of the precise plan for the bayfront.

In April of 1978, the Port of San Diego presented three alternative land use plans to the City Council of Coronado in a public meeting. These alternative plans were presented to elicit from the City Council comments on the development scenarios for an area which has been open for many years following the demolition of World War II temporary buildings. Following extensive discussion at the meeting, the Council appointed a Land Use Committee to review the Port's alternatives and to make recommendations to the Council by March 1979. This Committee has held a number of meetings and their views will be available for the second draft of the port master plan.

Staff does not intend to comment on the development scenarios for this planning sector of the Bay until the City's views are known and the environmental impact report for the Coronado Bayfront precise plan is completed.

6. Priority of Use. Section 30708 (c) of the Coastal Act requires that all port-related developments be located and designed to give highest priority to use of existing land space within harbors for port purposes including, but not limited to, navigational facilities, shipping industries and necessary support and access facilities. The preliminary draft plan would allow for the continued use of existing non-port related developments and provides for increases in general light industrial growth without commitments for primary port uses. In the Commission's certification of the Port of Long Beach Master Plan one of the conditions assigned withheld certification for all non-port related uses in the affected harbor district.

The port should consider a time table for phasing out non-port related uses to give higher priority in the plan for uses which are either primary port in nature or are directly supportive of primary port or marine related activities.

7. Recreation. Opportunities for recreation in the port have expanded considerably since the original master plan was adopted and many of the planning concepts implemented. Expanded small craft marinas, public parks, fishing access and recreational/commercial developments all provide for significant public enjoyment of the Bay environs.

In revising the preliminary draft plan the Port should consider expanding other types of recreation opportunities such as recreational vehicle parking, dry boat storage and new public accessways wherever possible. The consideration of these additional recreational opportunities will help satisfy Section 30708 (d) of the Coastal Act requiring other beneficial uses consistent with the public trust in all port-related developments.

8. Commercial Fishing Industry. The plan provides four areas around the bay for use by the commercial fishing industry. These areas include: the Shelter Island Commercial Basin; berthing along the seawall in the crescent area adjacent to Harbor Drive; around the "G" Street Mole where another breakwater pier is proposed to provide a protected fishing boat basin to the south; and in the long-range future in the proposed Chula Vista Marina area. The plan also contains an estimate that tuna seiners and baitboats are anticipated to maintain a need for approximately 7,000 lineal feet of berthing space daily, and that peak demands on berthing facilities for baitboats can be reasonably anticipated to triple or quadruple to about 5,000 lineal feet if the patterns of fish migration should shift southward toward San Diego. Finally, the plan estimates that the peak demand for berthing space is anticipated for tuna seiners at approximately 10,000 lineal feet daily.

Given the emphasis in the Coastal Act on the protection and enhancement of the commercial fishing industry, the plan should attempt to more closely relate demand to the provision of additional facilities in the Bay for commercial fishing. The Port District should address the potential problems of locating new commercial fishing facilities around the "G" Street mole area where there are problems with surge and its south eastern orientation, and should determine if there are other more appropriate locations. The plan should also include provision for the necessary ancillary facilities required by the commercial fishing industry including but not limited to unloading docks, maintenance facilities, and storage areas. Finally, given the environmental constraints of any major expansion of boating facilities in the Southbay area including the problems associated with a bay second entrance, the proposed commercial fishing facilities shown in the Chula Vista Bayfront area should be relocated into the northern portion of the Bay.

9. Public Participation. One of the weakest areas in the preliminary plan is lack of evidence that public participation has been provided for in development of the updated master plan. The port has conducted sessions with the planning directors of the cities comprising the district for the purpose of coordinating the port plans with the LCPs. However, staff has noticed concern from local government and interest groups in the District about inadequate opportunities for discussion of the plan.

The Port conducted a public hearing on the existing master plan June 13, 1978 for the purpose of gathering information on the plan's conformance or lack of conformance with the Coastal Act. Only three speakers presented testimony at that hearing. Reasons for the poor showing may be attributable to: (1) A lack of outreach beyond the strict public hearing notice requirements of the California Administrative Code on the part of the port; (2) feeling by the public that the formal atmosphere of a public hearing is intimidating public participation or; (3) disinterest on the part of the public in the San Diego Bay environs.

Staff believes that additional outreach in the form of public port planning workshops should be conducted by the Port to meet the intent of Section 30711(a)(5) of the ports Chapter in the Coastal Act.

10. Other Issues. Portions of the Chula Vista Bayfront planning district may be suited for long-term expansion of primary port industrial growth. The preliminary draft plan projections for commercial/recreation uses in this district may compromise future primary port needs for new development. Key to the development of alternatives for each planning district in subsequent drafts of the master plan should be an evaluation of primary port growth needs and areas with open water frontage and undeveloped backland area in all areas of the bay.

Erosion problems exist throughout much of the bay. Kellog Beach in the Shelter Island planning district is an area suffering particularly severe erosion problems. Rock revetments are being considered for many of the erosion prone areas, including Kellog Beach. Long term solutions to the continuing problems of erosion in the bay are not adequately addressed in the draft plan. The Kellog Beach area also suffers from inhibited public access and apparently some unpermitted encroachments across port tidelands by adjacent property owners. Consideration should be given to eliminating these encroachements and creating new linkages to the main Shelter Island commercial/recreation use areas.

APPENDIX J

COASTAL COMMENTS ON

DRAFT EIR CONTENT

State of California, Edmund G. Br[illegible] Jr., Governor

California Coastal Commission
631 Howard Street, 4th floor
San Francisco, California 94105
(415) 543-8555

JU[illegible]
SAN DI[illegible]
PORT D[illegible]
PLANNING SERVICES

May 31, 1979

Mr. Frederick H. Trull
Planning Director
Port of San Diego
P.O. Box 488
San Diego, CA 92112

Dear Fred:

I would like to discuss a number of points you raised at the May 10, 1979 meeting between our staffs on prospects for Coastal Commission certification of the Port of San Diego Master Plan. In general, we feel the Regional and State Commission informal reviews of your draft plan were very useful and that you have made substantial progress in developing a plan that can be certified this year. I hope you will receive the following six suggestions in a cooperative spirit. We both have the goal of placing a certifiable port plan before the Commission in the near future.

C-1

1. The issues raised in the draft plan informal review process indicate to us that you have nearly all the requirements for a plan that can be considered for certification. The proposed land and water uses are in sufficient detail. As you know, the two added components needed are the EIR and an implementation section indicating how the Port will process coastal development permits and make Coastal Act policy findings after certification. Though you may have had a different impression, the Commissioner comments and public testimony were actually favorable to the plan because there were few comments that your Plan's proposed land and water uses appear contrary to the policies of the Coastal Act.

A number of questions were asked that need answers. The Commission was concerned about coordination with local governments and interest groups. Commissioners asked that the Port make a good faith effort to coordinate with local governments and interest groups prior to plan submittal, but not to hold off submittal or delete planning districts pending total agreement by all parties on the few difficult issues which relate to greater than local concerns, which should be resolved by the Commission.

2. One of the most controversial issues is whether part of Planning District 4, the Tenth Avenue Marine Terminal, should be a park and/or Bay access to serve the Barrio Logan area. This is an issue because it has been raised by the City of San Diego and community groups. As Mike Dadasovich wrote you on May 10, 1978, the Chapter 8 Port Planning policies govern the certifiable permitted uses for this Planning District. We ask that you try to resolve this issue with the City prior to submittal.

But if resolution is not possible, we suggest that the final plan fully discuss the application of Chapter 8 policies to this area, as you did in the "Port District Staff Response to the State Coastal Commission Staff Report on the Preliminary Draft Port Master Plan" and that you fully analyze the alternative of using part of the area for access or a park in the EIR and in the plan. I have not taken a position on this issue, and staff will develop a position to recommend to the Commission after formal plan submittal.

3. The other most controversial issue seems to be proposed uses for the Coronado tidelands. The draft plan is very specific about the proposed uses and your "Port District Staff Response" outlines a long history of attempts to resolve possible uses with the City of Coronado. Commissioners' comments clearly indicate they expect efforts to reach agreement with the City to continue and hopefully to resolve issues prior to plan submittal. But if agreement cannot be reached in the next few months we urge you to submit a plan for this planning district for certification. With well documented attempts to resolve issues with the City, the issue before the Commission will be whether the plan conforms to the policies of Chapter 3 of the Coastal Act. While total agreement at the local level is desirable, we cannot indefinitely prolong consideration of plans for certification until all parties are in agreement.

4. As discussed at the meeting, we suggest you add analysis in the plan on the future need for commercial fishing facilities and consider the proposals for added facilities made by fisherman. The draft plan, of course, already does consider some added facilities.

5. The D Street fill may well be a project that might be removed from the plan because of the probable difficulties in making findings that the project is consistent with Coastal Act policies, especially in light of the uncertainties with Corps of Engineers and City of Chula Vista plans for the area. The other major fill project in the plan, the Chula Vista Marine arm, will, of course, need clear analysis in the EIR on its possible environmental impacts. We will ask the fish and wildlife agencies to review this part of the plan closely.

6. Your suggestion of developing a joint mailing list is an excellent one and we would like to do that. We all hope for broad public involvement as the plan nears certification, and Commissioners clearly indicated in the informal review that they expect the affected cities to be given active opportunities to coordinate their LCPs with the Port plan and to comment on the Port plan. However, if, after city involvement, agreements are not reached on all issues, that is not grounds for the Port to delay plan submittal. Any remaining disagreements can be aired before your Board of Harbor Commissioners and before the Coastal Commission. The coastal planning process is supposed to resolve issues, not prolong them. That is why there are deadlines in the Coastal Act.

As you can see, this is not as extensive list of suggestions. We would suggest that you include a revised and somewhat expanded version of the "Port District Staff Response" with the final plan to address the issues raised in the informal review. Please

let us know how we can assist you in finalizing a Port of San Diego Master Plan for submittal to the Commission this summer. When the ninety day period for action starts after submittal, we anticipate publishing an early staff summary and recommendation to serve as a basis for a San Diego Regional Coastal Commission public hearing and recommendation to the State Commission, a State Commission public hearing in the second month of the review period, and State Commission action on certification in the third month.

Very truly yours,

MICHAEL L. FISCHER
Executive Director

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cc: Tom Crandall
Mike Kennedy
Tom Firle, Port of San Diego
Lois Ewen
Harriet Allen

APPENDIX K

NOISE CONTROL PLAN

DEC 12 1978
Amended 1/16/79

San Diego International Airport - Lindbergh Field

Noise Control Plan

I. Introduction

Pursuant to Public Utilities Code §§21669 et seq., the Department of Transportation of the State of California has adopted regulations known as the California Noise Standards ("Noise Standards"). Utilizing the Community Noise Equivalent Level ("CNEL") methodology to describe noise generated by jet aircraft operations, the Noise Standards establish phased criteria in respect of noise generated by aircraft operations at certain airports within the State of California, including Lindbergh Field. The ultimate regulatory objective of the Noise Standards is that, by January 1, 1986, certain land uses now affected by airport noise (primarily residential, schools, churches, etc.) will be subject to noise levels less than 65dB CNEL. The present criterion for airports such as Lindbergh Field is 75dB CNEL.

As the Department of Transportation has itself recognized, there is not at present, nor within the scope of foreseeable technology, any practical means by which Lindbergh Field can meet the criteria of the Noise Standards. Therefore, the San Diego Unified Port District has applied annually to the Department of Transportation for a variance from the Noise Standards criteria pursuant to the provisions of 21 Cal.Admin. Code §5075.

On January 17, 1978, the Department of Transportation granted to Lindbergh Field a variance from the provisions of Section 5062 of the Noise Standards, subject to certain specified conditions ("Variance Decision"). Condition 3 of the Variance Decision provides:

"Respondent San Diego Unified Port District shall promptly develop an (sic) implement to the extent possible. (sic) A comprehensive noise control plan for Lindbergh Field in accordance with the provisions of the Federal Aviation Noise Abatement Policy. Said plan shall be prepared within six months from the effective date of this decision; provided, however, that upon good cause shown therefore the Department of Transportation may extend this time period for an additional six months.

"The comprehensive noise control plan shall set forth and discuss the various noise reduction programs that respondent has already established, those plans which it intends to establish or hopes to establish in the future and respondent shall further describe and discuss those noise abatement plans or programs which respondent has considered but rejected for any reason.

"The respondent's comprehensive noise control plan shall include but is not limited to the following items:

(1) Curfew

(2) Restrictions to types of aircraft

(3) Runway preferential use

(4) Flight paths or tracks

(5) Operational techniques

(6) Land acquisition

(7) Land use compatibility

(8) Airport design

(9) Aircraft scheduling

(10) Location and time for engine run-up

The comprehensive noise control plan shall be prepared after allowing for consultation with FAA and the final plan is to be submitted to the FAA for its review and comment allowing appropriate time for FAA action prior to the due date for adoption."

In response to these requirements, the Port District retained Systems Control, Inc. (then Olson Laboratories, Inc.) ("SCI") to assist the Port District in the development of the noise control plan described in Condition 3. Specifically, SCI was commissioned to evaluate the noise benefits or disbenefits which would occur as a result of implementation of alternative aircraft operational procedures or restrictions at Lindbergh Field. Because of the time limitations on this project and its implementation, SCI was directed to consult regularly with

representatives of the Federal Aviation Administration during its analysis, and to seek continuously the views of FAA regarding any of the alternatives to be studied by SCI. SCI's report of their analysis of operational alternatives and limitations for Lindbergh Field was submitted on December 8, 1978.

Based upon the information developed by SCI, as well as other information available to the Port District through public comments and numerous hearings, studies and other proceedings regarding Lindbergh Field which have occurred or been developed during the past 15 years, the Port District has adopted the following noise plan for Lindbergh Field.

II. Alternatives Affecting Aircraft Operational Procedures and Techniques

Three of the items which the Port District was to consider in the development of its plan were a preferential runway program, alteration of existing arrival and departure paths, and changes in aircraft operational techniques (Items (3), (4) and (5) in Condition 3 of the Variance Decision). The SCI report evaluates each of these items. However, as noise abatement strategies, each of these matters also require consideration of safety issues since they involve the actual flight of aircraft. Decisions regarding operational techniques and procedures utilized by aircraft in flight are under the sole regulatory jurisdiction of the Federal Aviation Administration, and the proprietor of an airport is in no position to substitute its judgment for that of FAA regarding the proper balance between noise abatement and safety considerations

in evaluating any one of these items. In view of FAA's sole authority and responsibility for regulatory action in this particular subject area, the plan of the San Diego Unified Port District in respect to these items is as follows:

A. The Port Director is directed to forward a copy of the SCI Report to appropriate officers of the Federal Aviation Administration specifically referencing the information provided in that report regarding preferential runway, flight paths, and operational techniques. In view of the obligations which the Congress of the United States has imposed upon the Federal Aviation Administration through various amendments to the Federal Aviation Act of 1958, directing FAA to take such steps as it deems necessary or desirable to afford relief from noise in respect to those matters under its regulatory authority and control, the Port Director will request FAA to evaluate carefully the information provided in the SCI report to determine what noise benefits FAA can provide to the San Diego community.

B. The Port Director is directed to advise FAA and appropriate representatives of the airline industry of the Port District's support for continued research and experimentation regarding aircraft operational procedures which would be effective in reducing noise.

III. Alternatives Affecting Land Use

In litigation now pending in the San Diego Superior Court, certain owners of real property have alleged that the Port District has taken an interest in their property as a result of noise generated by jet aircraft using Lindbergh Field. Such an interest is commonly referred to as an avigation easement. The Port District's response in the litigation has been, among other things, that if the operation of jet aircraft at Lindbergh Field has indeed resulted in the acquisition of an avigation easement for noise in respect of the plaintiffs' properties, then the use constituting such an easement existed for a period more than five years prior to the time that the plaintiffs first filed their action, and has continued since that time. Therefore, it is the position of the Port District that it has acquired all necessary avigation easements for noise by prescription.

The Port District's position regarding its acquisition of a prescriptive easement for noise applies not only to those particular parcels of real property involved in pending litigation, but applies equally to any and all parcels of real property which may be subject to noise generated by jet aircraft operations at Lindbergh Field.

Because of its past acquisition of these easements, the Port District is in compliance with the California Noise Standards and has a "noise impact area", as defined in the regulations, of zero. However, in previous variance proceedings, the Port District has stated publicly its position that, despite

its acquisition of prescriptive easements, it was voluntarily participating in the variance proceedings because the Port District had hoped that the variance proceedings might evolve into a forum in which ideas regarding noise control at Lindbergh Field could be responsibly discussed. It has been expressly agreed by the parties to the past variance proceedings, and confirmed by the administrative law judge in each proceeding, that the Port District's application for a variance was made without prejudice to its position regarding the acquisition of its prescriptive easements.

A. Land Acquisition

Additional land acquisition programs are at least theoretically possible, including acquisition of fee interests rather than easements, and relocation of persons now residing in a noise impacted area. For the time being, the Port District has considered and rejected any program involving acquisition of a fee interest in residential properties for a number of reasons: First, the expense of such a project would be substantial. It is clear that, at least for the present, the citizens of California are interested in reductions, not major increases, in government spending. Second, acquisition of fee interests in residential properties would necessarily be accompanied by a conversion of the land to uses more compatible with airport operations,

significantly changing the character of some existing neighborhoods. The Port District has had many indications from residents in adjacent areas that they do not presently favor such a program.

B. Land Use Compatibility

To the extent that zoning or other land use regulation could be used to convert land to uses which the Noise Standards would deem compatible with the operation of Lindbergh Field - or to prevent development of new and additional incompatible uses - such regulatory authority rests primarily with the City of San Diego. The Port District understands that, under compulsion of state law, the City is seeking to enforce some measure of soundproofing for new construction to meet a specified interior noise criterion. However, the City has also continued to permit new high density residential development within the "noise impact area" of Lindbergh Field even though the Port District has advised it of the inconsistency of its actions with the objectives of the Noise Standards, and despite objections by other interested persons and agencies.

The Port District therefore requests that the City of San Diego not make any further discretionary land use decisions which would serve to increase incompatable development within Lindbergh Field's

1986 criterion CNEL contour; and the staff is directed to continue to encourage the City of San Diego to make land use decisions which are consistent with the operation of Lindbergh Field, and to object to those decisions which are inconsistent with the operation of the airport. In addition, should the City make a firm commitment to pursue aggressively the use of its land use regulatory authority in an attempt to improve materially the existing situation, the Port District remains willing to cooperate in the development and implementation of such a program.

IV. Alternatives Affecting Airport Use

Certain items listed in Condition 3 of the Variance Decision come within a general category of regulations commonly known as airport use restrictions, specifically, items: (1) ["curfew"], (2) ["restrictions to types of aircraft"], (9) ["aircraft scheduling"], and (10) ["location and time for engine run-up"]. The plan of the Port District with respect to each of those items is as follows:

A. Curfew

The SCI study shows that expansion of the Port District's existing curfew to the hours of 11:00 p.m. to 7:00 a.m. would have virtually no effect on Lindbergh Field's existing CNEL contours. However, the CNEL methodology itself may or may not be adequate to

describe the impact or benefits to be realized from a nighttime curfew. It has been approximately three years since the present curfew was adopted by the Port District, and the Port District believes that it would be appropriate to solicit public comment and hold public hearings in the near future to permit the Port Commissioners to consider the effect of the existing curfew, and to consider whether or not there is any reason why the existing curfew should be expanded, contracted, or otherwise modified.

Therefore, the Port Director is directed to provide proper notice to the public and all other interested parties, and to schedule a public hearing before the Commissioners to take place not later than March 31, 1979, for the purpose of considering possible modifications to the existing curfew. Further, because of the complexities of the curfew issue, the notice of hearing shall invite all interested parties to submit written comments or proposals regarding modifications to the curfew in advance of the public hearing so that the Commissioners may have an opportunity to review carefully any such submissions.

B. Type Restrictions

The landing permit agreements between the Port District and most of the air carriers now serving Lindbergh Field expire in March of 1982. A few of

the landing permits expire prior to that date, but are renewable annually. The staff is directed to prepare an ordinance, to be effective in March of 1982 and upon expiration of the current landing permit agreements, which will thereafter prohibit any person from operating any aircraft at Lindbergh Field which is not certificated under the provisions of Part 36 of the Federal Aviation Regulations.

C. Aircraft Scheduling

Other than the matters discussed elsewhere in this noise plan, the Port District does not presently perceive any significant noise benefits which would be sufficient to justify further restricting the flexibility of the air carriers in the scheduling of their operations.

D. Jet Aircraft Maintenance Runups

The Port District has regulated the time and location for jet engine maintenance runups at Lindbergh Field for more than ten years. The SCI report indicates that no meaningful noise benefit would be realized by further restricting necessary maintenance operations at the airport. Therefore, the Port District will maintain in full force and effect its current regulations and procedures regarding jet engine maintenance runups.

V. Other Matters

There are certain other steps which the Port District believes can be taken in respect of noise control at Lindbergh Field which do not fall within the traditional categories of aircraft operational procedures, land use regulation, or airport use restrictions. Those items are as follows:

A. Airport Design

At the time the Port District retained Systems Control, Inc. to analyze various noise abatement alternatives which might be applicable to Lindbergh Field, there had been some public indication that the United States of America might be considering the abandonment of certain property to the north of Lindbergh Field now used for military purposes (the Marine Corps Recruit Depot ["MCRD"]). For that reason, the Port District requested SCI to analyze generally the feasibility of constructing a new runway through MCRD sufficient to serve air carrier aircraft, and to evaluate what noise benefits, if any, might be realized from the construction of such a runway. The SCI report considers two such runways, both on a heading of 300°. One alternative is a runway with a length of 7200 feet, and the other is a 10,000 foot runway. In addition, SCI analyzed two different departure profiles from those runways in order to determine their respective noise impacts.

It is apparent from the SCI report that the construction of a new Runway 30, either 7200 or 10,000 feet in length, could be used only for take-off purposes and would not be available for landings. Thus, the construction of the runway would have no effect on the noise impact to the east of Lindbergh Field presently caused by aircraft landing on Runway 27. (Approximately 90% of the current landing operations occur on Runway 27.) Nor would the construction of the new runway have any effect on the noise impact on the areas to the west of Lindbergh Field which presently occur when conditions require aircraft to land on Runway 9. (Approximately 10% of current landing operations occur on Runway 9.) Further, during that period of time when conditions require aircraft to depart on Runway 9, the construction of the new runway would have no effect on the noise impact which now occurs to the east of Lindbergh Field during those take-off operations.

Nevertheless, it is clear that the construction of this new runway would provide substantial noise relief to the area west of Lindbergh Field, because it would redirect a significant portion of the take-offs which now occur on Runway 27. It appears to the Port District that this noise benefit may be of sufficient magnitude to justify the expense of constructing a new Runway 30.

Unfortunately, the land needed for the construction of Runway 30 is presently being used by the United States Marine Corps, and the Port District has no legal means, by eminent domain or otherwise, to acquire the property without the consent of the United States of America.

Therefore, the Port Director is directed to advise appropriate local, state and federal officials of the results of the SCI study by providing them with a copy of the SCI report, together with any additional information which might better explain the benefits to the public which would be realized by the construction of Runway 30; and the Port Director shall convey the Port District's interest in acquiring this property should it become available at any time in the future.

B. Noise Abatement Advisory Committee

As noted earlier, the Port District is currently a defendant in multi-million dollar litigation

initiated by certain persons generally residing in the Loma Portal area of San Diego. The Port District has a public duty and responsibility to defend this litigation, and it has, and will continue to do so. Unfortunately, the existence of litigation substantially inhibits free and open communication between the parties. It now appears that a major segment of these lawsuits will be tried early in 1979, and may well be completed by July of 1979.

The Port District has previously expressed the view, which it continues to hold, that litigation of this type is not an effective means to achieve noise control, nor is it a proper means to strike the delicate balance between the San Diego's need for an adequate commercial air transportation facility and the desire of persons living around the airport for a reduction of noise levels. Also, it is clear that the proprietor of an airport has limited authority to achieve a reduction of incompatible uses adversely affected by airport operations, and that other entities have the authority and responsibility for taking many of the measures which might result in some noise reduction.

The Port District is, of course, fully aware that there are substantial competing interests involved in the operation of Lindbergh Field which often appear to be irreconcilably in conflict.

Nevertheless, if further attempts to improve the noise environment around Lindbergh Field are to be effective, all of these competing interests must be involved in a forum where they can communicate directly with each other. Obviously, such communication can be effective only if each of the interested parties and entities participates in good faith, with a full recognition of the valid and substantial nature of the concerns of each of the other parties, and with a willingness to accept the reality that compromise, rather than "total victory", is the only possible solution.

It may be that the conflicts between these competing interests are so great that they cannot work effectively together. Nevertheless, the potential benefit to be realized from effective communication between these interests is also great, and justifies an effort by the Port District to provide a forum in which those competing interests could work together if they so choose.

Therefore, and subject to any further advice from the Port District's special counsel for litigation, on July 1, 1979, the Port District will establish a Noise Abatement Advisory Committee to be composed of representatives of all governmental agencies, commercial interests, the airline industry,

and citizens groups which have a direct interest in the operation of Lindbergh Field.

The staff is directed to prepare recommendations regarding the composition of this Advisory Committee, as well as any recommendations they may have regarding its procedures.

~~C. Acceptance of Service By Commercial Air Carriers Not Presently Serving Lindbergh Field~~

In recent months, the current administration and the United States Congress have taken action to begin a process of reducing regulatory restrictions on the operation of the commercial air carriers in the United States. This process has been commonly referred to as "deregulation." As a result of one of the initial steps in this process of deregulation, certain air carriers, not presently serving Lindbergh Field, have been granted authority by the federal government to commence service to San Diego. Those air carriers have now, or are expected shortly to request the Port District's permission to commence scheduled operations at Lindbergh Field.

Deregulation of the commercial air carriers is a significant and substantial change in federal policy. Its effects on airport operations and airport use cannot now be accurately predicted. The ~~ultimate effects of airline deregulation on the~~

~~noise environment at Lindbergh Field are also~~ extremely difficult to ascertain at the present time, and it may well be that this federal decision to deregulate will eventually require a substantial reevaluation by the Port District of its approach to noise control at Lindbergh Field.

Therefore, the Port District hereby declares a moratorium, effective through December 31, 1979, on the use of Lindbergh Field for scheduled operations by any commercial air carrier not presently serving the airport. This moratorium is intended to permit the Port District sufficient time to evaluate the possible consequences of deregulation on the approach by the Port District, as proprietor, to noise control at Lindbergh Field. It is anticipated that, upon formation of the Noise Abatement Advisory Committee discussed above, procedures and policies for regulation of the use of Lindbergh Field by new and existing commercial air carriers will be a priority item for discussion, and that appropriate recommendations will be made by staff to the Port Commissioners for their consideration prior to the ~~expiration of this moratorium.~~ | Deleted by Resolution 79-16, January 16, 1979.

D. Periodic Review of the Noise Control Plan

Striking a proper balance between the desire for noise reduction and assuring adequate commercial air

transportation service to San Diego is an extremely delicate process and involves numerous factors which are subject to change. Therefore, it is the intent of the Port Commissioners to review this noise control plan annually, or more frequently in the event that special circumstances should so dictate. The staff is therefore directed to schedule a regular time and meeting for the purpose of the annual review of this noise control plan. In connection with the annual review by the Commissioners, the staff shall prepare and submit a report to the Commissioners regarding the implementation and effects of the noise control plan during the past year, together with its recommendations, if any, for modifications to the plan.

VI. Conclusion

Under the existing institutional scheme of airport noise regulation, the authority of an airport proprietor to directly regulate airport and aircraft operations is limited. Much of the authority to take regulatory action which would have the effect of reducing noise belongs to other government agencies. The Federal Aviation Administration has sole authority and responsibility for actions affecting aircraft operation. In San Diego, the City of San Diego has the primary authority and responsibility to make and effect land use decisions designed to improve, rather than aggravate, the

existing noise situation. Therefore, this noise control plan cannot, and does not, constitute a promise for substantial future noise reduction.

To the extent that the Port District does have authority to strike the delicate balance between adeguate air transportation service and noise reduction, it has in the past, and will continue in the future to exercise that authority. This noise plan, however, is intended also as an invitation to other government agencies which have authority to take meaningful noise reduction action to accept their responsibility for the consequences of their actions or inactions, and with that understanding, then to work together in a determined effort to improve the existing situation.

PORT OF SAN DIEGO
AND LINDBERGH FIELD AIR TERMINAL

(714) 291-3900 • P.O. Box 488, San Diego 92112

April 24, 1980

SUBJECT: FINAL ENVIRONMENTAL IMPACT REPORT
"MASTER PLAN, San Diego Unified Port District"
(UPD #78102-EIR-1; SCH #78030604)

Enclosed is the Final Environmental Impact Report, "MASTER PLAN, San Diego Unified Port District" (UPD #78102-EIR-1; SCH #78030604), which was certified by the Board of Port Commissioners on March 18, 1980, Resolution 80-73. This Final EIR was filed with the District Clerk on February 8, 1980, Document #12590. Two appeals were filed (Documents #12634 and #12635) and considered by the Board on March 18, 1980, prior to Final EIR certification, and denied.

The Port District's "Comments Received and Response" section (blue pages) had previously been sent directly to all who commented in writing by the close of the Public Hearing on the Draft EIR, held on December 4, 1979. This included communications received through the State Clearinghouse process, SCH #78030604. Respondents were notified at the Certification Hearing which was scheduled for and took place on March 11 and March 18, 1980.

Sincerely,

for

TOMAS E. FIRLE, Coordinator
Environmental Management

TEF/MVN/rc

Enclosure: Final EIR (UPD #78102-EIR-1)

File: UPD #78102-EIR-1

CERTIFIED MAIL RETURN RECEIPT REQUESTED

14051

Re Master Plan Environmental Impact Report . . . . .]

RESOLUTION 80-73

WHEREAS, the San Diego Unified Port District (Port District) is the trustee of all tidelands and submerged lands within the Port District's jurisdiction; and

WHEREAS, the San Diego Unified Port District proposes to further amend its adopted Master Plan of 1972, as amended, which is a conceptual development plan for the entire area of the Port District's jurisdiction, located in the member cities of San Diego, Chula Vista, National City, Imperial Beach and Coronado; and

WHEREAS, pursuant to the California Environmental Quality Act of 1970, as amended, State Resources Guidelines, and procedures adopted by the Port District, an Environmental Impact Report (EIR) has been prepared; and

WHEREAS, the Final Environmental Impact Report has been filed and two (2) appeals regarding the adequacy of said report have been received in a timely manner and are on file in the office of the Port District Clerk, Document Numbers 12634 and 12635; and

WHEREAS, the appellants were notified in writing that the Board of Port Commissioners would act on the appeals; and

WHEREAS, the Board, in open public session, considered the appeals, directed inclusion of the Staff Report with the Final EIR (Document 12590) and denied them; and

WHEREAS, the Environmental Impact Report is before the Board of Port Commissioners, and Port District staff has concluded that it is adequate and recommends amending the Master Plan with certain specific conditions, NOW, THEREFORE,

BE IT RESOLVED by the Board of Port Commissioners of the San Diego Unified Port District, as follows:

1. The Board hereby certifies that the Final Environmental Impact Report concerning the Port District Master Plan amendments proposed by the Port District, on file in the office of the Port District Clerk, Document 12590, has been completed in compliance with law, the California Environmental Quality Act of 1970, as amended, the State Resources Agency Guidelines, and Port District procedures for environmental documents, and that the Board and other Port District officials having final authority over approval of the project have reviewed and considered the information in the Report.

2. The Board finds that the contents of the Report are an exercise of the independent judgment and analysis of the Port District and are sufficient, accurate and objective.

3. Based on the information contained in the Final Environmental Impact Report, the Board finds and determines:

a. The Port District proposes to adopt amendments to the Port District Master Plan to provide revised land and water use policies, designations and management guidance for Port District development, including categories for Commercial, Industrial, Public Recreation, Public Facilities, Conservation and Military in nine (9) Planning Districts.

b. Projects which are currently under way and in conceptual stages have been described and discussed extensively in both the Port District Master Plan, as amended, and the Environmental Impact Report, and individual projects which are known or contemplated are tabulated.

c. The amendments include specific land/water category use changes from more intensive to less intensive uses for a number of relatively small areas. An exception in size is the reconfiguration of boating facilities adjacent to the Chula Vista Small Boat Basin; the 1972 Master Plan's conceptual configuration was schematically realigned to simplify the fill and dredge requirements.

4. The Board finds that there exists the potential for environmentally significant adverse specific project consequences which may result from implementation of a specific project for additional fill and development of the J Street Second Peninsula Extension. Because of this potential, an Environmental Impact Report shall be required prior to carrying out any such project.

5. Any subsequent specific project involving the former Rowing Club structure, which was placed on the National Register of Historic Places on August 30, 1979, according to the California State Historic Preservation Officer, shall be subject to all applicable environmental and other particular regulations which may pertain to its status, irrespective of adjacent land or water use designations of the Port District Master Plan, as amended.

6. The Board recognizes the fact that all specific project proposals identified in the Master Plan, but not limited thereto, are subject to subsequent environmental review to determine, and, if necessary, mitigate and minimize specific project impacts, and that specific Environmental Impact Reports may be required as appropriate. Where significant impacts are determined, project specific mitigations will be required which are feasible and adequate to control the project's impact.

7. The Board finds and concludes that the Master Plan project, as amended, its Goals, Objectives and land/water use designations as proposed will not have a significant effect (substantial adverse impact) on the environment.

8. The Board further finds, as an overriding consideration, that the "no-project" alternative is not available to the Port District as it would result in the inability of the Port District to satisfy the requirements of the California Coastal Act of 1976, for submittal of an appropriate Port District Master Plan, including an environmental inventory and development plan information.

BE IT FURTHER RESOLVED that the parcel of tide and submerged lands bounded by the mean high tide line on the northeast, Crosby Street and its extension into the Bay on the southeast, the pierhead line on the southwest, and a line parallel to and northwesterly of Beardsley Street on the northwest is hereby excluded from the certification action; and

BE IT FURTHER RESOLVED that this action by the Board of Port Commissioners constitutes a final environmental approval and for that purpose only the Port District approves the proposed Master Plan project, subject to Paragraphs 4, 5 and 6, above, which are hereby required as part of the project. The Port Director or his authorized representative is authorized and directed to file, in accordance with law, a Notice of Determination with the Secretary of Resources and the San Diego County Clerk.

ADOPTED this 18th day of March, 1980.

Presented By: DON L. NAY, Port Director

By _____
ASSISTANT PORT DIRECTOR

Approved: JOSEPH D. PATELLO, Port Attorney

_____

SW
3/13/80

SAN DIEGO UNIFIED PORT DISTRICT

Office of the Clerk

CERTIFICATION OF VOTE

Passed and adopted by the Board of Port Commissioners of the San Diego Unified Port District on 3-18-80 . by the following vote:

Commissioners	Yeas	Nays	Excused	Absent	Abstained
Miles D. Bowler	☐	☐	☒	☐	☐
Ben Cohen	☒	☐	☐	☐	☐
Phil Creaser	☒	☐	☐	☐	☐
Bernice Leyton	☒	☐	☐	☐	☐
Lorenz H. Ruehle	☒	☐	☐	☐	☐
Alois E. Smith	☒	☐	☐	☐	☐
L. M. Wolfsheimer	☒	☐	☐	☐	☐

AUTHENTICATED BY:

Bernice F. Leyton

Chairman of The Board of Port Commissioners

WILLIAM R. HUNT

Clerk of the San Diego Unified Port District

By Sally Lombardo

Deputy Clerk

(SEAL)

Office of the Clerk of The San Diego Unified Port District

Ordinance/Resolution Number 80-73

Adopted 3-18-80

Publication date

Effective date

Recorded on microfilm roll number

UPD FORM 022 (rev. 9-79)

Re Amendment of Noise Control Plan for San Diego International Airport, Lindbergh Field . . . . .

RESOLUTION 79-16

BE IT RESOLVED by the Board of Port Commissioners of the San Diego Unified Port District, as follows:

At the direction of the Federal Aviation Administration, the Board of Port Commissioners hereby amends the Noise Control Plan for San Diego International Airport, Lindbergh Field, adopted on 12 December 1978 and on file in the office of the District Clerk as Document No. 11531, by deleting Section V(c) of said Plan which established a moratorium on the admission of new air carriers to Lindbergh Field.

ADOPTED this 16th day of January, 1979.

Presented By: DON L. NAY, Port Director

By _____
ASSISTANT PORT DIRECTOR

Approved: JOSEPH D. PATELLO, Port Attorney

_____

sw
1/17/79

K-11

Re Adoption of Noise Control Plan for San Diego International Airport, Lindbergh Field . . . . .

RESOLUTION 78-346

BE IT RESOLVED by the Board of Port Commissioners of the San Diego Unified Port District, as follows:

That the Noise Control Plan for San Diego International Airport, Lindbergh Field, on file in the office of the District Clerk as Document No. 11531, is hereby adopted.

ADOPTED this 12th day of December, 1978.

Presented By: DON L. NAY, Port Director

By _____
ASSISTANT PORT DIRECTOR

Approved: JOSEPH D. PATELLO, Port Attorney

_____

sw
12/12/78

SAN DIEGO UNIFIED PORT DISTRICT
Office of the Clerk
CERTIFICATION OF VOTE

Passed and adopted by the Board of Port Commissioners of the San Diego Unified Port District on January 16, 1979, by the following vote:

Commissioners	Yeas	Nays	Excused	Absent	Abstained
Miles D. Bowler	☐	☒	☐	☐	☐
Ben Cohen	☐	☐	☒	☐	☐
Phil Creaser	☐	☐	☒	☐	☐
Bernice Layton	☒	☐	☐	☐	☐
Lorenz H. Ruehle	☒	☐	☐	☐	☐
Alois E. Smith	☒	☐	☐	☐	☐
Dudley D. Williams	☒	☐	☐	☐	☐

AUTHENTICATED BY:

Miles D. Bowler
Chairman of The Board of Port Commissioners

Clerk of the San Diego Unified Port District

By Mary Ann Greenfell
Deputy Clerk

(SEAL)

K-12

Office of the Clerk of The San Diego Unified Port District

~~XXXXXX~~ Resolution Number 79-16

Adopted January 16, 1979

Publication date

Effective date

Recorded on microfilm roll number

LPD Form 022 (Rev. 1-81)

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