CLERK'S FILE COPY

#200

(R-2004-737)

RESOLUTION NUMBER R- 298839

ADOPTED ON FEB 0 2 2004

A RESOLUTION OF THE COUNCIL OF THE CITY OF SAN DIEGO APPROVING THE NATURAL RESOURCES MANAGEMENT PLAN FOR THE FIRST SAN DIEGO RIVER IMPROVEMENTS PROJECT [FSDRIP].

WHEREAS, the First San Diego River Improvement Project [FSDRIP] runs along a 7000-foot section of the San Diego River in Mission Valley, is the mitigation site for a 100-year flood control project completed in 1988, and is funded through an agreement with owners of property benefiting from the flood control; and

WHEREAS, the proposed FSDRIP Natural Resources Management Plan [the Plan] provides for the future protection and sustainable management of the natural resources within FSDRIP, pursuant to the Army Corps of Engineers' permit and conditions; and

WHEREAS, upon adoption by the City Council, the Plan will become the operational document for maintenance and management of FSDRIP; and

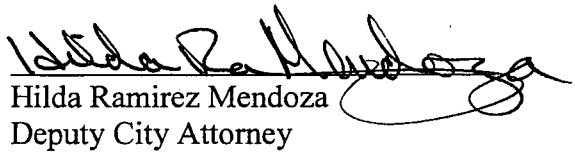
WHEREAS, on September 26, 2001, the FSDRIP Maintenance Assessment District Committee recommended adoption of the Plan by the City Council; and

WHEREAS, in September 2001, the FSDRIP Advisory Committee recommended adoption of the Plan by the City Council;

WHEREAS, in March 2002, the San Diego River Park Foundation recommended adoption of the Plan by the City Council; NOW THEREFORE,

BE IT RESOLVED, by the Council of the City of San Diego, that the Council adopts the First San Diego River Improvement Project (FSDRIP) Natural Resources Management Plan dated September 2001.

APPROVED: CASEY GWINN, City Attorney

By 
Hilda Ramirez Mendoza
Deputy City Attorney

HRM:cfq:jp
01/20/04
Or.Dept: Park &Rec.
R-2004-737

3124

REQUEST FOR COUNCIL ACTION
CITY OF SAN DIEGO

1. CERTIFICATE NUMBER (FOR AUDITOR'S USE ONLY)		
TO: CITY ATTORNEY	2. FROM (ORIGINATING DEPARTMENT): Park and Recreation Department	3. DATE: 1/24/2004

4. SUBJECT:
FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT (FSDRIP) NATURAL RESOURCE MANAGEMENT PLAN

5. FOR INFORMATION, CONTACT (NAME & MAIL STA.)	6. TELEPHONE NO.	7. CHECK HERE IF BOX 1472A "DOCKET" SUPPORTING INFORMATION" HAS BEEN COMPLETED ON PAGE 2:
R. STRIBLEY MS35A / A. HIX MS 804A	(619) 525-8230/(619) 533-6721	☐

8.COMPLETE FOR ACCOUNTING PURPOSES

					9. ADDITIONAL INFORMATION / ESTIMATED COST:
FUND					None
DEPT.					
ORGANIZATION					
OBJECT ACCOUNT					
JOB ORDER					
C.I.P. NUMBER					
AMOUNT					

REPORT TO COUNCIL

10. ROUTING AND APPROVALS

ROUTE (#)	APPROVING AUTHORITY	APPROVAL SIGNATURE	DATE SIGNED	ROUTE (#)	APPROVING AUTHORITY	APPROVAL SIGNATURE	DATE SIGNED
1	DEPARTMENT DIRECTOR	P&R	1/14/04	8			1-15-04
2	EOCP		1/14/04	9			
3	EAS		1/14/04	10			
4	CITY MANAGER	HERRING	1-16-04	11			
5	CITY ATTORNEY		1-20-04	✓	MGR. DOCKET COORD: RW 1/21/04		COUNCIL REP.
6	ORIGINATING DEPARTMENT	P&R	1/21/04		RULES COMMITTEE B	☐ CONSENT ☐ REFER TO:	☒ ADOPTION DATE: 2-2-4
7							

11. PREPARATION OF: ☒ RESOLUTIONS ☐ ORDINANCE(S) ☐ AGREEMENT(S) ☐ DEED(S)

1. Adopt the First San Diego River Improvement Project (FSDRIP) Natural Resource Management Plan dated September 2001.

CITY ATTORNEY
CIVIL DIVISION
JAN 16 PM 12:24

11A. MANAGER'S RECOMMENTATIONS:
Adopt the resolution.

R-298839 FEB 02 2004

12. SPECIAL CONDITIONS (REFER TO A.R. 3.20 FOR INFORMATION ON COMPLETING THIS SECTION.)

COUNCIL DISTRICT(S): Frye (6)

COMMUNITY AREA(S): 22 (Mission Valley)

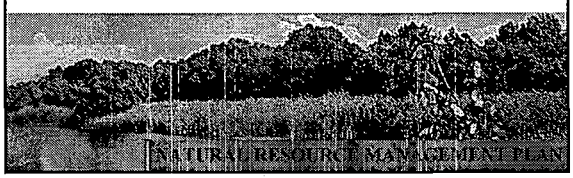
CITY CLERK INSTRUCTIONS: Send all copies of resolution via Robin Stribley, MS 35A

ENVIRONMENTAL IMPACT: The Natural Resource Management Plan is exempt from CEQA pursuant to State CEQA Guidelines General Rule 15307.

PLANNING/MSCP: MSCP indicated they did not need to be a sign-off on this 1472

ATTACHMENTS: 1. City Manager's Report

FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT (FSDRIP)



PURPOSE OF THE NATURAL RESOURCE MANAGEMENT PLAN

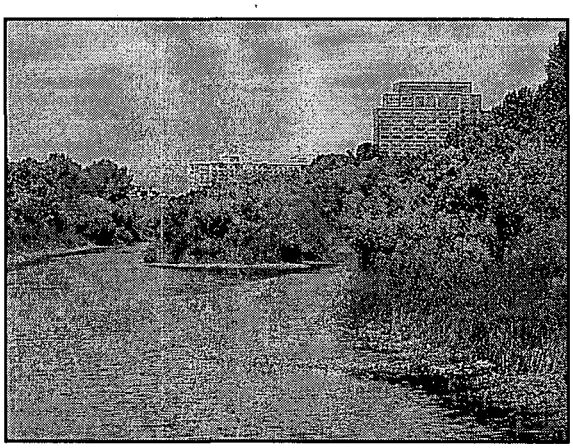
- COMPLETE LAST PERMIT REQUIREMENT
- ESTABLISH MANAGEMENT PRACTICES TO PROTECT BIOLOGICAL RESOURCES
- MAINTAIN FLOOD CONTROL CAPACITY
- PROVIDE FOR PUBLIC USES WITHOUT NEGATIVELY IMPACTING ENVIRONMENT

FSDRIP RESOURCES

- 90 RESIDENT/ SEASONAL SPECIES OF BIRDS
- ENDANGERED LEAST BELL'S VIREO NESTING ONSITE
- 2 SENSITIVE HABITATS: RIPARIAN WOODLAND AND FRESHWATER MARSH
- ACCESS FOR PASSIVE RECREATION

FSDRIP MANAGEMENT GUIDELINES

- MAINTENANCE OF NATIVE HABITAT
- REDUCTION OF ADJACENT DISTURBANCES
- MAINTENANCE OF HYDRAULIC EFFICIENCY
- PROVISION FOR EDUCATIONAL OPPORTUNITIES



R - 298839

THE CITY OF SAN DIEGO

MANAGER'S REPORT

DATE ISSUED: January 28, 2004 REPORT NO. 04-021

ATTENTION: Honorable Mayor and City Council
Agenda of February 2, 2004

SUBJECT: First San Diego River Improvement Project (FSDRIP) Natural Resource Management Plan

SUMMARY

Issue - Shall City Council adopt the First San Diego River Improvement Project (FSDRIP) Natural Resource Management Plan dated September 2001?

Manager's Recommendation - Adopt the FSDRIP Natural Resource Management Plan dated September 2001.

Other Recommendations -

1. San Diego River Park Foundation - In March 2002, the San Diego River Park Foundation staff reviewed the FSDRIP Natural Resource Management Plan, found it to be consistent with their mission relative to development of the San Diego River Park, and therefore, recommended City Council adoption of the Plan.

2. FSDRIP Maintenance Assessment District Committee - In September 2001, the FSDRIP Maintenance Assessment District Committee voted unanimously to recommend City Council adoption of the FSDRIP Natural Resource Management Plan dated September 2001.

3. FSDRIP Advisory Committee - In September 2001, the FSDRIP Advisory Committee reviewed the FSDRIP Natural Resource Management Plan and unanimously recommended adoption by City Council.

Fiscal Impact - None with this action.

R- 298839

BACKGROUND

The First San Diego River Improvement Project (FSDRIP) is a 45-acre flood control and mitigation project located within San Diego's Mission Valley area along a 7,000-linear foot section of the San Diego River (Figure 1). The U.S. Army Corps of Engineers (CORPS), U. S. Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG) required 26.8 acres of riparian woodland, 9.7 acres of freshwater marsh, and 8.7 acres of open water as mitigation for the 100-year flood control project proposed by local land owners who needed the project in order to develop their land. The CORPS and CDFG required that the aforementioned habitat acreage be planted and maintained in perpetuity within the project limits. The City of San Diego took on the permit responsibilities for creating the project. A Maintenance Assessment District, funded by the benefiting property owners, was established to pay for monitoring, maintenance and dredging activities. The flood control project was completed in 1988.

As part of the permit process, a FSDRIP Advisory Committee was created comprised of representatives from CORPS, USFWS, and CDFG, FSDRIP property owners, and City staff to provide guidance to the City on implementation and monitoring of the FSDRIP habitat creation/restoration effort. The vegetation planted to meet mitigation requirements progressed well and, in 1995, the CORPS and CDFG agreed to sign off the project as meeting success criteria on the condition that a Natural Resource Management Plan (NRMP) be prepared. The NRMP was the last CORPS requirement for final permit approval.

The NRMP was previously docketed for City Council approval in December 1997, but was pulled at the request of the affected property owners in the Maintenance Assessment District, who wanted more time to review the document. These owners then formed the FSDRIP Maintenance Assessment District Committee (MADC) to review all matters related to the Assessment District and FSDRIP. A representative from the MADC filled the FSDRIP Advisory Committee's property owners' representative position.

By October 2000, after extensive review, the FSDRIP Advisory Committee and MADC were in agreement on all elements of the Natural Resource Management Plan except construction noise parameters during the least Bell's vireo breeding season. For another year, between October 2000 and September 2001, the two groups worked together to develop mutually acceptable language related to this issue. The September 2001 FSDRIP Natural Resource Management Plan includes all revisions and amendments approved by the FSDRIP Advisory Committee and the FSDRIP MADC. The Plan is consistent with all FSDRIP mitigation and monitoring requirements. The both the FSDRIP MADC and the FSDRIP Advisory Committee unanimously recommended City Council adoption of the September 2001 FSDRIP Natural Resource Management Plan. The Plan was subsequently referred to the San Diego River Park Foundation for review, and was returned with a recommendation for approval in March of 2002.

ALTERNATIVES

1 Adopt the FSDRIP Natural Resource Management Plan (September 2001) with changes.

2 Do not adopt the FSDRIP Natural Resource Management Plan (September 2001).

Respectfully submitted,

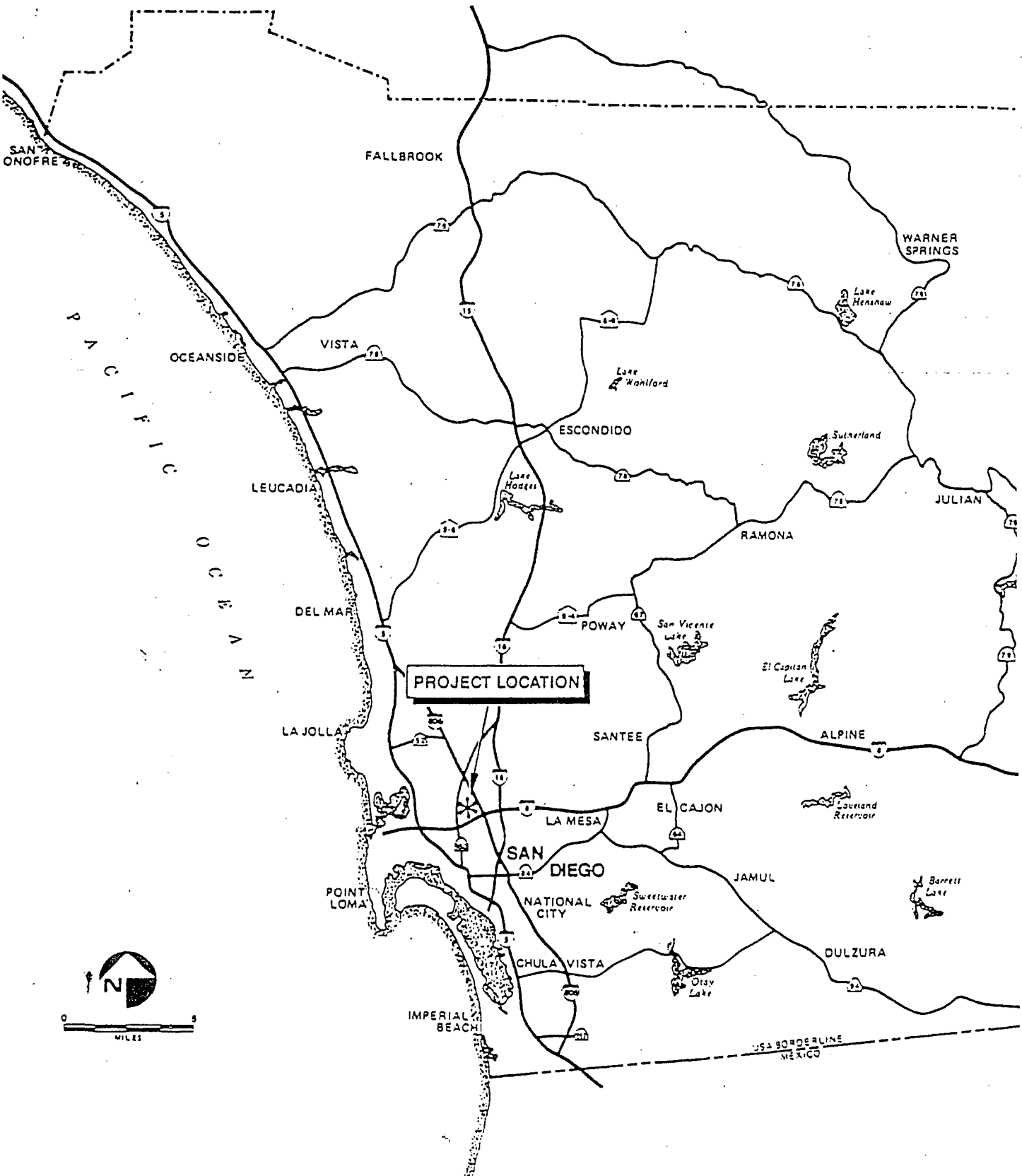
Ellen Oppenheim
Director, Park and Recreation

Approved: Bruce A. Herring
Deputy City Manager

OPPENHEIM/RS

Attachments: 1. Location Map
2. Executive Summary of FSDRIP Natural Resource Management Plan (September 2001)

Note: Due to the size of the Plan, it is not available in electronic format. A copy is available for review in the Office of the City Clerk at 202 "C" Street, San Deigo.



PREPARED BY OGDEN

FIGURE 1

REGIONAL LOCATION MAP

CITY OF SAN DIEGO PARK & RECREATION DEPT.

FSDRIP NATURAL RESOURCE MANAGEMENT PLAN
EXECUTIVE SUMMARY

The First San Diego River Improvement Project (FSDRIP) is located within San Diego's Mission Valley area along a 7000-foot section of the San Diego River, from Qualcomm Way west to Highway 163. FSDRIP is the mitigation site for a 100-year flood control project completed in 1988, and funded through an agreement with owners of property benefitting from the flood control. The mitigation required by the U.S. Army Corps of Engineers, under the Federal Clean Water Act, included replanting and permanently preserving natural riparian and upland habitat values impacted during construction of flood control improvements. Specifically, 26.8 acres of riparian woodland, 9.7 acres of freshwater marsh, and 8.7 acres of open water are required to be maintained in perpetuity within the limits of FSDRIP. FSDRIP refers to the area covered by the Army Corps of Engineers permit and conditions, which is the flood control channel, revegetated channel banks, and buffer zones. The adjacent development areas are referenced in this document as the FSDRIP Specific Plan area.

The FSDRIP Natural Resources Management Plan (NRMP) documents FSDRIP natural resources existing at the time of permit compliance as defined by U.S. Army Corps of Engineers and provides for their future protection and sustainable management. Upon City Council adoption, this NRMP becomes the operational document for maintenance and management of FSDRIP and is consistent with the Mission Valley Community Plan (1985).

The Natural Resource Management Plan addresses four key areas of FSDRIP use: natural habitat; flood control; utility corridor (sewer and Mission Valley trolley); and public uses. All allowable FSDRIP uses will be consistent with preservation of the natural habitat values. Guidelines for FSDRIP use include: avoidance of damage during utility corridor and flood control maintenance; fencing of FSDRIP limits during new construction on adjacent properties; replanting of disturbed areas with appropriate native plant species; limited passive recreation use which excludes swimming, boating, hunting, and other active recreational activities within FSDRIP limits; and leashing of pets while within FSDRIP limits.

Management and maintenance guidelines are also spelled out for FSDRIP and include: maintenance of the required acreages of riparian woodland, freshwater marsh, and open water habitats; management of invasive exotic plant species and animal vectors; limited irrigation; regular trash removal; limited pruning of vegetation along walkways; monitoring of the channel for flood capacity and dredging for flood control, if required; repair of flood and vandalism impacts to native vegetation; and a FSDRIP pamphlet to inform the public regarding FSDRIP habitat goals and public use limitation in the area.

For adjacent developments which are not able to eliminate impacts to project habitats or for maintenance activities resulting in habitat disturbance, mitigation restoration guidelines are outlined in the Plan. Revegetation plant palettes for such impacts are given in Appendix D. Suggested guidelines for interpretive and research opportunities include: signage; informational kiosks at major entry points; natural resource brochures; a self-guided nature walk; a future park ranger; and research, potentially based on previous project development monitoring data.

04-021

COPY

DATE ISSUED: REPORT NO.

ATTENTION: Honorable Mayor and City Council
Agenda of

SUBJECT: First San Diego River Improvement Project (FSDRIP) Natural Resource Management Plan

SUMMARY

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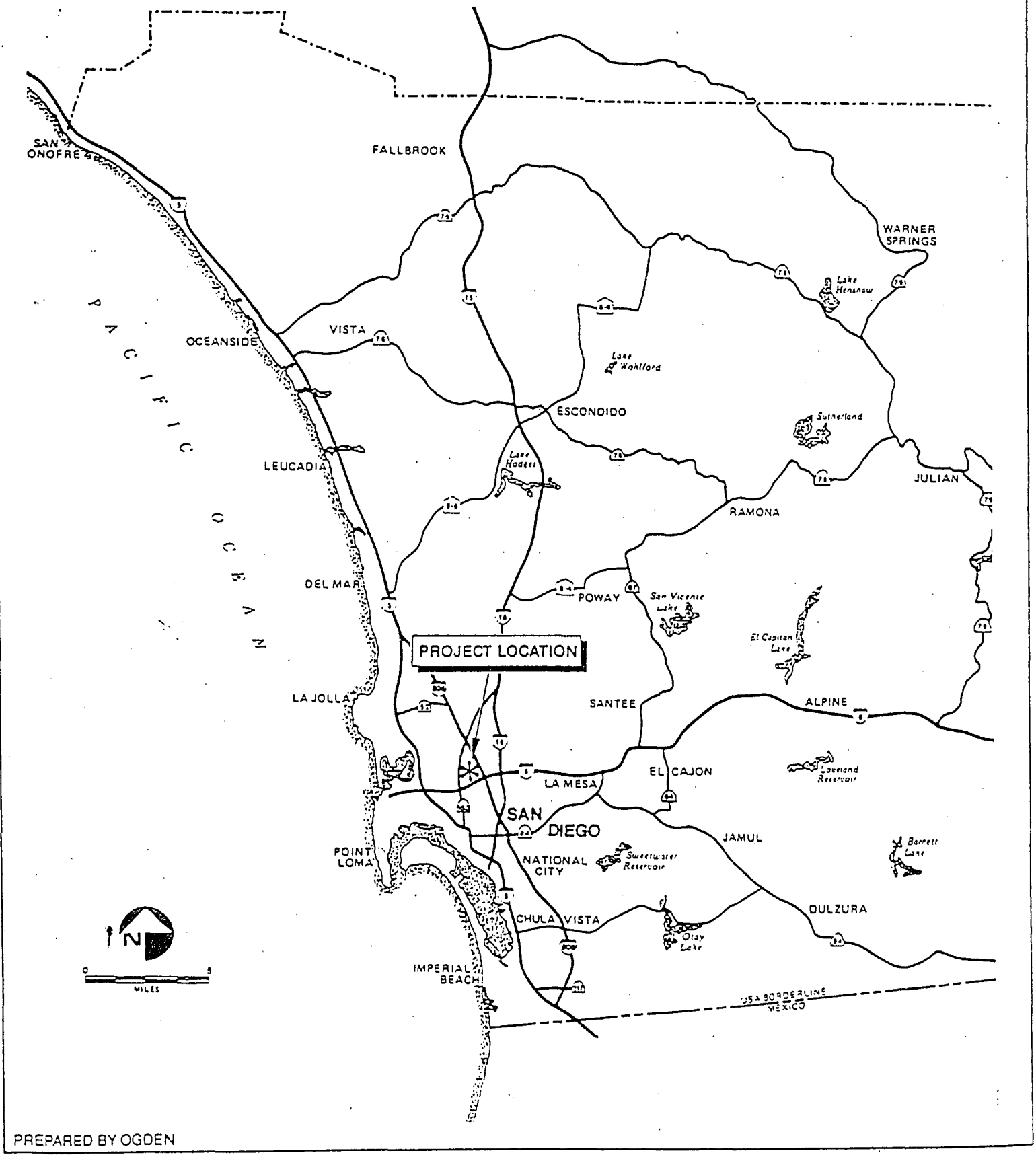

PREPARED BY OGDEN

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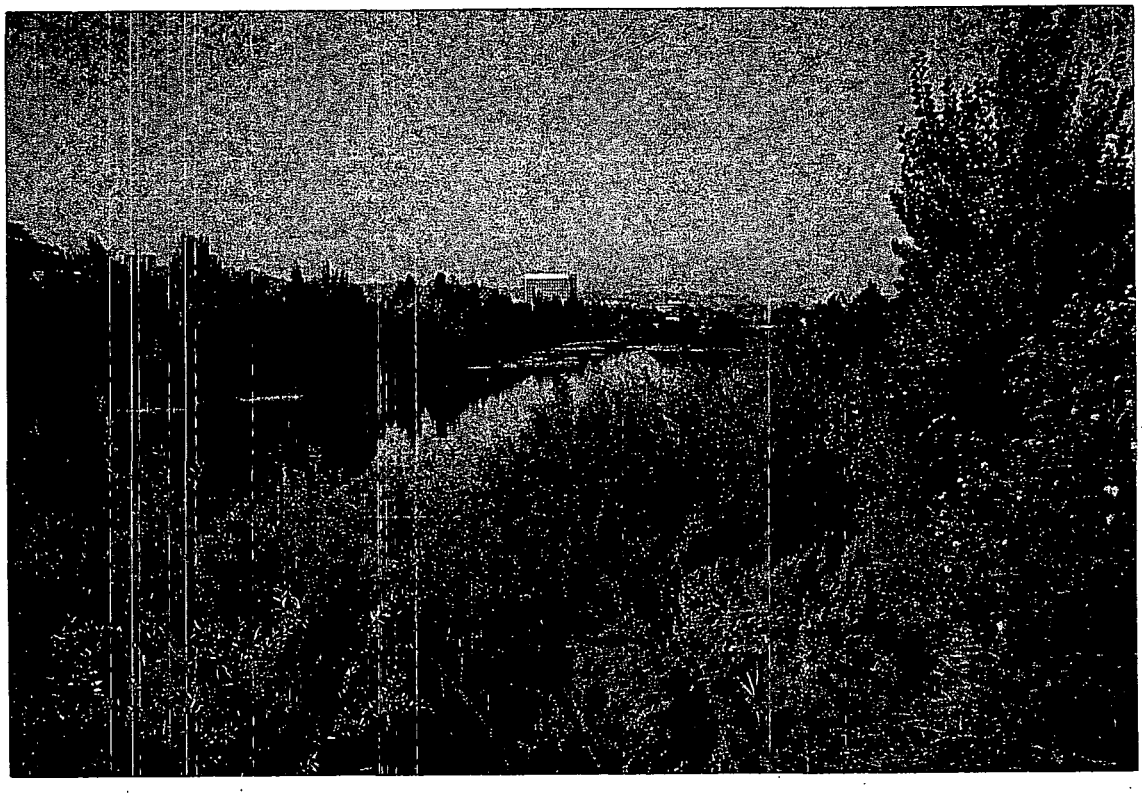

First San Diego River Improvement Project (FSDRIP)

Natural Resource Management Plan

SAN DIEGO PARK & RECREATION DEPARTMENT
AMERICA'S FINEST

City of San Diego
Park and Recreation Department

FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT (FSDRIP)

NATURAL RESOURCE MANAGEMENT PLAN

SEPTEMBER 2001

PREPARED BY
PARK AND RECREATION DEPARTMENT
CITY OF SAN DIEGO
AND
OGDEN ENVIRONMENTAL AND ENERGY SERVICES

Adopted by City Council on FEB 0 2 2004 **By Resolution No.** R-298839

R-298839

SAN DIEGO CITY COUNCIL
Dick Murphy, Mayor

Scott Peters, District 1
Byron Wear, District 2
Toni Atkins, District 3
George Stevens, District 4
Brian Maienschein, District 5
Donna Frye, District 6
Jim Madaffer, District 7
Ralph Inzunza, District 8

FSDRIP ADVISORY COMMITTEE
Robin Stribley, Chairperson
City of San Diego, Park and Recreation Department

Terry Dean, U.S. Army Corps of Engineers
Jack Fancher, U.S. Fish and Wildlife Service
Tim Dillingham, California Department of Fish and Game
FSDRIP Owner's Representative
Terri Williams, City of San Diego, Park and Recreation Department
Don Makie, Jr., City of San Diego, Park and Recreation Department
John Wilhoit, City of San Diego, Planning Department

FSDRIP MAINTENANCE ASSESSMENT DISTRICT COMMITTEE
Robert E. Griffin, Jr., Chairperson/Secretary
Sunbelt Management Company

Peter F. Bride, Hazard Center East Enterprises LP
Cari Carlson, The Missions At Rio Vista
Rauol Gazi, Hazard Center Associates
Dianna Lawless, Rio Vista Station
John McCulloch, H P Mission Valley II, LLC
Robert Sanchez, Mission Valley Partnership
R. Jeffrey Smith, Park Valley Center

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SUMMARY

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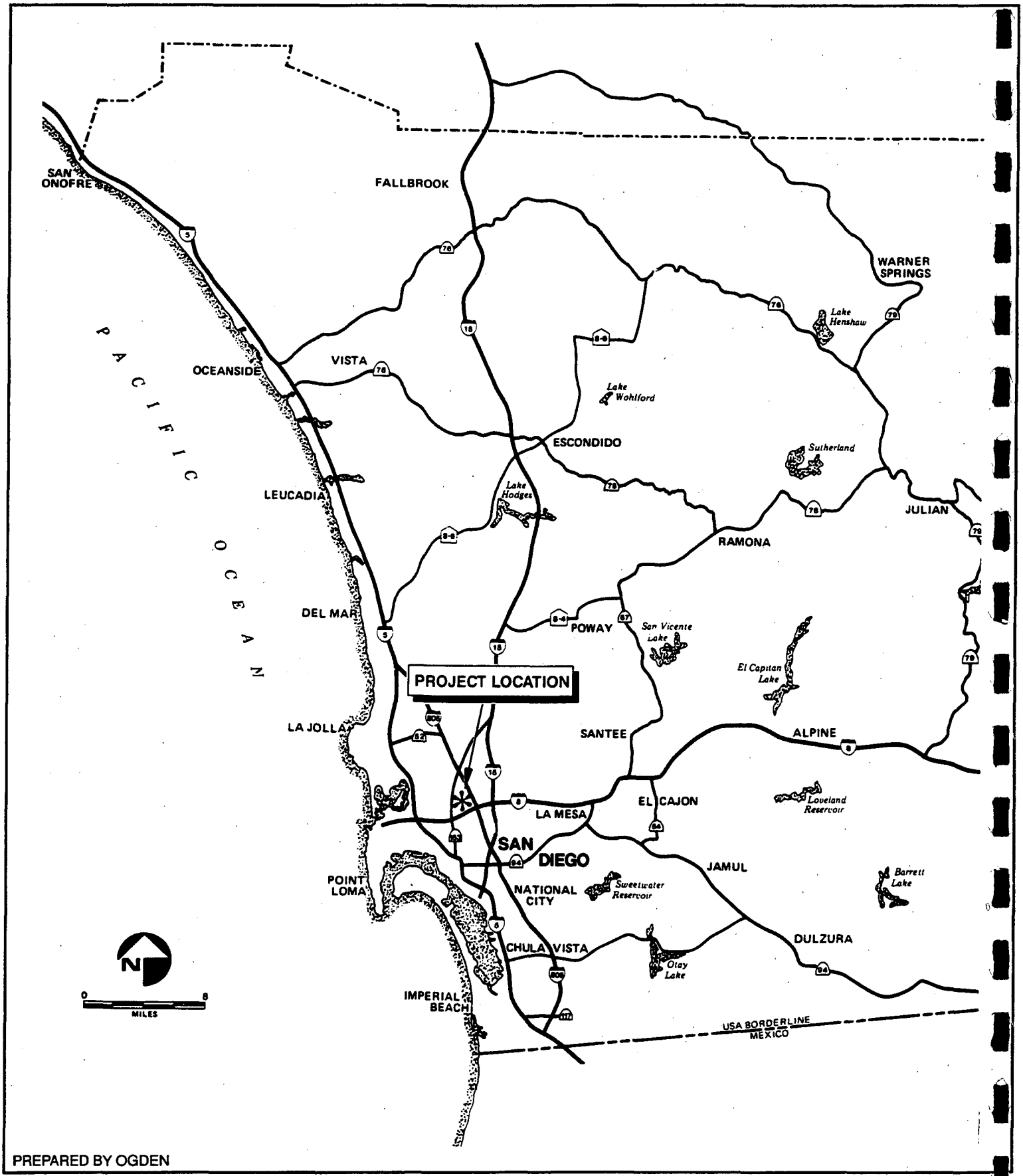
INTRODUCTION

PURPOSE

The First San Diego River Improvement Project (FSDRIP) is located between Qualcomm Way and Highway 163 along the San Diego River (Figure 1) in Mission Valley. FSDRIP refers to the area included in the U.S. Army Corps of Engineers permit which allowed the channelization of the San Diego River in this area and required the revegetation of the banks and buffer areas. The implementation of the FSDRIP flood control project allowed the FSDRIP landowners to proceed with development as outlined in the FSDRIP Specific Plan. This Natural Resource Management Plan (NRMP) is intended as a tool to ensure protection of natural resources created by the FSDRIP Revegetation Plan and to continue meeting original permit requirements while accommodating compatible human activities. To avoid confusion when referencing the various aspects of FSDRIP, the flood control channel, mitigation area, and buffer zones, which are the focus of this NRMP, will be referred to as FSDRIP and the adjacent development will be referred to as the FSDRIP Specific Plan area.

The purpose and objectives of the NRMP are established as long-range, 100-year goals. The plan itself will be updated every eight to ten years, as appropriate, and subject to approval by original permitting agencies, including the City of San Diego, with input from the FSDRIP Advisory Committee and the Maintenance Assessment District (MAD). A major goal of this plan is to demonstrate the City and public recognition of the biological resources found in FSDRIP. This NRMP provides guidance for the protection of natural resources, maintenance of original permit goals, and remedial measures to revegetate natural habitat disturbed by either natural disasters (e.g., flooding), or human disturbances (e.g., vandalism, adjacent development impacts, sewer maintenance, and flood control).

Besides the protection and preservation of sensitive natural resources, this plan also delineates acceptable public and recreational uses of FSDRIP. Public use, however, is secondary and all public activities that have a detrimental effect on FSDRIP will not be allowed.



PREPARED BY OGDEN

REGIONAL LOCATION MAP

FIGURE 1

CITY OF SAN DIEGO PARK & RECREATION DEPT.

OBJECTIVES

The objectives of the FSDRIP Natural Resource Management Plan are:

1. To establish management practices which will preserve and protect biological resources according to original permit requirements (U.S. Army Corps Permit No. 84-132);

2. To provide for public uses which will not negatively impact FSDRIP's biological resources;

3. To maintain the flood control capacity of the channel within FSDRIP per City of San Diego Engineering Department standards;

4. To emphasize improvements needed for environmental protection, interpretation, picnicking, walking, jogging, bicycling, and other low-intensity, nondisruptive recreational activities;

5. To ensure that improvements and maintenance consider and provide for public safety;

6. To control problem erosion along the San Diego River and river banks within FSDRIP;

7. To discourage illegal activities; and

8. To develop a reporting and enforcement procedure to prevent encroachment or impact from adjacent development and residents.

HISTORY

Mission Valley existed for many years as a broad, flat floodplain first used by local native peoples. Later, Spanish and western settlers farmed or grazed cattle over the area. The river was

relatively ephemeral and probably supported full surface flows only during the winter months. Winter floods regularly reconfigured the sparsely vegetated riparian channel located on the broad valley floor. In the late 1950's, after World War II, Mission Valley became the location for a number of commercial shopping malls, such as Mission Valley Center. Areas within FSDRIP were utilized for sand and gravel operations (CalMat) and a brick-making facility (Hazard Company). Scattered housing developments also began to develop in the valley including the Park Villa Condominiums, which was built along the FSDRIP's edge, north and east of Mission Center Road. The increased urbanization of the river's watershed had two consequences. First, river flows increased, particularly during the winter storm period, as the river's watershed was paved and became increasingly impervious to water penetration. Summer flows also gradually rose as irrigation runoff from urbanized areas of the watershed increased during the dry summer months. With a more dependable waterflow, the river itself changed, becoming a more year-round water source. With this change, a larger, dense, and more permanent riparian woodland developed. Secondly, as the valley became a major regional commercial center, the value of land along the river's edge increased. The river also became a backyard dumping ground during this period of urbanization. As a result, large patches of the floodplain remained disturbed or covered with exotic plant species introduced through past disturbance. Within FSDRIP, major sections of the site were covered with the invasive giant reed (*Arundo donax*) and the floating aquatic ludwigia (*Ludwigia peploides*).

The idea for the FSDRIP Specific Plan originated in the 1970's. Property owners along a portion of the San Diego River were unable to develop their properties because they were flooded by winter storms. A Specific Plan for development was prepared which addresses potential development of private properties based on improvements for the San Diego River directed at controlling seasonal flooding. The flood control plan for the San Diego River went through various stages of design, evolving from a concrete-lined channel to a grass-lined channel with ornamental landscaping. The U.S. Army Corps of Engineers (CORPS), however, could not permit a channel which eliminated the existing natural wetland values under the recently passed Federal Clean Water Act. Based on advice from the U.S. Fish and Wildlife Service (USFWS), a FSDRIP Revegetation Plan was developed to maintain wetland habitat values by creating a flood control channel revegetated along its edges with native riparian woodland and freshwater marsh cover.

Subsequent to approval of the FSDRIP Specific Plan, the City of San Diego entered into a Development Agreement with the property owners benefitting from approval of the Specific Plan. In exchange for assurance that development of their property could proceed in accordance with the Agreement, the property owners agreed to fund the necessary flood control improvements, including creation and long-term maintenance of the mitigation area. The FSDRIP Maintenance Assessment District was established which includes all benefitting property owners and which pays for on-going monitoring and management of resources within FSDRIP. Each of the benefitting property owners contributes to this assessment district based on the amount of benefit to property owned within the district.

In 1987, after final plan review and approval by the California Department of Fish and Game (CDFG) and CORPS, construction on FSDRIP began. The City took on the responsibility of overseeing the habitat restoration. Phase I of FSDRIP, located between Highway 163 and Mission Center Road, was completed in May of 1988. Phases IIA and IIb, located between Mission Center Road and Qualcomm Way were completed in January of 1989. After installation, FSDRIP was required to meet growth and cover standards set by the resource agency original permit conditions. To substantiate that success measures were being met, data was collected from vegetation line transects at FSDRIP, and annual reports were prepared analyzing the progress of the revegetation efforts. Regular bird surveys, as well as monthly horticultural reviews of FSDRIP maintenance effort, were a part of this monitoring effort. Remedial measures were implemented, if necessary, to ensure FSDRIP progressed sufficiently to meet success standards. An Advisory Board, comprised of City of San Diego staff, a property owner representative, an environmental consultant, and resource agency staff, reviewed annual reports analyzing the data collected and approved or disapproved remedial measures recommended by the environmental consultant.

FSDRIP vegetation progressed well, and in 1995, the CORPS and CDFG agreed that FSDRIP could be considered successful with this NRMP as the last requirement of the CORPS for final permit approval.

AGENCY JURISDICTION AND APPLICABLE CITY PLANS

AGENCY JURISDICTION AND PERMIT REQUIREMENTS

A number of agencies may have direct or indirect involvement with land use planning, resource protection, and permit approvals for FSDRIP and the FSDRIP Specific Plan area. The primary agencies and their degree of involvement are described below.

City of San Diego: The Park and Recreation Department is responsible for the day-to-day management of FSDRIP operating under the authority of the City Manager. Park and Recreation takes responsibility for maintaining the irrigation system, picnic tables, and signs; emptying trash cans; and keeping sidewalks clear and clean. Additionally, the Department undertakes weed control, replacing dead vegetation, and rehabilitating damaged areas. Most landscape maintenance and biological monitoring activities are contracted for through private providers, with oversight by Park and Recreation. Park and Recreation monitors adjacent development activities to assure protection of resources within FSDRIP. The City-owned property in FSDRIP also is subject to deed restriction. The Natural Resources Section of the Department also is involved with FSDRIP. This section oversees the implementation of programs and policies outlined in this Natural Resources Management Plan and advises the Park and Recreation Department on any remedial measures needed.

Other City departments involved in FSDRIP and the FSDRIP Specific Plan area include the Development Services , Community Planning and Development, Police, Fire, Water, Transportation, and Engineering and Capital Projects departments. The focus of the Development Services is on environmental review of proposed developments and environmental review associated with community plan amendments and updates. Community Planning and Development reviews development projects for conformance with the FSDRIP Specific Plan and processes amendments to the Plan. Onsite maintenance projects may also require environmental review. Development Services serves as the City's liaison between state and federal resource agencies and the public in the development decision making process. Water is responsible for

maintenance of water and sewer lines within FSDRIP. Transportation is responsible for keeping culverts open and free of debris. Engineering and Capital Projects is responsible for channel maintenance for purposes of flood control. This responsibility requires periodic monitoring of channel sediment deposition, and dredging when required to remove built-up sediment that impedes flood control. Police and Fire are involved from a public safety standpoint, but have no direct management supervision of FSDRIP and the FSDRIP Specific Plan area.

U.S. Army Corps of Engineer: The Army Corps of Engineers (CORPS) exercises permit authority over projects which require a permit under Section 404 of the Clean Water Act. Projects discharging fill or dredge material into the waters of the United States must secure a Section 404 permit. FSDRIP was built under the requirements of CORPS Section 404, Permit No. 84-1342-AA. This NRMP is the final requirement of this permit condition. Approval of the NRMP will result in CORPS agreement and release that all permit conditions have been met. Additional projects which impact the riparian habitat within FSDRIP would require new 404 permits. Dredging, however, to maintain open water areas for flood control was included as part of the 404 permit conditions for FSDRIP.

U.S. Fish and Wildlife Service: The primary mandate of the U.S. Fish and Wildlife Service (USFWS) is the protection of public fish and wildlife resources and their habitats. The USFWS is responsible for administering portions of the Endangered Species Act of 1973, as amended. To avoid violation of this Act, a Section 7 consultation or a Section 10 (a) permit is often required. In addition, the USFWS reviews and comments on projects requiring CORPS permits (Section 404) under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et. seq.), and other authorities mandating Department of Interior concern for environmental values. The USFWS would review and provide comment on any future 404 permits required for FSDRIP. They also reviewed and approved this management plan. Previously, USFWS was a major participant in the Advisory Board overseeing FSDRIP construction and monitoring activities.

State Regional Water Quality Control Board: The Regional Water Quality Control Board

(RWQCB) issues permits for activities affecting water quality. Generally, a permit is required for any project involving dredging or filling of 5,000 cubic yards of material within waterways or bodies of water. The RWQCB also serves in a advisory capacity to other agencies. Any future developments in the FSDRIP Specific Plan area which potentially affect water quality issues in the river would require a permit from the RWQCB.

California Department of Fish and Game: California Department of Fish and Game (CDFG) involvement occurs in one of two ways: 1) for projects involving alteration of a streambed, a permit must be issued pursuant to Sections 1601-1606 of the CDFG code; and 2) serving in an advisory capacity to other permitting agencies, such as CORPS. The CDFG reviewed and approved this NRMP. They were also a participant in the FSDRIP Advisory Board which monitored the mitigation implementation and success standards. Any future projects impacting FSDRIP woodlands would require a new permit from CDFG, except for channel dredging required for flood control, as previously stated.

CITY OF SAN DIEGO PLANS APPLICABLE TO FSDRIP NATURAL RESOURCES

Three major City planning documents pertain to FSDRIP: 1) the Mission Valley Community Plan; 2) the FSDRIP Specific Plan; and 3) the FSDRIP Revegetation Plan, including maintenance and monitoring. These plans, including the FSDRIP NRMP, build upon each other providing increasing levels of detail. The Community Plan is the foundation document for enhancement and future development within the Mission Valley community. Included in the Community Plan is the San Diego River Wetlands Management Plan which establishes specific biological design criteria, coordinated with hydrologic confinement criteria, for projects proposing changes to the floodplain configuration. The FSDRIP Specific Plan serves as a development plan for the specific area within its boundaries, including private development proposed by FSDRIP owners; flood control channel reconfiguration, maintenance and monitoring; and revegetation for mitigation of riparian impacts. The FSDRIP Development Agreement is not a planning document in itself but further supports the Specific Plan by outlining City and owner responsibilities including owners' fiscal requirements. The FSDRIP

Revegatation Plan outlines the precise details for mitigation requirements, implementation, and monitoring. The FSDRIP NRMP begins where the Revegetation Plan ends by providing guidelines for long-term management, protection, and maintenance of the mitigation area based on the actual results of Revegetation Plan implementation. The NRMP will be used as a future management tool for FSDRIP's natural resources.

The Mission Valley Community Plan (1985) covers approximately 2,418 acres in San Diego's Mission Valley. It addresses all land use areas that border FSDRIP, except the Caltrans Highway 163 right-of-way. The purpose of the community plan is to provide recommendations to guide overall development in the Mission Valley area through the plan's maximum occupancy capacity and design guidelines. This plan specifies, for example, residential development along FSDRIP's borders and forbids the installation of fences between residences and the project.

Even though the FSDRIP Specific Plan mitigation, flood control channel improvements, and most of the planned development has been implemented, there are many specific guidelines in the Community Plan which address adjacent development, including upstream and downstream, and are important in governing FSDRIP's setting. Specific guidelines related to FSDRIP maintenance and the interface with adjacent development include the following:

- A flood control facility should be capable of containing the year 2000, 100-year flood, of 49,000 cubic feet per second as determined by the CORPS and the City Engineer and as updated thereafter in order to provide public safety and protect public and private investment.

- Any given segment of a flood control facility should deliver and receive water at velocities equal to the existing exit and entry velocities.

- Dikes, embankments, etc., should be vegetated or otherwise protected against erosion. Riprap may be used in limited areas where scouring is likely to occur during high

velocity flows of water.

- A maintenance plan should be established to insure the future quality and preservation of wetland and riparian habitat areas.

- A revegetation and maintenance monitoring program for a flood control facility should be developed in conformance with the guidelines provided by the Wetland Management Plan.

- Maintenance of a flood control facility should include maintenance of the biological resources, the floodway's hydraulic efficiency, and the river corridor's aesthetic quality.

- Maintenance should be privately funded.

- Mitigation shall be appropriate for the quantity and type of vegetation lost and shall consist of habitat conversion or improvement of degraded woodland. If the impact is to wetlands, there shall be an in-kind replacement of total wetlands and individual habitat types (unless it is demonstrated that the habitat would be improved through alternative replacement). If the impact is to non-wetlands in the floodway zone, there shall be out-of-kind compensation through conversion to wetlands.

- Mitigation shall be accomplished concurrent with or in advance of floodway loss.

- The first priority is for wetland mitigation to occur within the same segment of the river in which the impact has occurred. Where it can be demonstrated that mitigation is not possible within the same segment, mitigation shall be permitted elsewhere within the study area.

- Use only appropriate plants native to coastal southern California in vegetation (FSDRIP Specific Plan provides a list).

- Use specialized plantings to serve as barriers to human access in wildlife nodes or in areas with little or no buffer between the wetlands and development. Specialized plantings would consist of brambly species or those with a thicket-like growth form that would discourage human access.

- Dredging and construction of a flood-channel should not disrupt bird breeding which occurs from April 1 - August 1. Clearing of vegetation should be accomplished prior to April 1. If this is not practicable, there must be a phasing plan that provides for the retention of natural vegetation within the same river section.

- Mitigation for the loss of riparian woodland requires special treatment to ensure that the habitat value is offset. Wooded wetlands, especially those dominated by mature trees, are of high habitat value and their reconstruction cannot rapidly or with certainty provide an equivalent value to that destroyed. Therefore, compensation for the loss of woodland must meet additional requirements. These include:

    - Revegetation shall be according to state-of-the-art techniques;

    - Trees to be planted shall vary in size and include trees of large stature;

    - The newly-created woodland shall be of limited accessibility and protected from human disturbance; and

    - There shall be a means of assuring the long-term preservation of the habitat.

- If these requirements cannot be met, compensation for the loss of woodland shall be at a ratio of 2:1 (two acres replaced for each acre lost) or greater to provide an equivalent habitat value.

- Public recreation along the river corridor should include only passive uses such as hiking, nature study, viewing, and picnicking. Designated pathways should be located along the outer edges of the wetlands and lead to specified recreation areas. Access to the wetlands in other areas should be discouraged through the use of specialized plantings.

- Buildings should be designed so that the skyline slopes down toward the wetlands. Low-story buildings should be located closest to the floodway channel with high-rise buildings away from the floodway. This will allow a wider flight path for birds.

- Reflective plate glass should not be used on building facades which face the river. In a wooded setting, reflective plate glass buildings cause high bird mortality.

- Lighting must be directed rather than general, except as required for safety, and should not illuminate habitat areas.

The FSDRIP Specific Plan (1984) area consists of approximately 261 acres in the City of San Diego located in Mission Valley. This Specific Plan provides for the specific developments proposed within the Plan's boundaries, the construction of the flood control channel, and the mitigation of its adverse environmental impacts through revegetation of the project with native riparian and upland habitats. In addition, the Specific Plan takes into account appropriate recreational uses, protection of public health and safety, and provides for the protection of adjacent private property. Since the adoption of the Specific Plan, several private properties have been developed or are in the process of development. The FSDRIP Maintenance Assessment District, comprised of most of the adjacent property owners and other owners with property benefitting from FSDRIP, funds FSDRIP maintenance activities on an ongoing basis, as outlined in the NRMP.

The FSDRIP Development Agreement (1982; amended 1983, 1987, 1992, and 1994) between the

City of San Diego and owners of FSDRIP Specific Plan and mitigation areas governs the implementation of the Specific Plan. The Development Agreement states that development will occur per the FSDRIP Specific Plan and that owners agree to finance development, maintenance, and management of the mitigation area. Other than the Development Agreement, nothing in this document would prohibit the owners from pursuing non-City, local, state, and/or federal funding for repairs to FSDRIP associated with damages caused by catastrophic or upstream impacts not associated with FSDRIP ownership.

The FSDRIP Revegetation Plan (April 1984) specifies installation, maintenance, and monitoring measures which were used to meet original FSDRIP 404 permit requirements for creation of wetland and riparian woodland habitats. The final condition for release from this 404 permit was the preparation and approval of this NRMP by the CORPS and USFWS.

EXISTING CONDITIONS

FSDRIP is a 46-acre open space area resulting from the channelization of a segment of the San Diego River, east of Highway 163 to Qualcomm Way, north of Interstate 8, and the associated mitigation required by CORPS and CDFG (Figure 1). The mitigation required was for the loss of riparian habitat when the river corridor was restructured for flood control purposes. The FSDRIP Revegetation Plan outlined the creation of 26.8 acres of riparian woodland, 9.7 acres of freshwater marsh, and 8.7 acres of open water and included a 20-foot wide buffer zone along most edges of FSDRIP to help protect the wetland vegetation from adjacent land use and development impacts.

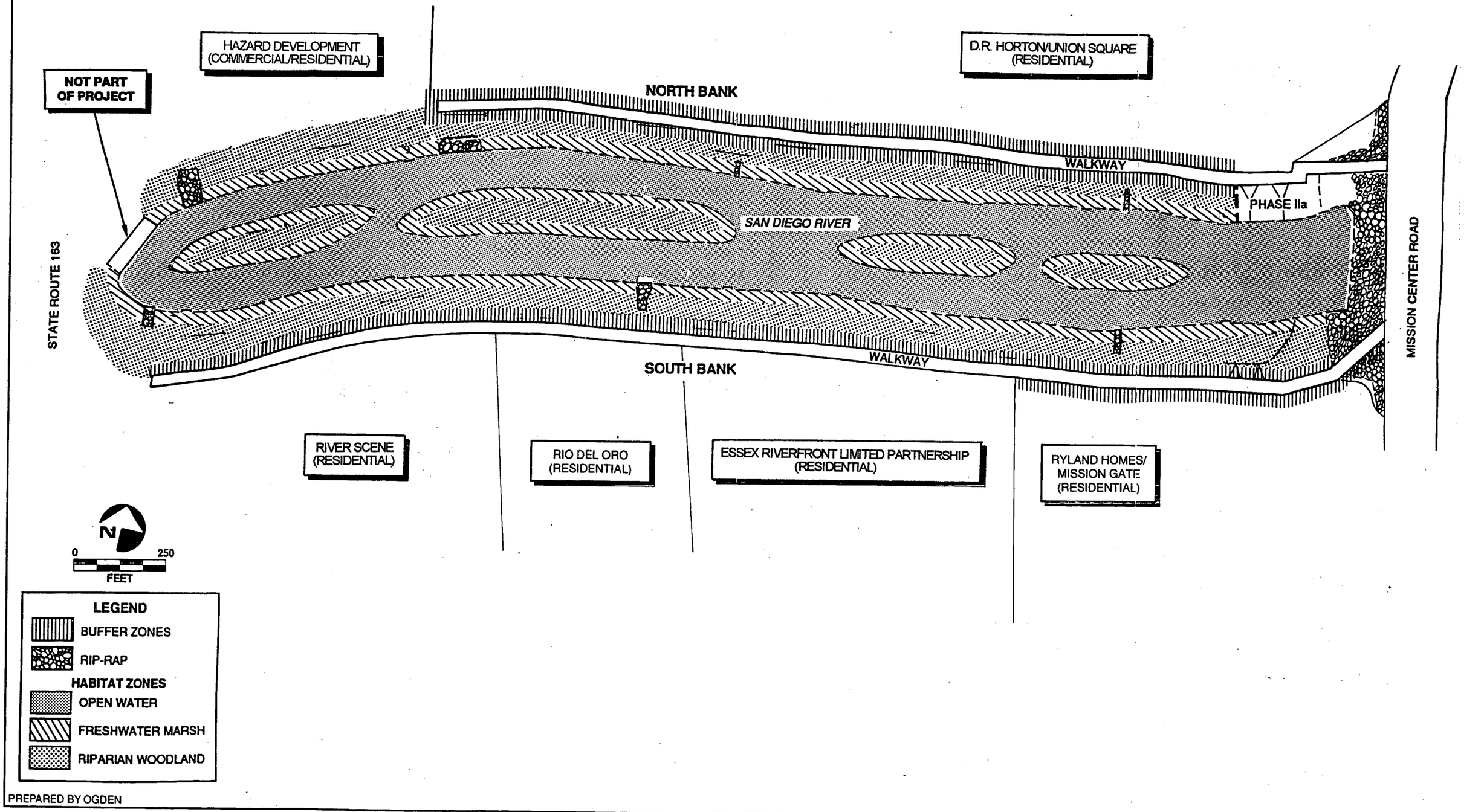
BIOLOGICAL RESOURCES

Annual biological surveys (vegetation, birds and sensitive species) were conducted within FSDRIP from 1987 through 1994. Surveys were conducted by Brad Burkhart, Doug Gettinger, and Leslie Hickson of Ogden Environmental and Energy Services (formerly WESTEC Services, Inc., and ERC Environmental and Energy Services). Species list resulting from these surveys are included in Appendices A and B.

VEGETATION

No natural, undisturbed habitat exists at FSDRIP; all is a result of revegetation. Plant communities which have successfully revegetated in FSDRIP include freshwater marsh, riparian woodland, and coastal sage scrub. Riparian scrub and coastal sage scrub species were planted in the buffer zone along with some native ornamental species. These habitats are mapped in Figures 2-4.

Freshwater marsh is dominated by perennial, emergent monocots, 4 to 7 feet tall. Uniform stands of bulrushes (*Scirpus spp.*) or cattail (*Typha* spp.) characterize this habitat. Freshwater

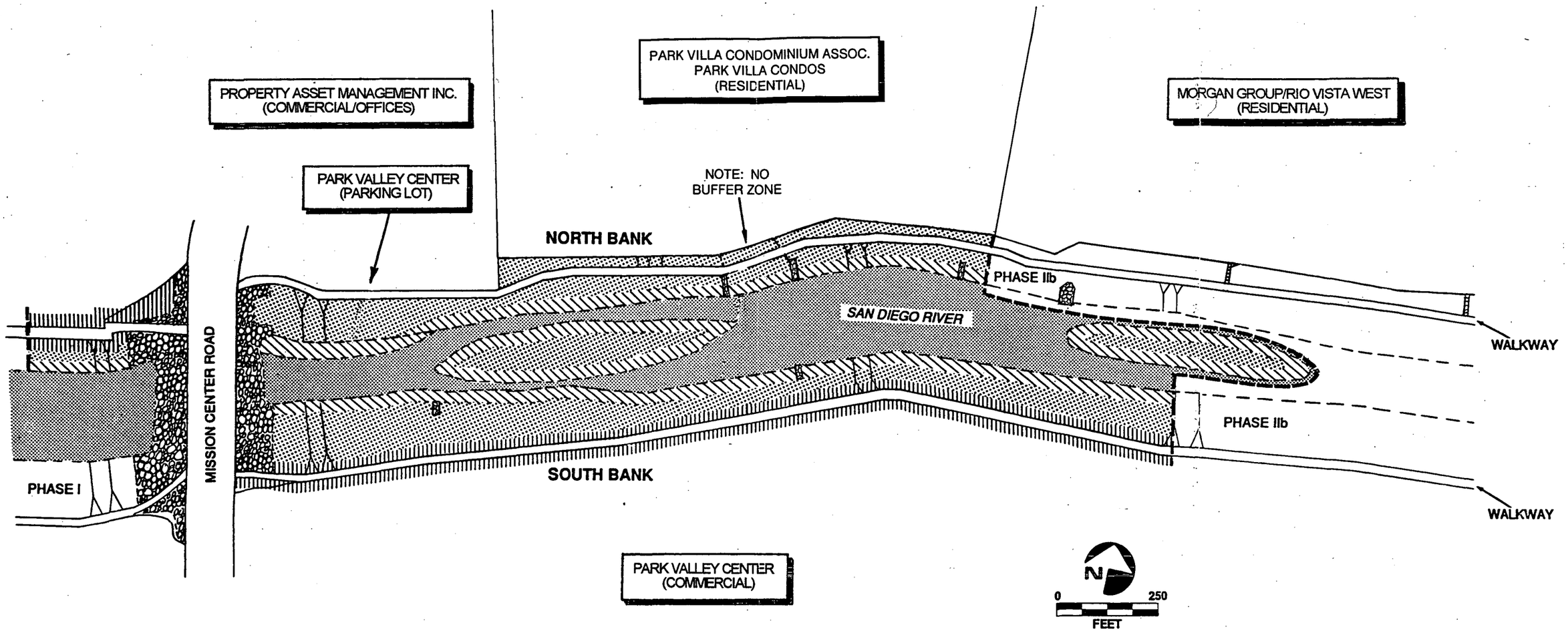


FSDRIP HABITATS - PHASE I

CITY OF SAN DIEGO PARK & RECREATION DEPT.

FIGURE

2



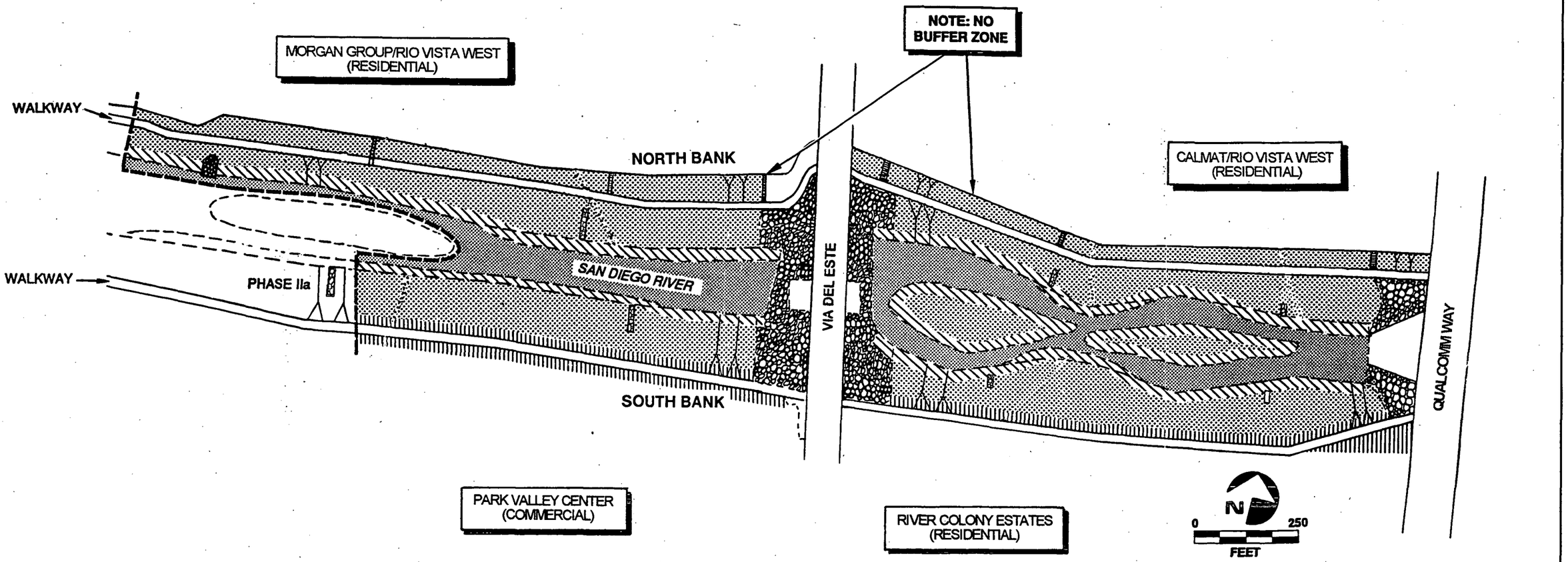
NOTE: See Sheets 22982-1190-D through 22982-126-D of the grading plan for Phase II Marsh Pad precise deliniation

PREPARED BY OGDEN

FSDRIP HABITATS - PHASE IIA

CITY OF SAN DIEGO PARK & RECREATION DEPT.

FIGURE 3



NOTE: See Sheets 22982-1190-D through 22982-126-D of the grading plan for Phase II Marsh Pad precise deliniation

PREPARED BY OGDEN

CITY OF SAN DIEGO PARK & RECREATION DEPT.

FSDRIP HABITATS - PHASE IIB

FIGURE

4

marsh occurs in wetlands that are permanently flooded by standing fresh water. Freshwater marsh species that occur at FSDRIP include cattail (*Typha latifolia*), California bulrush (*Scirpus californicus*), prairie bulrush (*S. robustus*), Olney's bulrush (*S. olneyi*), yerba mansa (*Anemopsis californica*), yellow nutsedge (*Cyperus esculentus*), and spiny rush (*Juncus acutus*). The edges of freshwater marsh at FSDRIP are also dominated by ludwigia (*Ludwigia peploides*). Ludwigia is a floating aquatic weed that expands to cover the open water areas if unchecked by flood flows or human intervention.

Riparian woodland is a tall, open, broad-leafed, winter-deciduous riparian vegetation association that occurs along permanent streams. The dominant species require moist, bare, mineral soil to germinate and establish themselves. Riparian woodlands in southern California are dominated by Fremont cottonwood (*Populus fremontii*) and several willow species (*Salix* spp.). California sycamore (*Platanus racemosa*) can also be present, with shrubby willow species constituting the understory. The dominant riparian overstory species that occur at FSDRIP are white alder (*Alnus rhombifolia*), western sycamore, Fremont's cottonwood, coast live oak (*Quercus agrifolia*), black willow (*Salix gooddingii*), sandbar willow (*S. exiqua*), red willow (*S. laevigata*), yellow willow (*S. lucida lasiandra* ssp), arroyo willow (*S. lasiolepis*), and Mexican elderberry (*Sambucus mexicana*). The dominant understory species that occur are mulefat (*Baccharis salicifolia*), Douglas mugwort (*Artemisia douglasiana*), San Diego sagewort (*A. palmeri*), giant wild rye (*Leymus condensatus*), San Diego marsh elder (*Iva hayesiana*), California rose (*Rosa californica*), California blackberry (*Rubus ursinus*), and desert grape (*Vitis girdiana*).

Open water is considered a habitat because it supports amphibian, fish, and waterfowl. While this seems simple, it should be noted that several qualities of this water are often critical to its success as habitat. First, the depth of water is crucial. Areas with a three-to five-foot depth to bottom are usually the preferred habitat for many of the bottom feeding waterfowl. Some birds, such as herons, need even shallower water to wade and feed. Clarity of water can also be critical to the ability of birds to feed below the surface, and cloudy water has more limited habitat value as a result. Occasionally, surface pollutants can fowl bird feathers and/or suffocate water

dwelling insects used as food. Finally, the distance to shore can often be critical to the value of open water as habitat, for open water protects most water birds from shore-dwelling predators. It also allows room for birds like swallows to catch their insect prey over the water's surface. Because FSDRIP is part of a flowing river system, the open water habitat changes dramatically from day to day and at different seasons of the year. During the winter rainy season the amount of open water habitat increases as the river fills with storm flow and surges through the project. Such fast flows in water often reduce habitat value since they muddy the water and move too quickly for most birds to use. Several non-native surface floating plants are associated with this open water habitat. The dominant aquatic species at FSDRIP are ludwigia and, occasionally, water hyacinth (*Eichornia crassipes*). The presence and amount of these plants at any given time will vary with the velocity of stream flows. Generally, these plants are at their greatest cover during the summer months when water flow is slow. In the winter months, flood flows often flush these species downstream, out of the project or deposit them on the drier banks where they die. Plant fragments of the ludwigia deposited along the water's edge take root and, thus, are more established in the habitat.

Coastal sage scrub intermingles with more drought tolerant riparian tree species along the buffer and upper slope areas at the site. These areas are a transition between the riparian habitat and the ornamental landscapes of adjacent developments. Because of the transitional purpose of this zone, a number of more ornamental and less site specific species and cultivars (horticulturally selected and developed species) were added in the buffer zone. The dominant coastal sage species include California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), lemonadeberry (*Rhus integrifolia*), toyon (*Heteromeles arbutifolia*), broom baccharis (*Baccharis sarothroides*), and California encelia (*Encelia californica*). Other species that were added include carmel creeper (*Ceanothus griseus* 'horizontalis'), saltbush (*Atriplex lentiformis* ssp. *brewerii*), Mexican flannelbush (*Fremontodendron mexicanum*), and leafy burrobush (*Hymenoclea monogyra*).

A list of all plant species found at FSDRIP is provided in Appendix A.

AMPHIBIANS AND REPTILES

Two amphibian species, bullfrog (*Rana catesbeiana*) and Pacific treefrog (*Hyla regilla*), were observed at FSDRIP. The four reptile species observed onsite include red-eared slider (*Pseudemys scripta*), western fence lizard (*Sceloporus occidentalis*), western skink (*Eumeces skiltonianus*), and the southern alligator lizard (*Gerrhonotus multicarinatus*). Other reptiles and amphibians which were not observed but may occur at FSDRIP are African clawed toad (*Xenopus laevis*), Pacific slender salamander (*Batrachoseps pacificus*), California toad (*Bufo boreas haliophilus*), painted turtle (*Chrysemys picta*), side-blotched lizard (*Uta stansburiana*), two-striped garter snake (*Thamnophis hammondi*), San Diego kingsnake (*Lampropeltus zonata pulchra*), striped racer (*Masticophis lateralis*), gopher snake (*Pituophis melanoleucus*), and spiny soft-shell turtle (*Trionyx spiniferus*).

BIRDS

A wide variety of bird species have been observed at FSDRIP. A total of 90 resident and seasonal species of birds were observed at the project during extensive bird surveys performed every year between 1989-1994 (see Ogden 1995, 1994, 1993, 1992, 1991, 1990, 1988). Appendix B provides a complete bird species list. The most common bird species observed include American coot (*Fulica americana*), mallard (*Anas platyrhynchos*), ruddy duck (*Oxyura jamaicensis*), mourning dove (*Zenaida macroura*), bushtit (*Psaltriparus minimus*), house finch (*Passer domesticus*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Zonotrichia melodia*), and red-winged blackbird (*Agelaius phoeniceus*).

MAMMALS

Eleven species of mammals were observed at FSDRIP including Virginia opossum (*Dipelphis virginiana*), Audubon's cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), Norway rat (*Rattus*

norvegicus), house mouse (*Mus musculus*), gray fox (*Urocyon cinereoargentus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), and California sea lion (*Zalophus californianus*). This is not a comprehensive list because these mammals were observed at FSDRIP only during post-installation monitoring/maintenance activities conducted by Ogden Environmental and Energy Services, Park and Recreation, and the landscape contractor. No extensive field surveys were performed. Other species that were not seen but can be expected to occur based on available habitats include California vole (*Microtus californicus*), black rat (*Rattus rattus*), desert shrew (*Notiosorex crawfordi*), western pipistrel (*Pipistrella hesperus*), brush rabbit (*Sylvilagus bachmani*), agile kangaroo rat (*Dipodomys agilis*), California pocket mouse (*Perognathus californicus*), San Diego pocket mouse (*Perognathus fallax*), San Diego desert woodrat (*Neotoma lepida intermedia*), dusky-footed woodrat (*Neotoma fuscipes*), deer mouse (*Peromyscus maniculatus*), and long-tailed weasel (*Mustela frenata*).

SENSITIVE RESOURCES

SENSITIVE HABITATS

Sensitive habitats are those which are considered rare within the region, are listed by the Conservation Element of the General Plan for the County of San Diego (County of San Diego 1980), or support sensitive plants or animals. Riparian woodland and freshwater marsh is considered a sensitive resource by the CDFG and CORPS. These habitats are defined as wetlands by the USFWS (Cowardin et al. 1979). All habitats in FSDRIP are considered sensitive except the buffer zone.

Riparian habitat is considered a valuable but declining resource. This habitat type covered less than 0.2 percent of San Diego County in 1963 (CDFG 1965), and the amount has since declined. Wetland habitat is naturally limited and remaining acreages are important islands of habitat for migrant birds. Many bird species are restricted to riparian habitat and are dependent on it for breeding and foraging. Overall wildlife diversity is normally higher in riparian zones than in surrounding habitats. Such habitat, by occupying natural drainages, also functions to control

water quality and erosion and functions as a wildlife corridor.

SENSITIVE SPECIES

Sensitive species, identified at the time of this document's printing, include those that are listed as endangered, threatened, or rare by the USFWS (1989), CDFG (1990), and CNPS (Skinner and Pavlik 1994). The CNPS Listing is sanctioned by the CDFG and essentially serves as its list of "candidate" species for threatened or endangered plant species.

Species that are federally- or state-listed are afforded a degree of protection which entails a permitting process including specific mitigation measures for any allowed, unavoidable impacts to the species. Species that are proposed for listing are treated similarly to species already listed by USFWS. USFWS recommendations, however, are advisory rather than mandatory in the case of species proposed for listing.

Four sensitive plant and five sensitive bird species listed by an agency or by the Native Plant Society were observed at FSDRIP. These species are discussed in detail below.

Artemisia palmeri
San Diego Sagewort
CNPS rating: List 2, 2-2-1
San Diego sagewort is a summer-blooming (June-September) suffrutescent (obscurely shrubby with very low amount of woodiness) coastal sage scrub perennial that occurs below 1931 ft (600 m) elevation in southwestern San Diego County and northern Baja California (Munz 1974). San Diego sagewort occurs throughout the project area as an understory species in riparian woodland.

Fremontodendron mexicanum
Mexican Flannelbush
USFWS: Proposed for Endangered Species

CDFG: Rare

CNPS rating: List 1B, 3-2-2

This is a frequent component of riparian woodlands growing with alders, willows, Tecate cypress, and several other sensitive plants. It occurs in cool canyons with permanently high groundwater. In the United States, Mexican flannelbush is only found in Cedar Canyon on Otay Mountain. It has been reported to occur in the Jamul Mountains, but has not been seen there recently (Beauchamp 1986). Mexican flannelbush does not occur naturally in this area but was planted in the buffer area for its ornamental value.

Iva hayesiana

San Diego Marsh Elder

USFWS: Candidate for Listing (Category 2)

CNPS: List 2, 2-2-1

This perennial subshrub occurs in southwestern San Diego County and northern Baja California (Munz 1974). It is frequent in low-lying, moist or alkaline places along the coast and has been recorded along intermittent streams. Although rare in the County, this species is apparently more common and widespread south of the border. Reported localities include Rancho Santa Fe, Miramar Reservoir, Penasquitos Canyon, Alvarado Canyon, Proctor Valley, La Presa, Otay, Tijuana River Valley, and Otay Mesa (Beauchamp 1986). San Diego marsh elder is threatened primarily by waterway channelization and development. San Diego marsh elder occurs throughout the project near the water's edge.

Juncus acutus ssp. *leopoldii*

Spiny Rush

CNPS : List 4, 1-2-1

Spiny rush is a relatively common plant associated with moist, saline, or alkaline soils. This species is found in drainages and wetland areas south of Aqua Hedionda to the Otay River Valley. The sensitivity of this plant is due to the decline in wetland habitats throughout the County. Spiny rush occurs throughout the project area on the lower portions of the slope.

Ixobrychus exilis hesperis

Western Least Bittern

USFWS: Candidate for Listing (Category 2)

CDFG: Species of Special Concern (nesting site)

Least bittern inhabits fresh and brackish water marshes, usually near open water sources, and desert riparian habitats. Most of the California bittern population winters in Mexico and migrates in the spring and the summer to scattered locations in the western U. S., including the Colorado River, Salton Sea, and coastal lowlands of southern California, where some populations are resident. Most migration takes place at night. The bittern is mostly diurnal and feeds in the daytime. The species is locally common at the Salton Sea and Colorado River and rare along the coast. Nesting occurs in dense emergent vegetation such as cattails or tules over water, and eggs are laid in mid-April to July (CDFG 1990). The primary threats to the species are habitat reduction and urbanization. In San Diego County, least bitterns have been reported from Mission Valley, San Diego River mouth, Tijuana River mouth, San Luis Rey River, San Pasqual Valley, Batiquitos and San Elijo Lagoon and Guajome Lake. Nesting localities are reported at Mission Valley, San Luis Rey, Guajome Lake, and San Pasqual Valley (Unitt 1984, Ogden unpublished data). As many as six least bitterns have been observed at FSDRIP. A pair was confirmed as nesting in Phase I in 1990, and a pair is likely to nest sporadically in dense marsh vegetation on the islands.

Sterna antillarum browni

California Least Tern

USFWS: Endangered

CDFG: Endangered (nesting colony)

California least tern breeds from San Francisco Bay south to Baja California. In San Diego County, it is a fairly common summer resident from early April to the end of September (Unitt 1984). Wintering areas are thought to be along the Pacific coast of South America. This small migratory tern nests colonially on undisturbed, sparsely vegetated, flat areas with loose, sandy substrate. Human disturbance has displaced the least tern from much of its traditional nesting

habitat. Few beach nesting areas remain and least terns are now found in varied habitats ranging from mudflats to airports. Experienced breeders begin nesting in mid-May, first time breeders begin later in June. A least tern lays from one to four eggs which are incubated for 20 -25 days by both adults. Young fledge 28 days after hatching, and are fed by adults for an additional two weeks. The terns abandon the nesting colonies by mid-August and generally migrated south by mid-September. Banding returns indicate that least terns exhibit a tendency to return to the site where they first bred successfully. They typically forage in areas with water less than 60 feet in depth (Atwood 1983). Prey items include northern anchovy, topsmelt, killifish, mosquitofish, shiner, surfperch and mudflat gobies. Two California least terns were observed foraging at FSDRIP in June 1989. Closest breeding colonies are in Mission Bay Park. California least terns are not expected to breed at FSDRIP but may forage here occasionally.

Agelaius tricolor
Tri-Colored Blackbird
USFWS: Candidate for Listing (Category 2)
CDFG: Species of Special Concern

This nomadic species is locally common in the coastal lowlands of San Diego County. It nests in colonies of 500 to 1,000 in freshwater marsh habitat, usually in cattails or reeds, and forages in a variety of habitats, including agricultural fields, grasslands, lakeshores, and scrub habitats. Tri-colored blackbird populations have declined sharply in recent years as a result of loss of their nesting habitat to agriculture and development. The tri-colored blackbird was seen in large number in June 1990, but has not been observed recently at FSDRIP. This rare species is nomadic in its breeding habits, frequently utilizing a given breeding site only intermittently.

Vireo bellii pusillus
Least Bell's Vireo
USFWS: Endangered
CDFG: Endangered

Formerly common and widespread in California and northwestern Baja California, the species now numbers about 600 pairs north of the border by 1991. It is restricted to riparian woodland and is most frequent in areas that combine an understory of dense young willows or mulefat with a canopy of tall willows. It occurs in a number of riparian habitat types, including cottonwood-willow forests, oak woodland, shrubby thickets, and mulefat scrub, and sometimes will use adjacent upland habitat. The vireo's decline is due to loss of riparian habitat combined with parasitism by the brown-headed cowbird, which lays its eggs in vireo nests. The young cowbirds squeeze out the vireo young, thereby, reducing the vireo's reproductive success. Other predators include scrub jays (*Aphelocoma coerulescens*), Cooper's Hawk (*Accipitii cooperii*), gopher snake rats (*Rattus sp.*), opossum, coyote, and domestic cats. To reconcile conservation of the vireo and its habitat with demands for development, the San Diego Association of Governments (SANDAG) has prepared a Comprehensive Species Management Plan (CSMP) in cooperation with the state and federal wildlife agencies, CORPS, Caltrans, environmental groups, property owners, and sand miners. If the plan is approved it will guide land-use decisions within drainages supporting this species.

The least Bell's vireo arrives in San Diego County in mid-March and early April and leaves for its wintering ground in September. It is known to winter only in southern Baja California. Since the vireos build their nests in average dense shrubbery 3 to 4 feet above the ground (Salata 1984), they require young, successional riparian habitat or older habitat with a dense understory. Riparian plant succession, therefore, is an important factor in maintaining vireo habitat. Nests are also often placed along internal or external edges of riparian thickets (USFWS 1986).

One least Bell's vireo was observed on the north side of Phase IIa on April 21, 1994. The bird did not attract a mate, so it moved on. Two territorial males were observed behind Camino del Este and Stadium Way on April 4, 1995. One male was observed on April 6 and 26. Two males were again seen on June 9, 1995. One of the vireos was with a fledgling estimated to be two to three weeks old.

Polioptila californica californica

California Gnatcatcher

USFWS: Threatened

CDFG: Species of Special Concern

The California gnatcatcher population is estimated between 1800 and 2500 pairs with 1000-1500 pairs remaining in San Diego County (Atwood 1992, USFWS 1993). The primary cause of this species' decline is the cumulative loss of coastal sage scrub vegetation to urban and agricultural development. Little of this species' habitat is formally protected or managed at the present time. This species is probably extirpated from Ventura and San Bernardino counties, and is declining proportionately with the continued loss of coastal sage scrub habitat in the four remaining southern California counties located within the coastal plain. Initial studies suggest that the California gnatcatcher may be highly sensitive to the effects of habitat fragmentation and development activity (Atwood 1990, ERCE 1990a, Ogden unpublished data). The territory size requirements of the gnatcatcher varies with habitat quality. Documented home ranges have varied from 6 to 45 acres in San Diego County (RECON 1987, ERCE 1990a, ERCE unpublished data). Studies of the species' habitat preferences in San Diego County indicate that California sagebrush and flat-topped buckwheat are the primary plants used by gnatcatchers when foraging for insects (RECON 1987, ERCE 1990b, Ogden unpublished data). The USFWS has estimated that coastal sage scrub habitat has been reduced by 70 to 90 percent of its historical extent (USFWS 1991), and little of what remains is protected in natural open space.

A California gnatcatcher was observed at FSDRIP in July 1991 (Ogden 1992). This bird was probably a dispersing juvenile and stopped while in transit. California gnatcatchers are not likely to inhabit FSDRIP because there is not enough coastal sage scrub habitat to support them.

In addition to the agency-listed sensitive species, 12 more species which occur regularly or sporadically in FSDRIP are identified as sensitive species of concern by the California Environmental Quality Act. These species include: double-crested cormorant (*Phalacrocorax auritus*); great egret (*Casmerodius albus*); white egret (*Egretta thula*); green-backed heron (*Butorides striatus*); osprey *(Pandion haliaetus*); Cooper's hawk (*Accipiter cooperi*); Vaux's

swift (*Chaetura vauxi*); downy woodpecker (*Picoides pubescens*); loggerhead shrike (*Lanius ludovicianus*); yellow warbler (*Dendroica petechia*); yellow-breasted chat (*Icteria virens*); and blue grosbeak (*Guiraca caerulea*).

HYDROLOGY

The San Diego River collects water from urban runoff, natural sheet drainage, and storm drains within its watershed. The San Diego River is channelized within FSDRIP for flood control. Flows are low (6.8 cfs) during drier summer months. The channel is designed to accommodate a 100-year flood (estimated at 49,000 cfs). To date, average winter flows range between flows of 57 cfs and 4700 cfs.

LAND USE AND RECREATION

Consistent with its natural resource character and mitigation requirements, improvements within FSDRIP are kept to a minimum. Improvements include picnic tables, sidewalk, waste cans, and signage (interpretive and regulatory). Recreation is primarily passive and includes birdwatching, jogging, walking, bicycling, fishing (in approved areas) and picnicking.

As provided for in the FSDRIP Specific Plan, existing and planned land uses occurring adjacent to FSDRIP include commercial retail, office, residential, hotel, a private recreation facility, and parking.

MANAGEMENT ISSUES

Management of natural resources within FSDRIP must consider the following issues: adjacent development; public use; utility maintenance and installation; light rail transit; maintaining habitat permit goals; and flood and sedimentation damage.

ADJACENT DEVELOPMENT

A number of private developments exist or are planned adjacent to FSDRIP, as outlined by the amended FSDRIP Specific Plan. These developments must take special precautions to prevent adverse effects on the vegetation and wildlife during development and operation. Specific problems include: graffiti; illegal access; volunteer trails resulting in destruction of habitat; trash; lighting; noise; and pollutant runoff (pesticides, etc.). Planned future construction of developments can also impact FSDRIP's natural resources if proper habitat protection measures are not implemented. Additionally, adjacent developments provide opportunities for connections, both physically and visually, to the FSDRIP improvements, resulting in overall benefits to users and visitors to Mission Valley.

PUBLIC USE

FSDRIP is used year-round for walking, jogging, bicycling, roller blading, picnicking, and nature appreciation. Impacts from human use can have a negative effect on the project's natural resources. Such impacts will increase as development in Mission Valley increases, bringing more people into the area. Intense human use creates the problem of litter, graffiti, vegetation damage, and illegal activities. The trampling of vegetation to reach the water's edge to feed ducks and to fish has become particularly destructive to the riparian habitat in several parts of FSDRIP. In addition, domestic pets such as dogs, if not kept on a leash, can kill project wildlife and disturb wildlife nesting and roosting. This damage has a negative effect on vegetation and wildlife. Since FSDRIP is designed as a natural area first, and recreation is considered secondary, human and domestic pet effects on the vegetation and wildlife have to be managed.

UTILITY MAINTENANCE AND INSTALLATION

Phase I of the North Mission Valley Interceptor Sewer (NMVIS) runs the length of FSDRIP under the north bank sidewalk. Phase II of NMVIS connects with Phase I at the northwest end of FSDRIP. General maintenance and construction of the sewer will need to take specific measures to avoid impacts, such as destruction of habitat, to natural resources whenever possible. Special precautions may be needed to assure natural resource protection.

LIGHT RAIL TRANSIT (LRT)

The recently constructed Mission Valley Light Rail Transit (MVLRT), a trolley line, runs the length of FSDRIP and crosses it in two places: over Mission Center Road and at Camino del Este. The pilings which were necessary to support the MVLRT were not accounted for in the original FSDRIP design prepared years before the MVLRT was proposed. Adding the pilings may change the river flow pattern with resulting scour and sedimentation within FSDRIP.

MAINTAINING PERMIT HABITAT GOALS

Maintenance will be needed to maintain the original 404 permit goals established by the City and CORPS. Some areas of FSDRIP ended up drier than planned, and will need close monitoring and perhaps irrigation or other attention to maintain vegetation. Occasional irrigation and weed control are some of the maintenance activities which may be required to insure the vegetation remains healthy and the required acreages of habitat types are maintained at the site (see Biological Resources, Page 14). More specific composition standards for these habitats are given in the original 404 permit for FSDRIP (Appendix C).

RESTORATION OF FLOOD AND SEDIMENTATION DAMAGE

The river is a dynamic system carrying and depositing sediment. Monitoring of channel depth will be needed to assure sediment deposits have not reduced the flood containment capacity of the

channel. Dredging may be needed to remove excess sediment. Special precautions would be required to insure that dredging the channel does not impact areas of freshwater marsh and riparian woodland habitat. Also, winters rains bring large quantities of water through the river corridor frequently flooding the channel. Damages to natural resources may occur from this flooding and require restoration.

ADJACENT LAND USE

Projects that have the potential to affect FSDRIP fall into two categories: existing development projects and future project development within the FSDRIP Specific Plan area. Existing developments can indirectly affect FSDRIP through human use and facility maintenance activities. In addition to indirect impacts, future development projects can directly affect FSDRIP if during construction adequate site protection is not in place to prevent construction intrusion into habitat areas (Figures 5, 6, and 7).

PROJECTS WITHIN FSDRIP SPECIFIC PLAN AREA

Land use within the FSDRIP Maintenance Assessment District (MAD) is all private, except for the MVLRT (see Appendix G). The District surrounds the majority of the revegetated river corridor. The MAD was established to provide funds for the construction and maintenance of FSDRIP. Existing FSDRIP Specific Plan private development within the MAD include Mission Valley Partnership, MBM Associates, Ryland Homes, Property Asset Management, Inc., Essex Riverfront Limited Partnership, Morgan Group, D.R. Horton, Hazard Development, Park Valley Center, CalMat, River Colony Estates, Park Villas, River Scene, and Bay Colony Development.

- Mission Valley Partnership owns the parcel south of Camino de la Reina and west of Mission Center Road. This parcel is now occupied by Mission Valley Center West and includes commercial and other service structures.

- Essex Riverfront Limited Partnership owns one parcel south of FSDRIP between Mission Center Road and Highway 163. That parcel is already developed with medium density attached residences called River Front.

- Hazard Center, constructed by Hazard Development, is north of FSDRIP between Mission Center Road and Highway 163. Hazard Center is a mixed-use complex containing commercial-retail, office, hotel, and recreational functions. Residential

development occurs in the area adjacent to FSDRIP.

- Property Asset Management, Inc. owns the property, formerly owned by Sammis, east of Mission Center Road and north of the Park Valley Center parking lot. A fast food restaurant is currently being built onsite.

- The River Colony Estates Development is located south of the river corridor between Camino del Este and Qualcomm Way. The property is developed as a multiple family residential complex called River Colony.

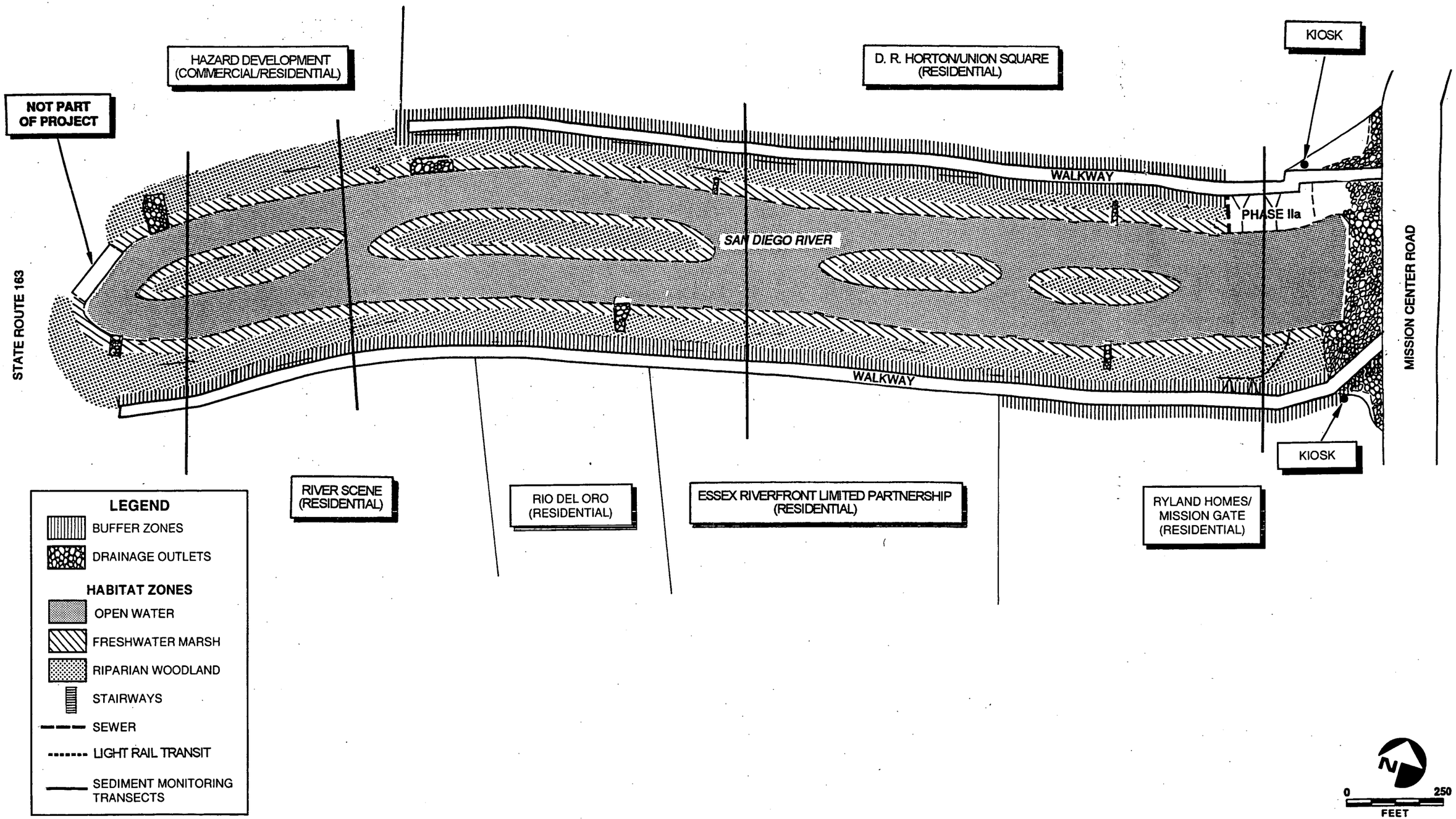
- The Park Villa Condominiums and Rio Del Oro are attached multiple-family residences. Park Villa Condominiums are located on the north side of the river corridor and east of Mission Center Road. Rio Del Oro is between River Scene and Essex Riverfront properties south of the river corridor.

- The Ryland Homes property was purchased from MBM Development and is located west of Mission Center Road and north of Camino de la Reina. It is developed as a multiple-family residence complex called Mission Gate.

- The D.R. Horton property (Union Square) is a multiple-family residential use development, located north of the river corridor, and south of Hazard Center Drive, between Highway 163 and Mission Center Road.

- The "Park Valley Center" property (formerly "Park in the Valley", a Sunbelt Management Company property) is located south of the river corridor and north of Camino de la Reina, between Mission Center Road and Camino del Este. It is developed with approximately 200,000 square feet of retail commercial land use.

- The River Scene Condominiums, just east of Highway 163, is a medium density residential (condominiums) development.



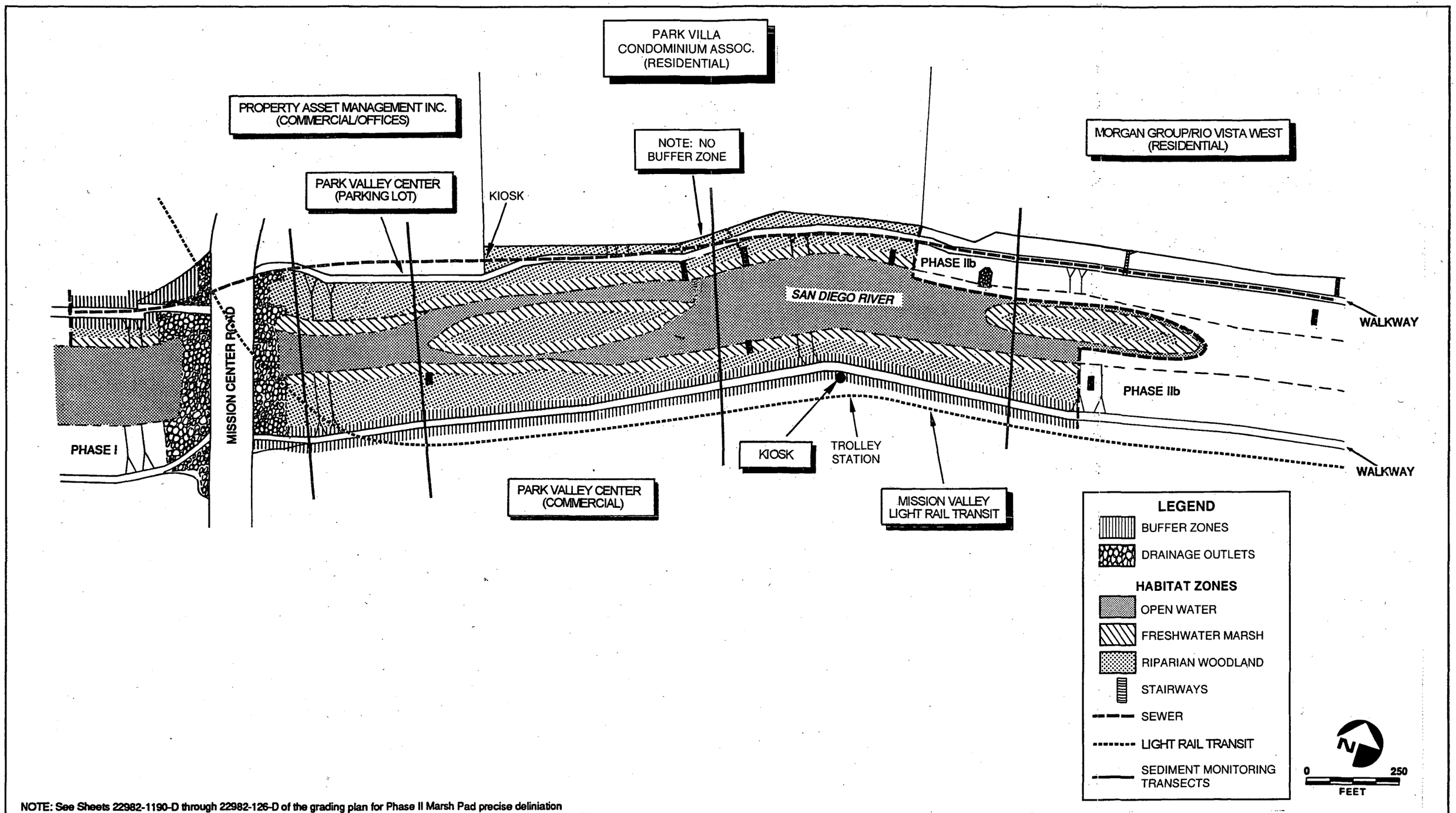
PREPARED BY OGDEN

FIGURE

5

DEVELOPMENT ADJACENT TO FSDRIP - PHASE I

CITY OF SAN DIEGO PARK & RECREATION DEPT.



NOTE: See Sheets 22982-1190-D through 22982-126-D of the grading plan for Phase II Marsh Pad precise deliniation

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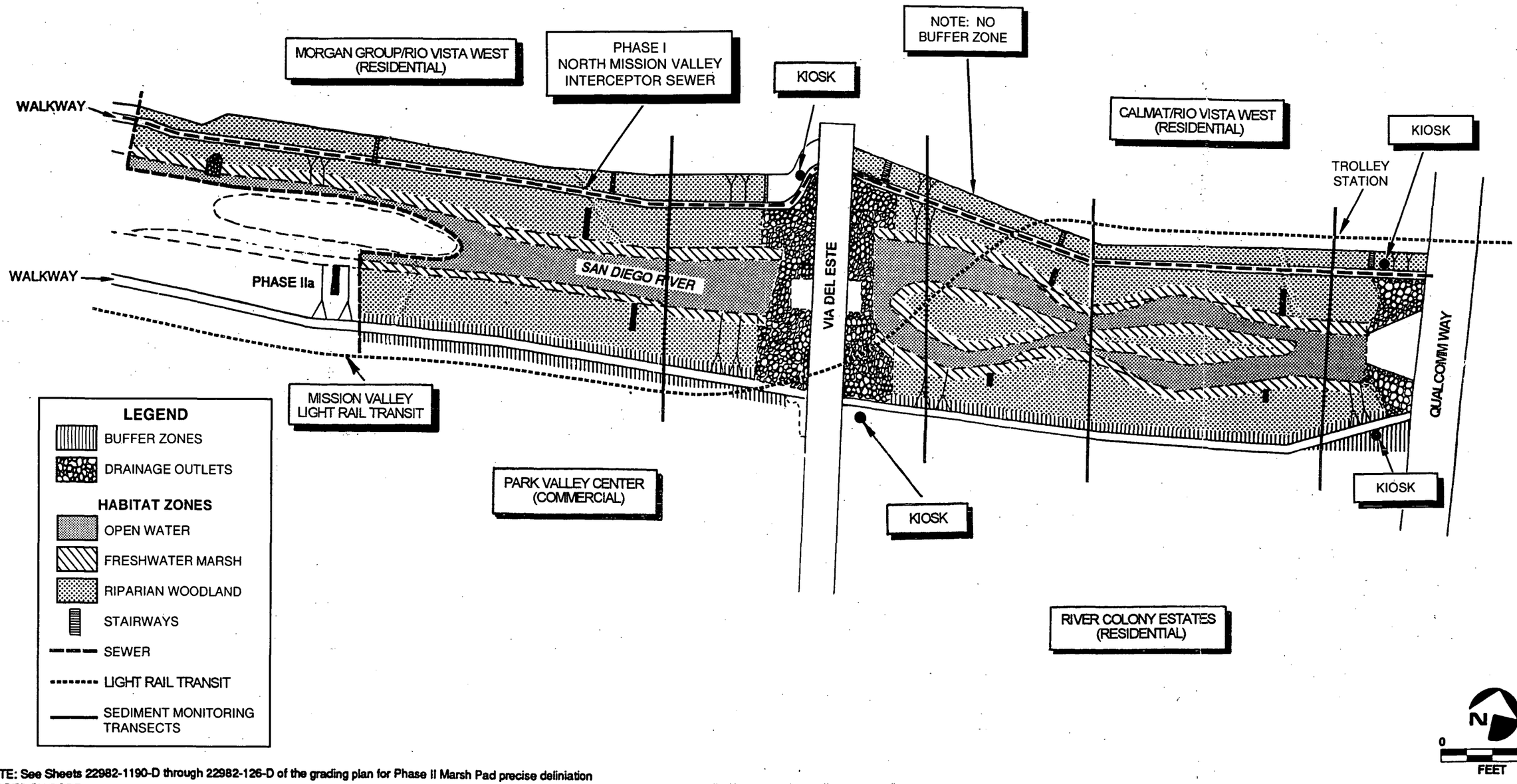
DEVELOPMENT ADJACENT TO FSDRIP - PHASE IIA

CITY OF SAN DIEGO PARK & RECREATION DEPT.

FIGURE 6



NOTE: See Sheets 22982-1190-D through 22982-126-D of the grading plan for Phase II Marsh Pad precise deliniation

PREPARED BY OGDEN

DEVELOPMENT ADJACENT TO FSDRIP - PHASE IIB

CITY OF SAN DIEGO PARK & RECREATION DEPT.

FIGURE 7

- The Morgan Group, a Texas company, owns the property from Camino del Este west to "Park Villa" and north of Station Village Lane, part of "Rio Vista West" as described in the Specific Plan. The site has been developed with multi-family residences.

- The Mission Valley Light Rail Transit (MVLRT), a trolley line completed in 1997, runs the length of FSDRIP and crosses it in two places. Beginning at Highway 163, the track runs along the north side of FSDRIP on Hazard Center Drive. It then crosses the river corridor over Mission Center Road. The pilings needed for this crossing impacted some FSDRIP riparian vegetation on the south bank just east of Mission Center Road. The trolley then runs along the FSDRIP buffer zone. At Camino del Este, the trolley crosses the river again and continues along the north edge of the project to Qualcomm Way. Three trolley stations are planned for this segment, one at Hazard Center, one on the Park Valley Center property, and one on the Rio Vista project site.

- The North Mission Valley Interceptor Sewer (NMVIS) Phase Two connects to the existing sewer that runs through FSDRIP on the north bank under the sidewalk. Impacts from this project were expected to be minimal; although, future maintenance of NMVIS Phase I could cause habitat impacts at FSDRIP. The connection point between the two phases is on the north bank at the extreme west end of FSDRIP. The sewer runs from the connection point in the Caltrans right-of-way under Highway 163 to the west.

FUTURE DEVELOPMENT PROJECTS

Future FSDRIP Specific Plan development projects which may directly impact FSDRIP are:

- The CalMat property is located west of Qualcomm Way, east and south of the

Morgan Group property between Friars Road and the river corridor. It is planned for development as "Rio Vista West" in the Specific Plan and will include a mixed-use core, retail center, and three types of residences. Construction is expected to begin in 1999.

DEVELOPMENT AND MITIGATION GUIDELINES

DEVELOPMENT GUIDELINES

The following development guidelines are provided to assure minimal impacts to FSDRIP during the construction of projects adjacent to FSDRIP or maintenance of utilities (such as the sewer) or other facilities (such as the MVLRT) within FSDRIP itself. These guidelines also assure conformance with the community plan.

1. Temporary fencing along FSDRIP's outer edge between the proposed construction and FSDRIP shall be installed before construction. This fence shall remain in place until the end of construction, and shall be inspected on a regular basis. Damaged portions of the fence shall be repaired in a timely manner from the construction side of the fence.

2. Buffer areas should be located along the entire length of an adjacent project and/or development. The buffer is defined as the area between the top of the floodway and development. The width of the buffer is specified in the amended Specific Plan. Changes to a uniform buffer were necessary to accommodate a meandering sidewalk design and usage by service vehicles and bicycles. At no point should private development intrude into the river corridor. Buffer areas, including the FSDRIP buffer area where it exists, and adjacent landscaped ornamental areas of private developments, shall meet the following criteria:

   - The average buffer width should be at least 20 feet.
   - Maximum buffer widths should be 50 feet, with a minimum buffer of ten feet.
   - Buffer areas should be widest when adjacent to sensitive habitat.

- Buffer areas within FSDRIP should be planted with a combination of native trees and shrubs, particularly riparian woodland and coastal sage scrub species. (Note: the exception to this rule is the narrow portion of the FSDRIP buffer zone (approximately two feet) on the outside of the sidewalk edges may be planted with ornamental species similar to the adjacent development). The buffer should provide some woodland overstory, but should be more open then the riparian woodland.

3. To avoid impacts to breeding least Bell's vireo and other migrating birds, construction activities which will impact FSDRIP, directly or indirectly, shall include the following conditions as part of any project authorization, permit, construction specifications and shall show these conditions on the construction drawings.

No clearing, grubbing, grading, or other construction activities shall occur between March 15 and September 15, the least Bell's vireo breeding season, until the following requirements have been met to the satisfaction of the City Manager. Coordination with the USFWS and CDFG will be required if least Bell's vireo are present.

Surveys for least Bell's vireo should be conducted pursuant to the recommended protocol survey guidelines as established by the USFWS. If full protocol surveys cannot be conducted, then a qualified biologist (has a valid 10(a)(1)(A) recovery permit from the USFWS for least Bell's vireo) shall survey any adjacent wetland habitat considered potentially suitable for the least Bell's vireo weekly for a minimum of four weeks (within the breeding season) prior to the commencement of any construction.

I. If the least Bell's vireo is detected during the initial survey or may be present (see Section II below), then one of the following conditions must be met:

A. Between March 15 and September 15, no clearing, grubbing, grading, or

other construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB hourly average at the edge of occupied least Bell's vireo habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the City Manager at least two weeks prior to commencement of construction activities.

B. At least two weeks prior to commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from clearing, grubbing, grading, or other construction activities will not exceed 60 dB hourly average at the edge of habitat occupied by least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60dB hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the above activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16).

*Construction noise monitoring shall continue to be monitored at least once weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60dB hourly average or to the ambient noise level if it already exceeds 60dB hourly average. If not, other measures shall be implemented in consultation with the biologist and the City

Manager, as necessary, to reduce noise levels to below 60dB hourly average or to the ambient noise level if it already exceeds 60 dB hourly average. Such measures include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

II If least Bell's vireo are not detected during the initial survey, the qualified biologist shall submit substantial evidence to the City Manger and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows.

A. If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then Condition I.B. shall be adhered to as specified above.

B. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

4. Dikes, embankments, etc. should be vegetated or otherwise protected against erosion. Riprap may be used in limited areas where scouring is likely to occur during high velocity water flow.

5. All pedestrian walks within FSDRIP should be a minimum width of 10 feet. In areas of high development intensity, widths of 15-20 feet or greater should be considered.

6. Item Deleted

7. Grading required to accommodate any new development should have minimal disturbance

to the natural terrain.

8. Contours should maintain the overall landform.

9. Plant and seed recontoured slopes with local native drought-resistant trees, shrubs, and grasses to restore a natural appearance and prevent erosion.

10. Use specialized plantings to serve as natural barriers to inappropriate human access, or in areas with little or no buffer between the wetland and development.

11. Do not plant invasive, exotic plant species, such as pampas grass (*Cortaderia* sp.), giant cane (*Arundo donax*), tamarisk (*Tamarix* sp.) and Brazilian pepper (*Schinus terebinthifolius*), in adjacent ornamental landscapes.

12. All development projects along FSDRIP edges will be required to inform residents and/or tenants within the development of the permitted and non-permitted uses within FSDRIP.

MITIGATION GUIDELINES

If impacts to FSDRIP vegetation are unavoidable, approval from the City of San Diego is required. In emergency situations, impacts to vegetation may occur without approval, if human health and safety or property damage may occur. All impacts to FSDRIP's vegetation require mitigation.

If unavoidable impacts to FSDRIP habitat occurs, the following guidelines provide an appropriate structure for mitigation. The mitigation options for habitat impacts are the creation of new habitat and/or the enhancement of degraded habitat.

1. No net loss of all habitats at FSDRIP will be permitted without replacement of the same habitat with equal or greater habitat value.

2. Revegetation of impacted area will be required. Additional mitigation at an offsite location may also be required.

3. Impacts to wetland vegetation may require a CDFG 1601 Streambed Alteration Agreement, except for dredging of the open water areas of the channel.

4. Revegetation should be scheduled in the fall to early spring to take advantage of the winter rains and avoid impacts to nesting sensitive birds.

5. Any disturbance to streambanks which would cause erosion or create a potential erosion risk will be mitigated by revegetating the disturbed area as soon as possible. Erosion control measures shall follow Best Management Practices.

6. A mitigation and monitoring program will be required for all wetland mitigation projects subject to approval by City and other appropriate agencies. The program will outline the installation, maintenance, monitoring, and the success standards for the mitigation project.

7. Only native plants that are known to occur in the area will be used for revegetation. Appendix D provides native plant palettes appropriate for revegetation at FSDRIP.

8. Human impacts should be considered in designing revegetation, such as the use of thorny shrubs to limit access to sensitive areas.

9. Temporary irrigation, if necessary, will be provided to help establish revegetation plants.

10. During revegetation, non-native, invasive and weedy species need to be removed on a regular basis between September 15 and March 1. During the rest of the year, noxious, invasive weeds may be removed by hand after the work area has been visually inspected for bird nests. If nests are found and inhabited, weed removal will be deferred until the nests

are abandoned.

11. Revegetation sites will be monitored on a regular basis. Appropriate recommendations will be made for enhancing revegetation efforts to ensure success criteria are met in a timely manner.

12. Prior to their implementation, all projects involving revegetation or mitigation within FSDRIP must be reviewed and approved by Park and Recreation and appropriate agencies.

13. Measures will be taken to limit human intrusion problems. This may include installation of fencing and/or new buffer plantings.

14. During revegetation, pest species, such as ground squirrels, cowbirds, gophers and weedy plants (such as pampas grass, arundo, tamarisk, etc.) will be controlled if they endanger the intended habitats and species composition. With the presence of least Bell's vireo, a cowbird trapping program is a priority.

15. Control agents for animal and plant pest will be carefully selected to avoid adverse effects on wildlife. These agents could be fertilizers, insecticides, algal control agents, and vertebrate poisons. There are a number of safe biological control methods for mosquitos. A licensed pest control advisor should be consulted regarding correct control agents devices, or methods to be used. Any control agents used shall be approved for use in a wetland by CDFG and USFWS.

16. Impacts to CORPS jurisdictional wetlands and waters of the United States may require a Section 404 permit pursuant to the Clean Water Act.

17. Impacts to least Bell's vireo or other rare, threatened, or endangered species may require a Section 7 consultation or Section 10 (a) permit pursuant to the Endangered Species Act.

18. The City-owned FSDRIP property is subject to deed restriction.

MANAGEMENT GUIDELINES

HABITAT MAINTENANCE

The following maintenance guidelines are to assure that FSDRIP's original permit goals and requirements are maintained and to insure public safety. Appendix E describes FSDRIP maintenance in greater detail for implementation by Maintenance Assessment District (MAD) staff and other City staff.

1. A park ranger/site manager will be employed to enforce FSDRIP's rules and regulations. The park ranger/site manager will be qualified in local biology, including recognizing plant and wildlife species occurring within FSDRIP.

2. Invasive, exotic species will be removed on a regular basis from September 15 through March 1. Table E-2 lists and Appendix F illustrates the species that will be eradicated completely from FSDRIP. During the sensitive bird breeding season (March 1 through September 15), noxious, invasive weeds may be removed by hand subsequent to a visual inspection to ensure the work area is clear of nests. Only two persons are allowed to work at the same time during this period.

3. No pruning will occur in the habitat areas, except for pruning to keep the walkway clear and to remove dangerous tree limbs. All work will be done by hand and by no more than two persons at any one time during March 1 through September 15. During this period, a visual inspection by a qualified biologist is required to ensure the work area is clear of nests.

4. Fertilization will be done only as required to establish remedial plantings or to correct soil chemistry problems. Soil samples will be taken when soil fertility problems are suspected. No fertilization will occur during March 1 through September 15 if least Bell's vireo is present onsite.

5. Pest animal species, such as ground squirrels, cowbirds, and gophers will be controlled if they endanger FSDRIP habitat and desired species composition.

6. Control agents for pest animal and exotic plants will be carefully selected to avoid adverse effects on wildlife and native plants and habitat. These agents could be fertilizers, insecticides, algal control agents, and vertebrate poisons. There are a number of safe biological control methods for mosquitos. A licensed pest control advisor should be consulted regarding control agents, devices, or methods to be used. Any control agents used should be approved for use in a wetland by CDFG and USFWS.

7. Ludwigia will not be allowed to cover more than 10 feet of open water as measured from the edge of freshwater marsh and open water areas of FSDRIP. There are several herbicides approved for aquatic use that will control ludwigia. Chemical control is the most cost effective and environmentally friendly method available to control this species. A ludwigia control program based on the recommendations of a licensed pest control adviser should be implemented on an as needed basis to accomplish this goal.

8. Water hyacinth will be monitored on a regular basis, and removed when first encountered.

9. Native plant species will be allowed to remain in the riprap as long as it does not interfere with safety or riprap integrity.

10. Plant replacement may be needed in damaged areas. Plant replacement will occur between September 15 and March 1. Native species shown in Appendix D will be used for this purpose.

11. In general, little irrigation will be used. Supplemental irrigation will probably be needed on the upper slopes to insure survival of some tree species (such as white alder) and to decrease the fire potential.

12. Overall maintenance will be performed routinely as needed, and manicuring natural areas will be avoided. Special care should be taken during the sensitive bird breeding season (March 1 - September 15) to avoid potential impacts to nesting birds.

13. Trash and debris will be removed from FSDRIP on a regular basis.

14. Picnic tables and sidewalks will be maintained in good condition.

15. Graffiti will be removed regularly.

16. Utility maintenance will not be allowed to impact FSDRIP vegetation. If impact is unavoidable, approval from the Park and Recreation Department and other appropriate agencies is required prior to any impacts.

17. Maintenance of storm drains will be the responsibility of City of San Diego Transportation Department. Storm drain maintenance will not be allowed to impact FSDRIP habitat. If impact is unavoidable, approval from Park and Recreation and other agencies, as appropriate, is required prior to impact.

18. Hydraulic efficiency of the flood control channel will be maintained to ensure the channel can accommodate a 100-year flood flow estimated to be 49,000 cfs under regular flood conditions. After major storm events, however, some dredging may be necessary upstream of drop structures and culverts. The following maintenance operations shall be implemented within the floodway zone and funded through the Maintenance Assessment District to assure these standards are met:

- Check the channel depth immediately upstream of the drop structures to ensure that water depth conforms to design levels. Dredge, if necessary, to remove silt.

- Check channel depths at points between drop structures to ensure that water depth conforms to flood design standard. Dredge, if necessary, to remove silt.

- Check channel depths around MVLRT pilings to ensure there is no scour and/or sedimentation. Dredge, if necessary, to remove silt. Monitor scour to document potential problems.

- Dredged spoils will be transported off-site to an approved location.

- Inspect culverts each year after the rainy season and remove collected debris, if necessary. Cleaning the culverts shall be the responsibility of the City Transportation Department.

- Clear any excess marsh vegetation in the open water areas as necessary to maintain flood control.

- Dredging and construction within FSDRIP boundaries will be scheduled to avoid disruption of sensitive bird breeding season (March 1-September 1). If this is not practicable, there must be a phasing plan that provides for the retention of some nesting habitat within each area where dredging is taking place.

- Dredging operations will be most effectively accomplished by use of a floating "mini-dredge". Dredging and spoil removal will be done by the City of San Diego Engineering and Capital Projects.

- Dredge entry will occur only over riprap areas of FSDRIP.

- Maintenance dredging will be confined to the open water areas of the channel and initiated by decisions of the City Engineering and Capital Projects with approval of the CORPS.

PUBLIC USE

FSDRIP is a wetland corridor protected by national and state environmental laws. FSDRIP was created by dredging a section of the San Diego River to create a 100-year flow flood control channel and by revegetating the banks and buffer zones to mitigate the impacts of dredging the new channel. The federal and state permits for this mitigation required that FSDRIP be permanently preserved as wildlife habitat; although, passive human uses are allowed. The following guidelines were developed so that public uses of FSDRIP will remain non-disruptive to the wetland habitat.

1. Only non-disruptive recreation, such as walking, bicycling, picnicking, fishing, and wildlife observation, will be allowed. Fishing is an allowable use in the riprap areas and from bridge crossings. Other activities which deviate from the sidewalks are not permitted.

2. All pets or other domestic animals using the project must be kept on a leash. These animals chase away the wildlife or kill them. Domestic pets, such as rabbits or ducks, are not to be released into FSDRIP.

3. Motorized vehicles are not permitted. All vehicles must stay on the roads and parking lots outside of FSDRIP.

4. Swimming and boating is not permitted. These activities discourage use of the water by waterfowl and destroy the vegetation along the shoreline.

5. Entry and usage of FSDRIP will be on sidewalks only. Walking though the vegetation is prohibited unless along designated fishing access paths.

6. Pruning by other than City maintenance crews or destruction of the vegetation is not permitted. Views from the sidewalk and condos will become obscured as the vegetation continues to grow. Because a primary purpose of FSDRIP is the establishment of riparian woodland, the vegetation will be allowed to grow naturally.

7. Access for pruning of ornamental trees on land adjacent to FSDRIP, will not be allowed from FSDRIP.

8. Installation of plants within FSDRIP, including buffer areas, is not permitted except by Park and Recreation. The plants within FSDRIP must be native to the area. All plants which are not native to the area will be removed by the maintenance staff.

9. Night use is discouraged as no lighting is provided. Artificial light disrupts wildlife.

10. Firearms use is prohibited.

11. Fires are prohibited.

12. Glass containers are prohibited.

13. All litter should be placed in trash cans.

14. Fishing access will be limited to no more than one or two clearly identified sites within each phase of FSDRIP. Such sites will be mainly near bridge crossings.

INTERPRETIVE AND RESEARCH GUIDELINES

INTERPRETIVE AND INFORMATIONAL DISPLAYS

FSDRIP provides an unusual opportunity for public education. It was designed to control flooding of adjacent development, while re-establishing the same amount of wetland habitat that existed at the project prior to development. FSDRIP can be used as a model for future flood control projects. It can also be utilized to teach the community about wetland and upland habitats, species, and ecological processes as well as appropriate and inappropriate human activities within the project. Interactive signage and displays will be created using the following guidelines.

1. To make the public aware of FSDRIP's function as well as its permitted uses, kiosks have been placed at FSDRIP's entrances, describing the history, purpose, and rules of use. These have been funded through the Maintenance Assessment District. Existing and proposed kiosk locations are shown on Figures 5, 6, and 7.

2. Before signs may be placed in the kiosks or at other locations within FSDRIP, the City's approval is required. Non-authorized signs will be removed.

3. Kiosks shall be a rustic design and the same design will be used throughout FSDRIP.

4. Additional informational signs may be used throughout FSDRIP to educate the public regarding FSDRIP's ecology and species.

5. All kiosks or educational signs will be kept in good repair at all times.

6. FSDRIP informational pamphlets will be distributed to adjacent residents at least every two years.

7. An informational meeting with adjacent residents should be held at least once every two years to explain FSDRIP's purpose, function, and importance to the public.

8. A natural resource interpretive pamphlet and a self-guided nature tour of FSDRIP will be developed as funding and staff become available.

RESEARCH OPPORTUNITIES

Research proposals for studies to gather unknown information about FSDRIP's natural resources will be reviewed by the City Park and Recreation Department (Natural Resource and Site Maintenance personnel). Research projects shall not significantly impact FSDRIP wildlife and vegetation. Research projects which could directly or indirectly impact federally-listed species may require a Section 10 (a) permit from USFWS. Research which could impact state-listed species may require a Memorandum of Understanding with CDFG. Potential funding for research opportunities would not be the responsibility of the Maintenance Assessment District and would come from non-City sources.

Many research opportunities exist at FSDRIP in the fields of aquatic, plant, bird, and restoration ecology. Studies as the habitats mature and as wildlife returns could be used to plan or manage future wetland restoration projects. A data base, prepared by Ogden Environmental and Energy Services Company during the post-installation monitoring period, is available on disk from the City for research purposes. This data base could serve as a baseline for research projects and includes all vegetation transect data gathered at FSDRIP between 1988 and 1995. The City also has copies of the final monitoring reports for all years of FSDRIP monitoring, as well as aerial photos showing FSDRIP vegetation development.

IMPLEMENTATION

FEDERAL AND STATE AGENCY PERMITS AND AGREEMENTS

The City of San Diego will be lead agency for almost any project proposed within or adjacent to FSDRIP boundaries. Federal and state agencies will be notified of all proposed projects affecting the natural resources. These agencies could include CDFG, USFWS, CORPS, and the RWQCB depending on the nature of the proposed project. Mitigation plans and mitigation monitoring reports for individual projects would also be submitted to these agencies for their review and comment as appropriate for permitting. Adherence to this NRMP, which is approved by City Council, CDFG, USFWS, and CORPS, is required for construction and management of all future projects. Changes to this plan could require approval from all these agencies.

In some instances another agency may be the lead agency. This is the case in streambed alteration or erosion control when a specific permit must be obtained from CDFG. Any deposition of fill or other material into United States waters requires a CORPS permit. These lead agencies would then consult with other resource agencies for review and comment on the proposed project and mitigation plan, if there is one.

CITY OF SAN DIEGO RESPONSIBILITIES

The City of San Diego will be the lead agency for almost any project proposed within or around FSDRIP. The Development Services Department will review all public and City development proposals to determine compliance with the FSDRIP Natural Resource Management Plan. The California Environmental Quality Act (CEQA) process will be applied to determine the environmental impacts of development proposals and identify mitigation measures and alternatives to reduce impacts to FSDRIP's natural resources.

The Park and Recreation is responsible for administration of guidelines and programs, and

maintenance activities at FSDRIP, in compliance with this Natural Resource Management Plan. Park and Recreation will review any proposed development plans along with the associated revegetation and mitigation plans to ensure all projects meet the requirements and objectives of this NRMP. Enhancement projects, park improvements, and the current data base are also the responsibility of the Park and Recreation.

The Transportation and Water departments conduct maintenance activities for their facilities or flood control at FSDRIP. These maintenance activities will be required to comply with the measures outlined in this NRMP. If emergency work is needed, Park and Recreation must be notified of what, why, when, and how these measures will be taken. Mitigation and monitoring plans, if necessary, will require Park and Recreation approval prior to implementation, as well as sign-off to determine when mitigation criteria are met.

Funding for enhancement, management, and preserve maintenance for the natural resource system can come from a variety of sources. Items outlined in this management plan are listed below with possible funding sources:

1. **Informational, Directive, and Educational Signs/Kiosks.** The existing information kiosks were funded by the Maintenance Assessment District. Potential Funding for Signs/Kiosks: Environmental License Plate Grant; Coastal Conservancy Grant; possible future state bond initiatives; and/or Landscape Maintenance District (LMD) operating budget.

2. **Habitat Enhancement** - includes restoration of damaged areas, addition of native trees and stabilization of erosion or potential erosion areas with native vegetation. Potential funding: Maintenance Assessment District for permit required acreage; Environmental License Plate Grant; Coastal Conservancy Grant; operating budget for habitat area beyond that of permit requirements; and/or recreation council fundraising.

3. **Park Ranger.** Potential Funding: LMD operating budget.

DEVELOPMENT RESPONSIBILITIES

This NRMP covers four types of possible projects that could impact FSDRIP: 1) existing developments and future projects, 2) FSDRIP maintenance activities, 3) sediment and flood control, and 4) utility maintenance. Funding for FSDRIP habitat maintenance and management, as well as maintenance of the flood control channel hydraulic efficiency, is the responsibility of the Maintenance Assessment District, per the FSDRIP Development Agreement. This does not preclude, however, the assessment district or FSDRIP property owners from seeking local, state, or federal funds for repairs associated with damages caused by catastrophic or other upstream effects not caused by FSDRIP ownership. Project proponents will be required to: assess impacts; prepare a mitigation and monitoring plan per the NRMP and agency direction; and obtain permits from appropriate agencies prior to impacts taking place. The City and any jurisdictional resource agencies will be the final judge of the adequacy of these mitigation plans. It will be the responsibility of the City or project applicant to plan, implement, maintain, and monitor any required mitigation effort.

Mitigation Planning: For any erosion control, new structure, or maintenance activity involving habitat or streambed disturbance, a pre-project, site-specific field survey will be conducted by a qualified biologist. This survey will determine the type and extent of natural resources and identify possible mitigation requirements.

If a revegetation plan is required, a qualified biologist will outline the mitigation proposal. Revegetation plans will include the following: a landscape plan which addresses in detail the compensation concept and design criteria; the types and extent of habitats to be developed; grading requirements (if any); plant materials to be used; method of planting; and plans for maintenance and monitoring of the revegetation. The City of San Diego will review and approve revegetation plans before project approval is granted.

A binding mechanism will be instituted to ensure a project applicant will implement, maintain, and monitor the mitigation effort as planned and approved. This mechanism can be a bond or other means of assuring funds will be available to complete the mitigation program. In cases where

mitigation habitat area is to be purchased from an already existing City mitigation bank, the acceptability of the project as a participant in the bank will need to be approved by the City and resource agencies and the required mitigation area purchased prior to project development.

Mitigation Implementation: Mitigation programs will be implemented according to mitigation plans preceding or coincident with project construction. This includes the purchase of mitigation area from a mitigation bank. Wherever necessary, exotic or invasive vegetation will be removed and an irrigation plan will be implemented to water plants until they have become established.

After project construction is complete, a second habitat survey of impacted areas will be conducted by a qualified biologist to ensure the success of the mitigation plan.

Mitigation Maintenance: Mitigation and enhancement plans will include a long-term monitoring program to determine the success of the plan and identify maintenance needs. In the first three to five years after plan implementation, monitoring will be conducted and reports made to the Park and Recreation Department on a regular basis. The frequency of monitoring will be determined during the mitigation plan approval process. After the first three to five years, mitigation sites will be monitored to obtain information regarding species and quantity and quality of their growth. An annual report of the monitoring effort will be prepared and submitted to the Park and Recreation Department. The report will address plant survival, vegetative cover, the success of establishing designated habitats, and recommended actions necessary to accomplish full mitigation. Resource agencies will receive copies of mitigation monitoring reports.

The applicant will be responsible for maintaining revegetated mitigation sites for three to five years from the date the planting is completed. Replacement of vegetation and elimination of undesirable species will be undertaken as part of the mitigation maintenance program.

Any vegetation that dies or is otherwise damaged within the first few years due to flooding, disease, over- or under-watering, vandalism, etc., will be replaced by the applicant. Vegetation should be

monitored on a regular basis and replaced as needed to fulfill mitigation plan conditions.

In order for mitigation areas to be successfully established, non-native plants which compete with native plants for light and space must be controlled. Non-native species, such as iceplant, giant reed, tree tobacco, fennel, pampas grass, acacia, castor bean, and tamarisk must be removed from all mitigation sites. Any non-native plants should be removed biannually during the three- to five-year maintenance period. once removed, the plants should be disposed of in a landfill.

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APPENDIX A

FSDRIP PLANT SPECIES

APPENDIX A

PLANT SPECIES OBSERVED AT FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT

Scientific Name	Common Name
Alnus rhombifolia	White alder
Ambrosia psilostachya	Western ragweed
Anagallis arvensis	Scarlet pimpernel*
Anemopsis californica	Yerba mansa
Artemisia californica	California sagebrush
Artemisia douglasiana	Douglas mugwort
Artemisia dracunculus	Tarragon
Artemisia palmeri	San Diego sagewort
Atriplex lentiformis ssp. *lentiformis*	Saltbush
Baccharis pilularis ssp. *consanguinea*	Coyote bush
Baccharis salicifolia	Mulefat
Baccharis sarothroides	Broom baccharis
Berberis nevinii	Nevin's barberry
Brassica nigra	Black mustard*
Bromus laevipes ssp. *rubens*	Foxtail chess
Calstegia macrostegia	Morning-glory
Ceanothus griseus var. *'horizontalis'*	Carmel creeper*
Chenopodium album	Pigweed*
Chenopodium ambrosioides	Mexican tea*
Chrysanthemum cornarium	Garland chrysanthemum*
Clematis lasiantha	Pipestem clematis
Conyza bonariensis	Conyza*
Conyza canadensis	Horseweed*
Cortaderia jubata/C. selloana	Pampas grass*
Cotula coronopifolia	Brass-buttons
Cupaniopsis anacardioides	Carrotwood*
Cynodon dactylon	Bermuda grass*
Cyperus eragrostis	Tall flatsedge
Cyperus esculentus	Yellow nutsedge*
Echinodorus berteroi	Burhead
Eichornia crassipes	Water hyacinth*
Eleocharis macrostachya.	Pale spike-sedge
Encelia californica	California encelia
Epilobium canum (Zauschneria californica)	California fuchsia
Eriogonum fasciculatum	Flat-top Buckwheat
Erodium botyrs	Long-beak filaree*
Erodium cicutarium	Red-stem filaree*
Eschscholzia californica	California poppy
Euphorbia sp.	Euphorbia

APPENDIX A (Continued)

PLANT SPECIES OBSERVED AT FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT

Scientific Name	Common Name
Fraxinus uhdei	Evergreen ash*
Fremontodendron mexicanum	Mexican flannelbush
Geranium caroliniannum	Carolina geranium
Gnaphalium leucocephalum	Everlasting
Haplopappus venetus	Goldenbush
Hazardia squarrosus	Saw-toothed goldenbush
Heliotrpium curvassavicum	Salt heliotrope
Heteromeles arbutifolia	Toyon
Hordeum sp.	Barley
Hymenoclea monogyra	Leafy burrobush
Iva hayesiana	San Diego marsh elder
Juncus acutus	Spiny rush
Lactuca serriola	Prickly lettuce*
Leymus condensatus (Elymus c.)	Giant wild rye
Lonicera subspicata	San Diego honeysuckle
Lotus scoparius	California broom, deerweed
Ludwigia peploides	Ludwigia*
Lupinus succulentus	Arroyo lupine
Malacothamnus fasciculatus	Mesa bushmallow
Malosma laurina	Laurel sumac
Medicago polymorpha	Burclover*
Melilotus albus	White sweetclover*
Melilotus indicus	Sourclover*
Mimulus aurantiacus	Coast monkey flower
Mimulus guttatus	Seep monkey flower
Mirabilis californica	Coast wishbone plant
Nicotiana glauca	Tobacco tree*
Oenothera hookerii	Evening primrose
Picris echioides	Bristly ox-tongue*
Plantago lanceolata	Buckthorn plantain
Platanus occidentalis	London plane tree*
Platanus racemosa	California sycamore
Pluchea odorata (P. purpurascens)	Salt marsh fleabane
Polypogon monspeliensis	Rabbitfoot grass*
Populus fremontii	Fremont cottonwood
Quercus agrifolia	Coast live oak
Rhamnus californica	California coffeeberry
Rhamnus ilicifolia	Holly-leaf redberry
Rhus integrifolia	Lemonadeberry

APPENDIX A (Continued)

PLANT SPECIES OBSERVED AT FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT

Scientific Name	Common Name
Rhus ovata	Sugar bush
Ricinus communis	Castor bean*
Rorippa nasturtium-aquaticum	Water-cress
Rosa californica	California rose
Rubus ursinus	California blackberry
Rumex sp.	Curlydock*
Salix exigua (S. hindsiana)	Sandbar willow
Salix gooddingii	Black willow
Salix laevigata	Red willow
Salix lasiolepis	Arroyo willow
Salix lucida ssp. *lasiandra*	Yellow willow
Salsola iberica	Russian thistle*
Sambucus mexicana	Mexican elderberry
Scirpus californicus	California bulrush
Scirpus olneyi	Olney bulrush
Scirpus robustus	Prairie bulrush
Sisyrinchium bellum	Blue-eyed grass
Solanum douglasii	Douglas nightshade
Sonchus asper	Spiny sowthistle*
Tamarix sp.	Tamarisk*
Taraxacum officinale	Common dandelion*
Tradescantia fluminensis	Wandering Jew*
Trifolium sp.	Clover*
Typha latifolia	Cattail
Vitis girdiana	Desert grape
Vulpia microstachys var. *hirsuta (Festuca megalura)*	Foxtail fescue
Xanthium strumarium	Cocklebur

*non-native plants

APPENDIX B

FSDRIP WILDLIFE SPECIES

APPENDIX B

WILDLIFE SPECIES OBSERVED AT FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT

Scientific Name	Common Name
Fish	
Micropterus salmoides	Largemouth bass*
Lepomis cyanellus	Green sunfish*
Gambusia affinis	Mosquito fish*
Amphibian	
Hyla regilla	Pacific treefrog
Rana catesbeiana	Bullfrog*
Reptiles	
Pseudemys scripta	Red-eared slider*
Sceloporus occidentalis	Western fence lizard
Eumeces skiltonianus	Western skink
Elgaria multicarinata	Southern alligator lizard
Birds	
Podilymbus podiceps	Pied-billed grebe
Phalacrocorax auritus	Double-crested cormorant
Ixobrychus exilis hesperis	Western least bittern
Ardea herodias	Great blue heron
Casmerodius albus	Great egret
Egretta thula	Snowy egret
Butorides striatus	Green-backed heron
Nycticorax nycticorax	Black-crowned night heron
Anas crecca	Green-winged teal
Anas platyrhynchos	Mallard
Anas acuta	Northern pintail
Anas cyanoptera	Cinnamon teal
Anas clypeata	Northern shoveler
Anas strepera	Gadwall
Bucephala albeola	Bufflehead
Oxyura jamaicensis	Ruddy duck
Gallinula chloropus	Common moorhen
Fulica americana	American coot
Charadrius vociferus	Killdeer
Actitis macularia	Spotted sandpiper
Numenius phaeopus	Whimbrel

WILDLIFE SPECIES OBSERVED AT FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT

Scientific Name	Common Name
Birds (Cont'd)	
Calidris minutilla	Least sandpiper
Larus delawarensis	Ring-billed gull
Larus occidentalis	Western gull
Sterna caspia	Caspian tern
Sterna antillarum	Least tern
Cathartes aura	Turkey vulture
Pandion haliaetus	Osprey
Accipiter cooperi	Cooper's hawk
Buteo lineatus	Red-shouldered hawk
Buteo jamaicensis	Red-tailed hawk
Falco sparverius	American kestral
Callipepla californica	California quail
Columba livia	Rock dove
Zenaida macroura	Mourning dove
Chaetura vauxi	Vaux's swift
Aeronautes saxatalis	White-throated swift
Archilochus alexandri	Black-chinned hummingbird
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
Ceryle alcyon	Belted kingfisher
Picoides nuttallii	Nuttall's woodpecker
Picoides pubescens	Downy woodpecker
Sayornis nigricans	Black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Tachycineta bicolor	Tree swallow
Stelgidopteryx serripennis	Northern rough-winged swallow
Hirundo pyrrhonota	Cliff swallow
Hirundo rustica	Barn swallow
Aphelocoma coerulescens	Scrub jay
Corus brachyrhynchos	American crow
Corvus corax	Common raven
Psaltriparus minimus	Bushtit
Salpinctes obsoletus	Rock wren
Thryomanes bewickii	Bewick's wren
Cistothorus palustris	Marsh wren
Regulus calendula	Ruby-crowned kinglet
Chamaea fasciata	Wrentit
Turdus migratorius	American robin

WILDLIFE SPECIES OBSERVED AT FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT

Scientific Name	Common Name
Birds (Cont'd)	
Mimus polyglottos	Northern mockingbird
Toxostoma redivivum	California thrasher
Anthus spinoletta	Water pipit
Lanius ludovicianus	Loggerhead shrike
Sturnus vulgaris	European starling*
Vireo bellii pusillus	Least Bell's vireo
Vireo gilvus	Warbling vireo
Vermivora celata	Orange-crowned warbler
Dendroica petechia	Yellow warbler
Dendroica coronata	Yellow-rumped warbler
Polioptila californica californica	California gnatcatcher
Geothlypis trichas	Common yellowthroat
Wilsonia pusilla	Wilson's warbler
Icteria virens	Yellow-breasted chat
Pheucticus melanocephalus	Black-headed grosbeak
Guiraca caerulea	Blue gosbeak
Passerina amoena	Lazuli bunting
Pipilo crissalis	California towhee
Melospiza melodia	Song sparrow
Melospiza lincolnii	Lincoln's sparrow
Zonotrichia leucophrys	White-crowned sparrow
Agelaius phoeniceus	Red-winged blackbird
Agelaius tricolor	Tricolor blackbird
Euphagus cyanocephalus	Brewer's blackbird
Molothrus ater	Brown-headed cowbird*
Icterus cucullatus	Hooded oriole
Icterus galbula	Northern oriole
Carpodacus mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
Carduelis tristis	American goldfinch
Passer domesticus	House sparrow
Mammals	
Dipelphis virginiana	Virginia opossum*
Sylvilagus audubonii	Audubon's cottontail
Spermophilus beecheyi	California ground squirrel
Thomomys bottae	Botta's pocket gopher

WILDLIFE SPECIES OBSERVED AT FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT

Scientific Name	Common Name
Mammals (Cont'd)	
Rattus norvegicus	Norway rat*
Mus musculus	House mouse
Zalophus californianus	California sea lion
Procyon lotor	Raccoon
Mephitis mephitis	Striped skunk
Urocyon cinereoargenteus	Gray fox
Canis latrans	Coyote

* non-native species

APPENDIX C

CORPS PERMIT FOR FSDRIP

This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers

July 12, 1985

A permit to construct a 7,000 foot earthen flood control channel as part the First San Diego River Improvement Project (FSDRIP) by placing, etc.
at Mission Valley, city of San Diego, California

has been issued to Mr. Bruce McIntyre
MBM Associates on 19
Mooney-Lettieri and Associates

Address of Permittee 9903-B Businesspark Avenue
San Diego, California 92131

Permit Number

84-132-AA

Dennis F. Butler
Colonel, Corps of Engineers
District Commander

FORM 4336, Jul 81 (ER 1146-2-303) EDITION OF JUL 70 MAY BE USED *(Proponent DAEN-CWO)*

Name of Applicant Mr. Bruce McIntyre

Effective Date July 12, 1985

Expiration Date (*If applicable*) July 12, 1995

DEPARTMENT OF THE ARMY
PERMIT

Referring to written request dated May 11, 1984 for a permit to:

( ) Perform work in or affecting navigable waters of the United States, upon the recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (*33 U.S.C. 403*);

(X) Discharge dredged or fill material into waters of the United States upon the issuance of a permit from the Secretary of the Army acting through the Chief of Engineers pursuant to Section 404 of the Clean Water Act (*33 U.S.C. 1344*);

( ) Transport dredged material for the purpose of dumping it into ocean waters upon the issuance of a permit from the Secretary of the Army acting through the Chief of Engineers pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (*86 Stat. 1052; P.L. 92-532*);

Mr. Bruce McIntyre
MBM Associates
Mooney-Lettieri and Associates
9903-B Businesspark Avenue
San Diego, California 92131

is hereby authorized by the Secretary of the Army:
to construct a 7,000 foot earthen flood control channel as part of the First San Diego River Improvement Project (FSDRIP) by placing approximately 1 million cubic yards of dredged and fill material///

in the San Diego River and adjacent wetlands///

at Mission Valley, city of San Diego, California///

in accordance with the plans and drawings attached hereto which are incorporated in and made a part of this permit (*on drawings, give file number or other definite identification marks.*)

"CORPS OF ENGINEERS APPLICATION NO. 84-132"
SHEETS 1 THROUGH 5
DATED: JULY 1984
///

subject to the following conditions:

1. General Conditions:

a. That all activities identified and authorized herein shall be consistent with the terms and conditions of this permit; and that any activities not specifically identified and authorized herein shall constitute a violation of the terms and conditions of this permit which may result in the modification, suspension or revocation of this permit, in whole or in part, as set forth more specifically in General Conditions j or k hereto, and in the institution of such legal proceedings as the United States Government may consider appropriate, whether or not this permit has been previously modified, suspended or revoked in whole or in part.

b. That all activities authorized herein shall, if they involve, during their construction or operation, any discharge of pollutants into waters of the United States or ocean waters, be at all times consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, pretreatment standards and management practices established pursuant to the Clean Water Act (33 U.S.C. 1344), the Marine Protection, Research and Sanctuaries Act of 1972 (P.L. 92-532, 86 Stat. 1052), or pursuant to applicable State and local law.

c. That when the activity authorized herein involves a discharge during its construction or operation, or any pollutant (including dredged or fill material), into waters of the United States, the authorized activity shall, if applicable water quality standards are revised or modified during the term of this permit, be modified, if necessary, to conform with such revised or modified water quality standards within 6 months of the effective date of any revision or modification of water quality standards, or as directed by an implementation plan contained in such revised or modified standards, or within such longer period of time as the District Engineer, in consultation with the Regional Administrator of the Environmental Protection Agency, may determine to be reasonable under the circumstances.

d. That the discharge will not destroy a threatened or endangered species as identified under the Endangered Species Act, or endanger the critical habitat of such species.

e. That the permittee agrees to make every reasonable effort to prosecute the construction or operation of the work authorized herein in a manner so as to minimize any adverse impact on fish, wildlife, and natural environmental values.

f. That the permittee agrees that he will prosecute the construction or work authorized herein in a manner so as to minimize any degradation of water quality.

g. That the permittee shall allow the District Engineer or his authorized representative(s) or designee(s) to make periodic inspections at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.

h. That the permittee shall maintain the structure or work authorized herein in good condition and in reasonable accordance with the plans and drawings attached hereto.

i. That this permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations.

j. That this permit does not obviate the requirement to obtain state or local assent required by law for the activity authorized herein.

k. That this permit may be either modified, suspended or revoked in whole or in part pursuant to the policies and procedures of 33 CFR 325.7.

l. That in issuing this permit, the Government has relied on the information and data which the permittee has provided in connection with his permit application. If, subsequent to the issuance of this permit, such information and data prove to be materially false, materially incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Government may, in addition, institute appropriate legal proceedings.

m. That any modification, suspension, or revocation of this permit shall not be the basis for any claim for damages against the United States.

n. That the permittee shall notify the District Engineer at what time the activity authorized herein will be commenced, as far in advance of the time of commencement as the District Engineer may specify, and of any suspension of work, if for a period of more than one week, resumption of work and its completion.

o. That if the activity authorized herein is not completed on or before /////// day of ////, 19//////, (three years from the date of issuance of this permit unless otherwise specified) this permit, if not previously revoked or specifically extended, shall automatically expire.

p. That this permit does not authorize or approve the construction of particular structures, the authorization or approval of which may require authorization by the Congress or other agencies of the Federal Government.

q. That if and when the permittee desires to abandon the activity authorized herein, unless such abandonment is part of a transfer procedure by which the permittee is transferring his interests herein to a third party pursuant to General Condition t hereof, he must restore the area to a condition satisfactory to the District Engineer.

r. That if the recording of this permit is possible under applicable State or local law, the permittee shall take such action as may be necessary to record this permit with the Register of Deeds or other appropriate official charged with the responsibility for maintaining records of title to and interests in real property.

that there shall be no unreasonable [illegible]

k. That this permit may not be transferred to a third party without prior written notice to the District Engineer, either by the transferee's written agreement to comply with all terms and conditions of this permit or by the transferee subscribing to this permit in the space provided below and thereby agreeing to comply with all terms and conditions of this permit. In addition, if the permittee transfers the interests authorized herein by conveyance of realty, the deed shall reference this permit and the terms and conditions specified herein and this permit shall be recorded along with the deed with the Register of Deeds or other appropriate official.

m. That if the permittee during prosecution of the work authorized herein, encounters a previously unidentified archeological or other cultural resource within the area subject to Department of the Army jurisdiction that might be eligible for listing in the National Register of Historic Places, he shall immediately notify the district engineer.

II. Special Conditions: (*Here list conditions relating specifically to the proposed structure or work authorized by this permit*):

(See enclosed sheet for conditions)///

CONDITIONS FOR PERMIT NO. 84-132-AA

a. This permit is not valid until the State of California, Regional Water Quality Control Board, San Diego Region certifies that the activities permitted herein meet all applicable State water quality standards.

b. The permittee shall offset the wetland habitat losses incurred by the permitted work (FSDRIP) by reconstructing, revegetating, monitoring, and managing the wetland habitats for their habitat value, as follows;

1. The revegetation, maintenance, and monitoring of the wetland habitat within the project site shall be accomplished in accordance with the 25 April 1984 Revegetation Plan for the First San Diego River Improvement Project (FSDRIP), incorporated by reference herein as Exhibit B, except as specified in this permit.

2. The revegetation plan shall be in conformance with the conceptual rendering shown as Figure 6 of Exhibit B and result in not less than 26.8 acres of forested wetland of complex structure and vigorous growth, 9.7 acres of emergent vegetated marsh, and 8.7 acres of open water, all of high habitat value as determined by the U.S. Fish and Wildlife Service. With the exception of 1.3 acres of forested wetland located in the buffer, this vegetation shall exist within the floodway between State Route 163 and Stadium Way, upon completion of the management period specified below. The wetland revegetation landscape plans shall be approved by the Corps of Engineers in consultation with the U.S. Fish and Wildlife Service prior to construction of each phase and shall include at a minimum, the size, number, location, and species of each woody plant, and a description of the area treatment of herbaceous species and groundcover.

3. Implementation of the revegetation plan shall follow the schedule shown in Exhibit B, Table 3, particularly in that tree clearing and earthwork in phase two shall not begin until the initial wetland habitat landscaping called for in phase one has been completed. Management and maintenance to maximize the wetland habitat value of the revegetated area shall be the responsibility of the permittee, as specified in Exhibit B, for a period of 5 years following the completion of construction, including wetland landscaping, of each phase.

4. Annual biological monitoring reports shall be submitted to the Corps of Engineers and the U.S. Fish and Wildlife Service by December 1 of each year during the specified monitoring period for each phase. The monitoring period for phase one will extend 5 years after planting; monitoring periods for subsequent phases can be less than 5 years if approved by the Corps of Engineers in consultation with the U.S. Fish and Wildlife Service. These reports shall be prepared on the basis of field studies outlined in Exhibit B and shall document and summarize the status of the wetland revegetation/habitat reconstruction effort. The Corps of Engineers and the U.S. Fish and Wildlife Service shall consider the monitoring reports, and the findings of direct observation, and the revegetation milestones specified below in "b.5," in evaluating the process of the revegetation effort.

5. Specific wetland revegetation milestones shall be:

a) Upon completion of each phase of wetland revegetation landscaping, the vegetation shall be determined to be as shown in the wetland landscape plans previously approved by the Corps of Engineers in consultation with the U.S. Fish and Wildlife Service. Open water areas shall be undisturbed by construction or development activities related to actions allowed by the FSDRIP Specific Plan.

b) At intervals of 6 and 12 months from the completion of each phase of wetland landscaping, plant survival shall be determined, and mortality greater than ten percent of transplanted container stock shall be offset by in-kind (size and species) replacement. Ground cover vegetation shall be at least 75 percent in the area between tree canopies and shrub plantings.

c) At 24 months from completion of each phase of wetland landscaping, surviving tree species (i.e. willow species, cottonwood, and sycamore) shall be ranked by the applicant's biological consultant for their relative growth, as determined by height, and foliage volume, and/or other acceptable measures. Individual specimens which rank in the lowest twenty percent shall then receive appropriate remedial attention.

d) At 36 months, the combined canopy cover of perennial shrubs and trees shall be greater than 40 percent, with a mean tree height greater than 4 meters, within the 26.8 acres designed to ultimately be wooded wetland. General irrigation shall be curtailed, except as a specific remedial measure.

e) At 48 months, the combined canopy cover of perennial shrubs and trees shall be greater than 60 percent, with a mean tree height greater than 6 meters, within the 26.8 acres designed to be wooded wetland.

f) At the end of the 5-year management/maintenance period for each phase, the 26.8 acres shall have a combined canopy cover of perennial shrubs and trees of at least 100 percent. The composition of the vegetation will reflect that defined in Exhibit B (section IV .2.B.2). For example, extrapolating from this composition, cottonwood trees (with a mean height greater than 6 meters) would contribute no less than 21 percent of the total, willow species would contribute 60 percent canopy, alders, sycamores and oaks would contribute 4 percent canopy, and herbs and shrubs should comprise the remaining 15 percent cover.

g) Remedial measures aimed at achieving plan goals, and satisfying required milestones, recommended by the Fish and Wildlife Service and the Corps of Engineers in response to special conditions 4 and 5, shall be carried out within the ensuing year by the permittee. Remedial measures to satisfy milestones may include, by not be limited to, replacement of failed vegetation, additional planting, fertilization, pest species removal, irrigation modification, control of land-use practices within the floodway wetlands, modification of field studies, and erosion control and repair.

6. Before initiating construction on a phase, the permittee shall post a bond adequate (as determined by the Corps of Engineers) to insure satisfaction of the above monitoring, management, and revegetation milestones spanning the specified revegetation management and monitoring period for that phase.

7. The permittee shall assure the long-term conservation of the

vegetation wetland by deed restriction or environmental easement acceptable to the U.S. Fish and Wildlife Service, upon completion of wetland landscaping of each phase. This conservation easement or deed restriction will not include the buffer, with the exception of the 1.3 acres set aside as wetland woodland. The easement over the woodland in the buffer area would prohibit recreation amenities and maintenance such as pruning or other manicuring activities but would allow pedestrian/bikeway paths.

8. No riprap, rock, or other impermeable materials shall be discharged within the project floodway, except as needed for protection of the three road-crossings (Mission Center Road, Camino del Este, and Stadium Way), or as shown on the wetland landscape plan approved the Corps in consultation with the U.S. Fish and Wildlife Service.

9. The permittee may prepare a monitoring plan which includes specific field studies, vegetation analysis, revegetation milestones, and remedial measures, which would supplant these conditions, with the approval of the Corps in consultation with the U.S. Fish and Wildlife Service.

STRUCTURES IN OR AFFECTING NAVIGABLE WATERS OF THE UNITED STATES:

That this permit does not authorize the interference with any existing or proposed Federal project and that the permittee will not be entitled to compensation for damage or injury to the structures or work authorized herein which may be caused by or result from existing or future operations undertaken by the United States in the public interest.

b. That no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized by this permit.

c. That if the display of lights and signals on any structure or work authorized herein is not otherwise provided for by law, such lights and signals as may be prescribed by the United States Coast Guard shall be installed and maintained by and at the expense of the permittee.

d. That the permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the authorized structure or work, shall, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the waterway to its former conditions. If the permittee fails to comply with the direction of the Secretary of the Army or his authorized representative, the Secretary or his designee may restore the waterway to its former condition, by contract or otherwise, and recover the cost thereof from the permittee.

e. Structures for Small Boats: That permittee hereby recognizes the possibility that the structure permitted herein may be subject to damage by wave wash from passing vessels. The issuance of this permit does not relieve the permittee from taking all proper steps to insure the integrity of the structure permitted herein and the safety of boats moored thereto from damage by wave wash and the permittee shall not hold the United States liable for any such damage.

MAINTENANCE DREDGING:

a. That when the work authorized herein includes periodic maintenance dredging, it may be performed under this permit for None years from the date of issuance of this permit (*ten years unless otherwise indicated*);

b. That the permittee will advise the District Engineer in writing at least two weeks before he intends to undertake any maintenance dredging.

DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES:

a. That the discharge will be carried out in conformity with the goals and objectives of the EPA Guidelines established pursuant to Section 404(b) of the Clean Water Act and published in 40 CFR 230;

b. That the discharge will consist of suitable material free from toxic pollutants in toxic amounts.

c. That the fill created by the discharge will be properly maintained to prevent erosion and other non-point sources of pollution.

DISPOSAL OF DREDGED MATERIAL INTO OCEAN WATERS:

a. That the disposal will be carried out in conformity with the goals, objectives, and requirements of the EPA criteria established pursuant to Section 102 of the Marine Protection, Research and Sanctuaries Act of 1972, published in 40 CFR 220-228.

b. That the permittee shall place a copy of this permit in a conspicuous place in the vessel to be used for the transportation and/or disposal of the dredged material as authorized herein.

This permit shall become effective on the date of the District Engineer's signature.

Permittee hereby accepts and agrees to comply with the terms and conditions of this permit.

See attached sheets for signatures.

PERMITTEE — DATE

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Dennis P. Butler, Colonel — July 12, 1985

DISTRICT ENGINEER, U.S. ARMY, CORPS OF ENGINEERS — DATE

Transferee hereby agrees to comply with the terms and conditions of this permit.

TRANSFEREE — DATE

U.S. GOVERNMENT PRINTING OFFICE : 1983 O - 401-834

EXHIBIT A

CORPS OF ENGINEERS APPLICATION 84-132
APPLICANTS

MBM Associates
C. Dennis Marteeny
General Partner
533 Broadway, Suite 104
El Cajon, CA 92117

May Centers, Inc.
General Partner
William Grafstrom
611 Olive Street
St. Louis, MO 63101

Mission Valley Partnership
General Partner
May Centers Inc.
William Grafstrom
611 Olive Street
St. Louis, MO 63101

Mission Valley One
Donald P. Sammis
General Partner
2650 Camino del Rio North, Suite 100
San Diego, CA 92108

Sammis Properties
Donald P. Sammis
President
2650 Camino del Rio North, Suite 100
San Diego, CA 92108

CalMat Co.
Scott J Wilcott
Senior Vice President, Legal
Counsel and Secretary
Box 2950, Terminal Annex
Los Angeles, CA 90051

THE UNDERSIGNED PERMITTE HEREBY ACCEPTS AND AGREES TO COMPLY WITH THE TERMS AND CONDITIONS OF THE PERMIT ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREO.

DATED: June 21 1995

CALMAT CO.
SCOTT J WILLCOTT
SENIOR VICE PRESENT, LEGAL
COUNSEL AND SECRETARY

BY: _____
SCOTT J WILLCOTT

THE UNDERSIGNED PERMITTEE HEREBY ACCEPTS AND AGREES TO COMPLY WITH THE TERMS AND CONDITIONS OF THE PERMIT ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

DATED: JUNE 15th 1985

SAMMIS PROPERTIES
DONALD F. SAMMIS
PRESIDENT

BY: _____
DONALD F. SAMMIS

THE UNDERSIGNED PERMITTEE HEREBY ACCEPTS AND AGREES TO COMPLY WITH THE TERMS AND CONDITIONS OF THE PERMIT ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

DATED: June 15th 1985

MISSION VALLEY ONE
DONALD F. SAMMIS
GENERAL PARTNER

BY: _____
DONALD F. SAMMIS

THE UNDERSIGNED PERMITTEE HEREBY ACCEPTS AND AGREES TO COMPLY WITH THE TERMS AND CONDITIONS OF THE PERMIT ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

DATED: 6-27-86

MEM ASSOCIATES
A CALIFORNIA LIMITED PARTNERSHIP

BY: MAY CENTERS INC.
A MISSOURI CORPORATION

BY: William Gustafson GC

BY: _____

THE UNDERSIGNED PERMITTEE HEREBY ACCEPTS AND AGREES TO COMPLY WITH THE TERMS AND CONDITIONS OF THE PERMIT ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

DATED: 6-27-85

MISSION VALLEY PARTNERSHIP
MAY CENTERS INC.
GENERAL PARTNER

BY: William Gustafson

APPENDIX D

APPROVED FSDRIP REVEGETATION PLANT SPECIES

FSDRIP HYDROSEED MIXES

Seedmix #1: Lower slope	**lbs. per acre**
Anemopsis californica	1
Artemisia douglasiana	2
Artemisia palmeri/Artemisia dracunculus	2
Juncus acutus	2
Minulus guttatus	1.5
Oenothera hookeri	.5
Sisyrinchium bellum	.5
	.5

Seedmix #2: Middle slope	**lbs. per acre**
Artemisia californica	2
Artemisia douglasiana	2
Artemisia palmeri/artemisia dracunculus	2
Baccharis pilularis var. *consanguinea*	1
Collinsia heterophylla	2
Elymus condensatus	3
Encelia californica	2
Eriogonum fasciculatum	2.5
Eschscholzia californica	.5
Festuca megalura	6
Lotus scoparius	5-6
Mimulus puniceus (Diplacus puniceus)	1
Oenothera hookeri	.5
Rosa californica	1
Sisyrinchium bellum	2
Solidago californica	1.5
Vitis girdiana	1

FSDRIP HYDROSEED MIXES (Continued)

Seedmix #3: Lower slope	lbs. per acre
Artemisia californica	
Artemisia palmeri/Artemisia dracunculus	2
Baccharis pilularis var. *consanguinea*	1
Collinsia heterophylla	1.5
Encelia californica	
Eriogonum fasciculatum	
Eschscholzia californica	2
Festuca megalura	6
Lasthenia glabrata	1
Lotus scoparius	4
Lupinus succulentus	3
Mimulus puniceus (Diplacus puniceus)	
Orthocarpus purpurascens	1
Sisyrinchium bellum	2
Solidago californica	

Seedmix #4: Middle slope	lbs. per acre
Anemopsis californica	1-2
Artemisia palmeri	2
Carex spissa	3
Iva hayesiana	
Mimulus guttatus	2
Scirpus olneyi	3
Scirpus robustus	3

FSDRIP CONTAINER PLANT

Scientific Name	Common Name
Acer negundo	Box edler
Juglans californica	California walnut
Platanus racemosa	California sycamore
Populus fremontii	Fremont cottonwood
Quercus agrifolia	Coast live oak
Salix exigua (S. hindsiana)	Sandbar willow
Salix goddingii	Black willow
Salix laevigata	Red willow
Salix lasiolepis	Arroyo willow
Salix lucida ssp. *lasiandra*	Yellow willow
Sambucus mexicana	Mexican elderberry
Artemisia californica	California sagebrush
Artemisia douglasiana	Douglas mugwort
Artemisia Palmeri	San Diego sagewort
Clematis lasiatha	Pipestem clematis
Encelia californica	California encelia
Epilobium canum (Zauschneria californica)	California fuchsia
Eriogonum fasciculatum	Flat-top buckwheat
Heteromeles arbutifolia	Toyon
Hymenoclea monogyra	Leafy burrobush
Iva hayesiana	San Diego marsh elder
Leymus condensatus (Elymus c.)	Giant wild rye
Lonicera subspicata	San Diego honeysuckle
Malosma laurina	Laurel sumac
Pulchea servicea	Arrow weed
Rhus integifolia	Lemonadeberry
Rosa californica	California rose
Rubus ursinus	California blackberry
Scirpus olneyi	Olney's bulrush
Solanum douglasii	
Vitus girdiana	Desert grape

APPENDIX E

FSDRIP MANAGER'S ROLE

APPENDIX E

STEWARDING NATURE: ROLE OF FSDRIP MANAGER

1. DEFINE PROJECT AREAS AND KNOW PERMIT REQUIREMENTS

FSDRIP is to be managed by several entities. The day-to-day maintenance work will be done by a contractor hired by the City of San Diego Park and Recreation Department (PRD). The PRD will oversee this work with guidance from this management plan and, if needed, input from a project biologist.

The first job of the FSDRIP maintenance manager is to familiarize themselves with the habitats present. For this purpose a general map has been created (Figures 2, 3 and 4). A careful review of this map should be made to define where buffer areas are intended to exist, since they do not always exist beside the walkways in all areas of the project. In particular, there is no buffer zone along the northern edges of the Phase IIa and IIb areas. It is also expected that as the rest of the properties along the edge of the project are developed, additional buffer areas outside the walkway will be turned over to private landscape maintenance as was done at the River Scene and Bay Colony developments.

The second job of the manager is to understand the goals that have been set for the project by the CORPS permit. It is recommended that any new manager review the permit requirements and all previous reports regarding the project to understand the decisions made in the past. The manager should also be familiar with the behavior, recognition, and vocalization of listed species such as the California least tern, least Bell's vireo and California gnatcatcher, so impacts to those species can be avoided.

2. NON-PERMITTED USES

In order to preserve the project goals for habitat establishment, some uses are not permitted at the project and reasonable steps should be taken to insure that they do not occur. As FSDRIP is first a wildlife habitat and other uses are of a secondary importance, uses that conflict with the wildlife habitat should be guarded against. Non-permitted uses include boating, swimming, fires, and night

use. Fishing, while allowed, is not encouraged. Dogs must be on a leash when within the project.

The PRD plays the primary role by installing and maintaining signs to notify the public about non-permitted uses at all major entry ways to the project. These signs may need to be changed over time to keep them up to date. Management recommendations will be made by the City to further insure disruptive activities cease at the project or institute rehabilitation efforts.

Presently, vehicular access is limited to the streets along the edges of the project. Bollards are installed at each of the street entries to the walkways to enforce this. The maintenance contractor is responsible to make sure that these bollards are always in place and locked to prevent unauthorized vehicles from entering the project. Further, foot access limitations to some areas of the project may become necessary if the City is not able to contain access and protect habitat sufficiently.

Public relations, rather than individual enforcement, will play the primary role in assuring the habitats at FSDRIP are protected. Public education about the project and its intentions will be necessary. An interpretive program which teaches the public the goals of the project, describes the types of prohibited activities, provides the reasons for non-permitted activities, and invites their participation in project protection will be necessary to prevent habitat destruction, especially as residential densities rise along the project edges.

3. HOW FSDRIP NATIVE HABITAT MAINTENANCE DIFFERS FROM ORNAMENTAL MAINTENANCE

Natural habitat maintenance utilizes the same horticultural techniques as those used in maintaining ornamental landscapes; but, the vision of what is being created is different, as well as the species present. The goal in most ornamental landscapes is to create an unchanging landscape which always looks as the designer intended it. With the typical ornamental landscape, aesthetics are usually the single biggest consideration. In contrast the goal in maintaining a natural system is to keep it in balance so it can continue to dynamically change and evolve through time. But, most importantly, the manager of a natural habitat area allows the habitat to naturally progress. Each of the common horticultural practices applied to the ornamental landscape is compared in Table E-1 with their counterpart in the natural landscape. This comparison is made to help educate the FSDRIP manager

in a process which may best be described as habitat stewarding rather than landscape maintenance.

4. FSDRIP MAINTENANCE SYSTEM

The project character is one of a wildlife habitat corridor bordered in most parts by a buffer/transition zone in most areas between the habitat areas and the urban developments along the project edge. Within the habitat zones, nature will largely be allowed to take its course. It will be the job of the maintenance manager to envision how both individual plant species and their associations will develop over time and recommend remedial measures to encourage this succession if necessary. Normal ornamental pruning, pest control, fertilization, irrigation, and weed control will not be allowed in these areas. Instead, only methods that focus on the development of the three vegetation types as wildlife habitat will be allowed. A limited degree of aesthetic and safety maintenance shall be allowed in the buffer zone areas. The general performance standards and restrictions are summarized below.

Invasive Plants

Invasive, exotic species will be removed on at least a monthly basis over the entire project during the non-nesting season (September 15 to March 1). During the remainder of the year, only noxious, invasive weedy species will be removed monthly subsequent to a visual inspection to ensure the work area is free of nests. Work would be done by hand and limited to two persons during the nesting season. The list in Table E-2 includes the species that shall be eradicated completely from the project as well as those that should to be kept under continuing control.

TABLE E-1

ORNAMENTAL MAINTENANCE COMPARED TO NATURAL AREA MAINTENANCE

Ornamental Systems	Natural Systems
Weeds Weed out all plants not planted	Remove only invasive exotic species; favor long-term native species dominants.
Always keep weed-free basins around container plantings in groundcovers.	Maintain weed-free basins around container plantings only during first two to three years after planting.
Herbicides often used to remove weeds.	Herbicides used only where required for invasive exotic species eradication.
Weed whipping often used.	Almost no weed whipping used except along walkway edges and then only after weeds have been eliminated.
Pruning Prune to maintain safest and most beautiful or utilitarian form (shearing common).	No pruning at all in habitat areas (dead wood is left in place); safety and minor aesthetic pruning in buffer zone (natural heading back, little shearing).
Fertilization Fertilizer used regularly to promote green, lush, quick growth.	Fertilizer used to establish plants and push early growth.
	No long-term use.
	Soil root fungi help plants get additional nutrients.
Pests Use pesticides when cost justified to prevent unattractive or fatal damage to plants.	Use pesticides only when essential for plants to establish.
Generally low threshold levels of damage justify chemical use.	High threshold of damage before chemical use is justified.
Ongoing use expected when needed.	No long-term use expected.

TABLE E-1

ORNAMENTAL MAINTENANCE COMPARED TO NATURAL AREA MAINTENANCE (Continued)

Ornamental Systems	Natural Systems
Rodents controlled with traps and poisons.	Rodents controlled if necessary, according to the recommendation of a licensed pest control advisor.
Disease Fungicides used when necessary to prevent infection or spread of disease.	No fungicides necessary.
Dead plants removed and replaced with same species originally planted.	Replace dead plants as necessary. Use substitute species better adapted to site if necessary.
Mature dead plants removed.	Mature dead plants not removed.
Weeds, dead wood, and trimming removed.	Only weed waste removed from site.
Irrigation Water year-round as necessary to keep plant growing and looking lush and green.	Water as necessary to establish planting and to lower fire danger.
	Once established, plants are weaned from irrigation and should be able to survive on no further irrigation, although summer irrigation can keep plants growing and green.
Brown plants in summer are considered dead plants.	Many species of plants turn brown in summer dry areas but are still alive and are dormant or in seed.
Trash Trash removed including all organic debris.	Trash removed, but dead wood and leaf litter left.
Walkways kept clean.	Walkways kept clean.
Riprap Maintenance All plant growth kept out of riprap.	Native plant growth allowed to grow into riprap.

TABLE E-1

ORNAMENTAL MAINTENANCE COMPARED TO NATURAL AREA MAINTENANCE (Continued)

Ornamental Systems	Natural Systems
Appearance Lush and green year-round. Flowers if possible at all seasons. Plants pruned to remove all unsightly growth.	Greenest in winter/spring season. Most flowers in spring and early summer. All plant growth okay.
Plants replaced if they do not look good.	Plants replaced if they die. Substitutions made from species better adapted to site but not for aesthetics.
Plants staked or trained to grow a certain way.	Staking only to stabilize plants against wind or flood damage.
Project Disturbance Due to Vandalism or Flooding Original landscaping restored. Access limited during repair period.	Some ongoing disturbance expected from flooding, people, and animals; only major disturbances to plantings and irrigation are repaired.
Signs used if necessary to limit access.	Foot and bicycle traffic access limited only to walkways; general access to habitat discouraged but fishing access allowed.
	Signs used to keep out people/dogs and educate public as necessary about project goals and restrictions.

TABLE E-2

FSDRIP WEEDS

Complete Weed Eradication

Arundo donax	giant reed
Chrysanthemem coronarium	garland chrysanthemum
Cortaderia selloana	pampas grass
Eichornia crassipes	water hyacinth
Eucalyptus spps.	eucalyptus species
Fraxinus spps.	ash species
Hydrilla verticillata	hydrilla
Nicotiana glauca	wild tobacco
Osteospermum fruiticosum	African daisy
Pennisetum clandestinum	kikuyu grass
Pennisetum ruppelii	pink fountain grass
Pennisetum setaceum	fountain grass
Phoenix canariensis	Canary island date palm
Phragmites communis	common reed
Ricinis communis	castor bean
Salsola iberica	Russian thistle
Schinus molle	California pepper
Schinus terebinthifolia	Brazilian pepper
Tamarix spps.	tamarisk
Washintonia spps.	Mexican and California fan palms

The following species shall constitute no more than 10 percent of visual groundcover in any area of 5000 square feet or greater at any time.

Weed Control

Brassica nigra	wild mustard
Conzyza canadensis	horseweed
Cynodon dactylon	Bermuda grass
Melilotus albus	white bee clover
Melilotus indicus	yellow bee clover
Raphanus sarivus	wild radish
Sonchus asper	sow thistle

Pruning

No pruning should occur in the habitat areas. Pruning in the buffer zone areas will be limited to keeping the walkway clear, removing dangerous tree limbs, and keeping a low shrub and groundcover layer up to five feet from either side of the sidewalk. Perennial shrub species shall generally be allowed to grow to mature size except where they interfere with sidewalk passage. The visual dominance of evergreen shrubs shall be favored over more drought deciduous and annual vegetation. However, pruning in walkway areas not bordered by a buffer zone shall only be for clearance of the walkway itself. All pruning will be done according to the standards approved by the International Society of Arborculture and shall be made to maintain the natural form of each species. No hedge or "poodle" pruning will be allowed. No pruning shall be allowed for the purpose of maintaining view corridors to the river or beyond the project if such pruning requires entry into the riparian woodland habitat.

Staking

Only tree species will be staked, if necessary, to stabilize them during their establishment period. All stakes are to be removed from trees as soon as they can remain upright without support. No stakes will remain on trees beyond the end of their third full year after planting. Stakes and ties, once removed, will be taken off site for disposal. If staking is necessary, two stakes of adequate size to stabilize the tree will be driven a minimum of two feet into the ground on opposite sides of the plant. A tree tie will be used to secure the plant to both posts at the lowest possible point where the tree can hold itself upright.

Pest Control

Few pesticides are expected to be needed at the project as high thresholds of damage will be tolerated. In the event that a major insect or rodent outbreak begins to do unacceptable levels of damage to the habitat or buffer areas, a licensed pest control adviser shall be consulted along with a native plant revegetation specialist and wildlife biologist from USFWS and/or CDFG to decide if chemical or management procedures should be used to bring it under control and ensure sensitive wildlife are not harmed.

Disease Control

No disease control measures will be utilized in the habitat or buffer zone areas. Any dead plants shall be left in place. If replacements are made for diseased plants, substitute species should be considered which are more disease resistant. A native plant revegetation specialist or nursery worker should be consulted in this effort. Any chemical applications must be applied only upon the recommendation of a licensed pest control adviser.

Fertilization

No fertilization shall be done to any plantings unless recommended by a native plant revegetation horticulturist to meet resource agency permit requirements.

Trash

All inorganic trash and debris shall be removed from the project. In the habitat areas, all organic debris except invasive, exotic species shall remain in the project area. Under no circumstances shall invasive, exotic or brush trimmings taken from the buffer zone be dumped in large piles in the habitat areas of the project. No oil, fertilizers, or left over pesticides shall be dumped into the project at any time. Animal droppings will generally only be removed from the walkway areas of the project.

Channel Dredging

The City of San Diego Engineering and Design Department (E&D) will be responsible for devising a program for annual monitoring of sediment levels in the open water areas of the channel. E&D will decide when sediment removal is necessary to maintain flood control channel capacity. If sediment removal is required, entry and egress for such work will be permissible only from the bridge crossings at the project and shall not be allowed to cross over any of the riparian woodland habitat areas. Sediment removal will be scheduled during non-breeding seasons (September 15 - March 1). Any material dredged from the channel will not be dumped in habitat areas but will be taken to an approved deposition area. Areas designated for freshwater marsh in the original

revegetation plan will be preserved during any sediment removal process.

Disturbance/Vandalism

Disturbance to the riparian habitat areas shall be discouraged through both maintenance and signage practices. The PRD will institute a program for project kiosks which will both alert the public to the access and use limitations of the project and actively educate the public regarding the biological values present.

Night-lighting is not present at the project and should not be installed in the future since it would detrimentally affect habitat values.

The only motorized vehicular access permitted will be for maintenance, fire, or rescue purposes. Otherwise, the only traffic that will be allowed is pedestrians or bicyclists on the project walkways. Nature trails will not be installed within the habitat areas of the project. Locked bollard entries shall be maintained at all entryways off streets that cross the project. These entries shall be opened only to let maintenance or emergency vehicles pass and then shall be closed and locked immediately once the project is entered or exited.

Fishing access will be allowed, but not encouraged. Fishing access will be discouraged horizontally along the shoreline. Instead, direct access at specific points will be provided and encouraged.

Flood damage to the channel will be evaluated by the City of San Diego Engineering Department. If damage is considered major and repairs are warranted, then revegetation per the requirements in CORPS permit and original plan intentions will take place once repairs are completed. Because the river is a dynamic system, minor amounts of channel vegetation disturbance are expected and will be tolerated within the management program. Such areas will be allowed to revegetate naturally without additional human help.

Irrigation

The irrigation system at FSDRIP was designed initially to be temporary and used just to establish

the original plantings. It consists of two main components: an overhead broadcast system to cover the entire project area and a drip system to water just the container stock. The concept was to water long enough for the plants to become established and then abandon one or both of these systems. For fire and aesthetic reasons, however, it will be necessary to continue to give some supplemental water to the upper slope plantings on a continuing basis.

In order to achieve these objectives and also meet current City of San Diego goals for water conservation, an irrigation management program has been devised for the project. Each of the irrigation zones is documented in the controller boxes at the project. The maintenance contractor will be required to provide the PRD with monthly documentation of the irrigation times for each zone and system. The California Irrigation Management Information System (CIMIS) will be used to set a general watering schedule for these areas which will then be given minor adjustments in the field by the PRD based on actual weather conditions. The CIMIS system is designed to provide water at the expected rates of plant usage as calculated for location, time of year, and type of vegetation grown. A copy of the CIMIS will be in the possession of the FSDRIP maintenance manager.

The overhead system consists of two types of heads. Pop-up spray heads are in the buffer zone and gear driven rotors cover the remainder of the dike face. The bottom row of rotors were disconnected once the plants were established because the plants in this zone are close to the river and should be able to obtain all of their water needs from it. Irrigation for the middle and upper zones will be left in place and may be used to supplement watering over the dry summer months.

When an irrigation zone is no longer needed and is designated for abandonment, the following steps should be taken: zero-out the station in the controller, disconnect the control wire in the controller, disconnect the solenoid or control wire at the valve, and wind down the valve stem. These steps will effectively prevent the zones from being accidentally or inadvertently reactivated.

If irrigation in a zone is temporarily discontinued but the zone is not designated for abandonment, the following steps should be taken: zero-out the station in the controller and wind down the valve stem.

The system of drip emitters was designed to provide water to all container plantings. In most cases, separate lines were installed for trees and shrubs. It is desirable for certain species to continue to be irrigated in order to ensure survival, in addition to good looks and/or speed of growth.

For plants that are to be removed from the drip system, if it continues to be used, the tubing should be disconnected from the emitter and a plug placed into the emitter. The tubing should be left in place, as it is below ground. If the entire drip system is to be abandoned, the same procedure outlined above for the overhead system should be followed; however there will be no aboveground parts to remove with the drip system.

Irrigation Scheduling

Factors to consider when determining an irrigation schedule and how much water to apply include: plant type, weather, time of year, soil type, and aspect.

Plant Type

Individual species needs must be known and met for the plants to fulfill their intended function. Some species require constant moisture, such as the freshwater marsh species. Others tolerate little or no summer water, such as *Fremontedendron mexicanum* and *Rhus integrifolia*. Others have a rather wide range of tolerance, such as *Heteromeles arbutifolia*. As the irrigation system applies the same amount of water to each plant, it is important to gauge a good average and meet the needs of the weakest link in the plant palette. This must be done by observation.

Weather

Weather, in conjunction with the time of year, plays a big part in the water need of plants. The maintenance manager needs to make adjustments for rain by turning the system off, preferably in advance of a storm. For unseasonable weather, by slightly increasing or decreasing the irrigation, it is possible to help the plantings avoid undue stress and save water. The manager can consult and use the CIMIS system, described later in this section, to make weather related adjustments.

Time of Year/Day

The changing of the seasons and the associated weather play the biggest part in plant water needs. The single most important factor in changing plant water needs is day length, which changes throughout the year but is uniform from year to year. Longer days mean greater transpiration and higher water use. Shorter days also coincide with dormancy in many species and reduced water need. Irrigation will be early in the morning or late at night to avoid loss of water to evaporation and to remain within the water conservation guidelines.

Soil Type

Soil plays a factor in irrigation needs because the soil is a reservoir for air and water. The coarse, sandy soils found at FSDRIP tend to dry out and do not retain moisture. This tends to necessitate more frequent irrigation than a soil with a greater water holding capacity.

Aspect

Aspect plays a role in plant water needs. At FSDRIP, the dike faces are oriented to the north and south. The north shore, which have a southern exposure, will have a higher evaporative loss than the south shore, which faces north. This is because the north dike face receives more direct rays from the sun, which increases both transpiration and evaporation. The maintenance manager must keep this in mind when setting schedules and adjust times accordingly.

CIMIS

CIMIS is a valuable irrigation tool for the maintenance manager. It is a weather station driven system that provides the manager with actual reference evapotranspiration (ET_o) figures for selected areas statewide. By plugging in the specific site variables, the manager can program irrigation efficiently and without guessing. Used properly, it can significantly reduce waste.

For a project like FSDRIP, CIMIS data can assist in formulating irrigation scheduling and can be used as a check of actual consumption.

The reference evapotranspiration (ET_o) number is expressed in inches and can be given for any time frame desired (i.e., day, week, month). This number is then multiplied by a crop coefficient (K_c) and the resulting total is the actual evapotranspiration (ET_o), or the amount of water that must be supplied to the crop, expressed in inches.

The nearest weather station to FSDRIP is in San Diego. The historical ET_o for this station is as follows:

J	F	M	A	M	J	J	A	S	O	N	D
2.2	2.5	1.3	1.4	4.4	4.0	4.6	4.6	1.9	1.3	2.2	1.9

For FSDRIP, it is expected that the crop coefficient should be set between 0.25 and 0.5. Thus for June, with an ET_o at 4.0 and using a K_c of 0.5, 2.0 inches of water would need to be applied to the project (4.0 x 0.5 = 2.0). The manager would then decide how to apply this 2.0 inches during the month, such as two applications of one inch or four applications of one-half inch, etc. It is recommended that irrigation not be applied too frequently, as it will result in applying water to only the uppermost layer of soil. This is not only inefficient, but can result in plant rooting only along the surface. Irrigations to the mature FSDRIP landscape should not occur more often than weekly.

To determine the actual run time for each station, the desired amount of water, expressed in inches, is divided by the precipitation rate for each type of sprinkler head, which is also expressed in inches.

As an example, assuming proper spacing, Hunter rotors have a precipitation rate of 0.4 inches per hour. To apply 0.5 inches, the sprinklers would need to run one hour, 15 minutes (0.5 t 0.4 = 1.25). In order to reduce possible runoff, it is suggested to apply two cycles of 38 minutes each.

This method is easily repeated for each type of head, though it is more complicated to calculate for drip systems because square footages are more difficult to gauge which makes precipitation rates difficult to determine. Moreover, if the drip system is to be utilized over the long term, it is likely to require significant revisions to the system. This is because emitters must be moved away from the base of the plant and emitters added to accommodate the increased size of the plant material, especially the tree species.

Historically, July and August have the highest ET_o in San Diego, with an average of 4.6 inches per month. Based on this ET_o, a model irrigation program for July and August shall be laid out. Using a crop coefficient (K_c) of 0.5, 2.3 inches of water is needed for each month (4.6 x 0.5 = 2.3). With 2.3 inches required for the month, about 0.6 inches would be needed each week (2.3 ÷ 4 = 0.6). So, for Hunter rotor heads, which have a precipitation rate of 0.4 inches per hour, it will be necessary to water 90 minutes per week. This, of course, assumes a properly designed system with uniform coverage and also assumes that the system has been installed correctly and is well maintained.

With the amount of time needed per week, it is recommended that it be applied with two to three cycles in order to reduce runoff potential. The manager will need to determine how much water can be applied in one cycle without any runoff. It is recommended that all of the water for each week be applied on the same day, or at a maximum over two days in the week. This will result in deeper watering of the soil profile and will be of more benefit to the plants than frequent shallow irrigation.

The manager will need to make adjustments in this schedule. It may be appropriate for the north side, which faces south, but the south side, with its northern exposure, could possibly need as little as half that amount. Soil texture may vary from area to area and adjustments should be made to reflect those differences. This can only be done in the field by observation. The manager should probe the soil to gauge its moisture content and visually assess the plant material for signs of unacceptable water stress. By utilizing this type of system, educated decisions can be made with regard to irrigation scheduling.

Riprap Maintenance

Native species which do not interfere with either the safety or structural integrity of the riprap will be allowed to remain. In general, this will mean that over time, as the gaps between the riprap fill with sediment, riparian tree and shrub species will be allowed to remain.

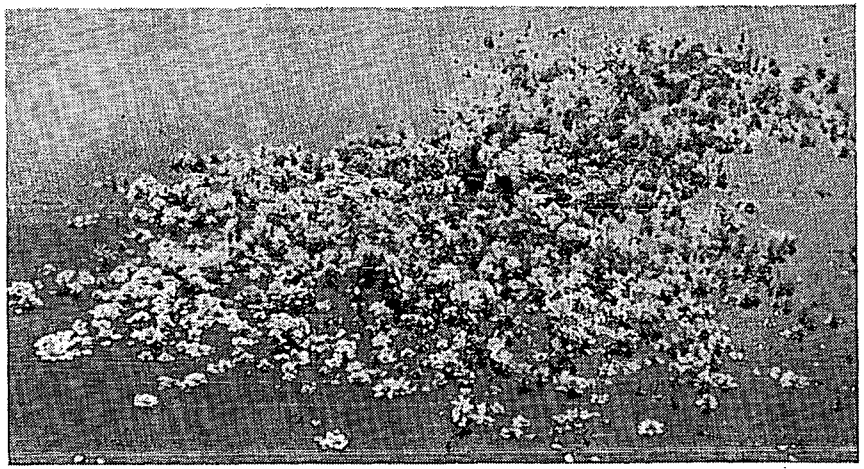
5. CONCLUSION

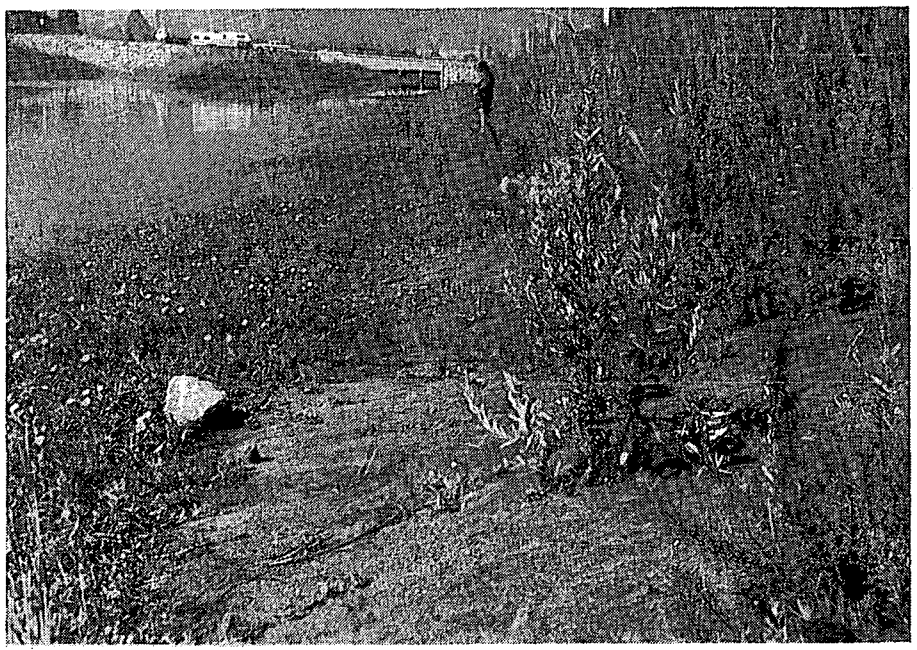
From the standpoint of traditional landscaping, the project is expected to be more dynamic than an ornamental one and will change and evolve through time. Likewise, the urban surroundings are also expected to be dynamic along the edges of the project. In one aspect, the project has been set up as static, and that is in its designation as permanent wildlife habitat not to be disturbed by future human developments nearby or within the site. It will be the challenge of the FSDRIP manager in the future to sufficiently educate the public and owners about this aspect of the project habitat values and to protect it in the face of demands which will almost certainly be made to use the project for other purposes. But, if successful, the managers will leave a legacy not only for the wildlife of the project but also for all those living in this densely urban area to enjoy now and in the future.

APPENDIX F

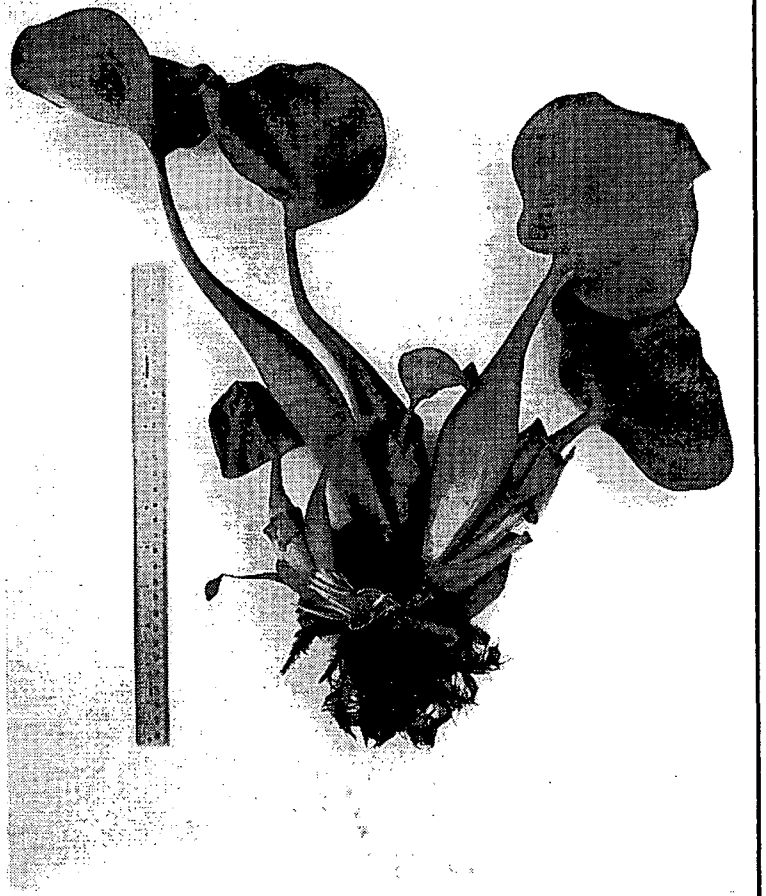
RIPARIAN PLANT PHOTOGRAPHS

TO AID IN IDENTIFICATION





Ludwigia *(Ludwigia peploides)*



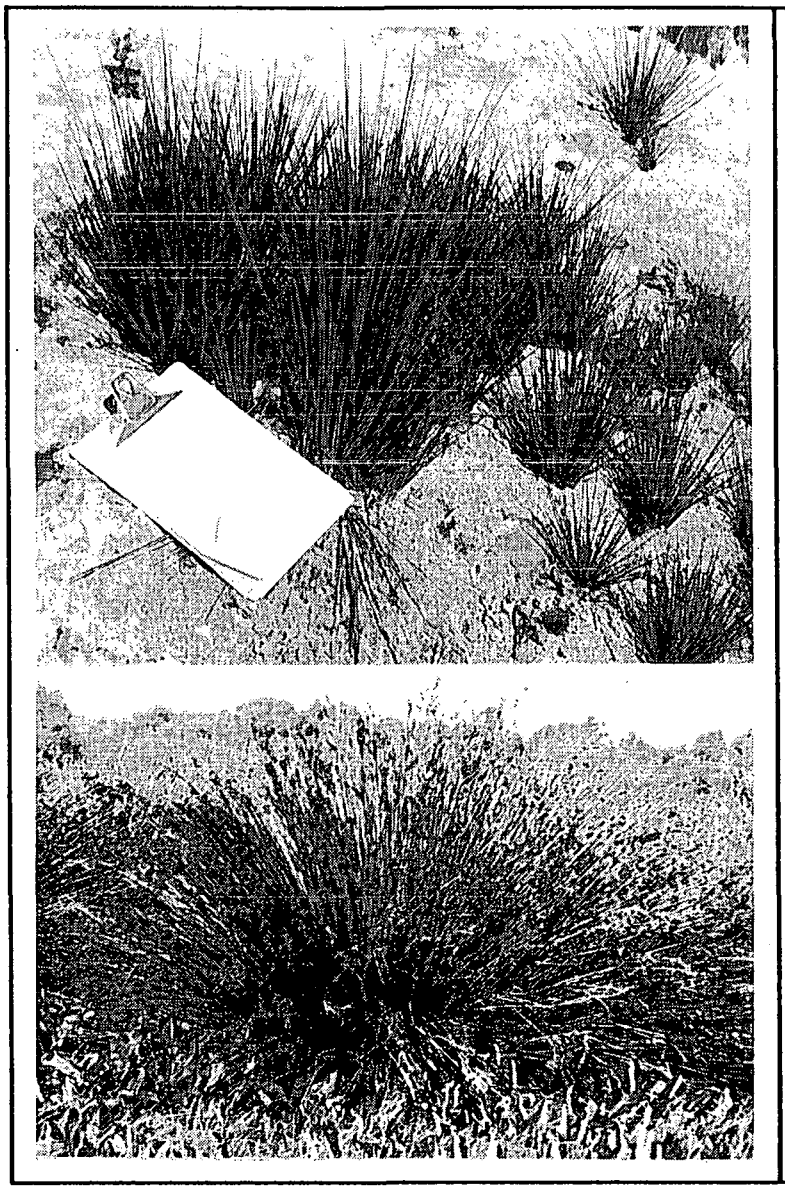
Water Hyacinth *(Eichornia crassipes)*

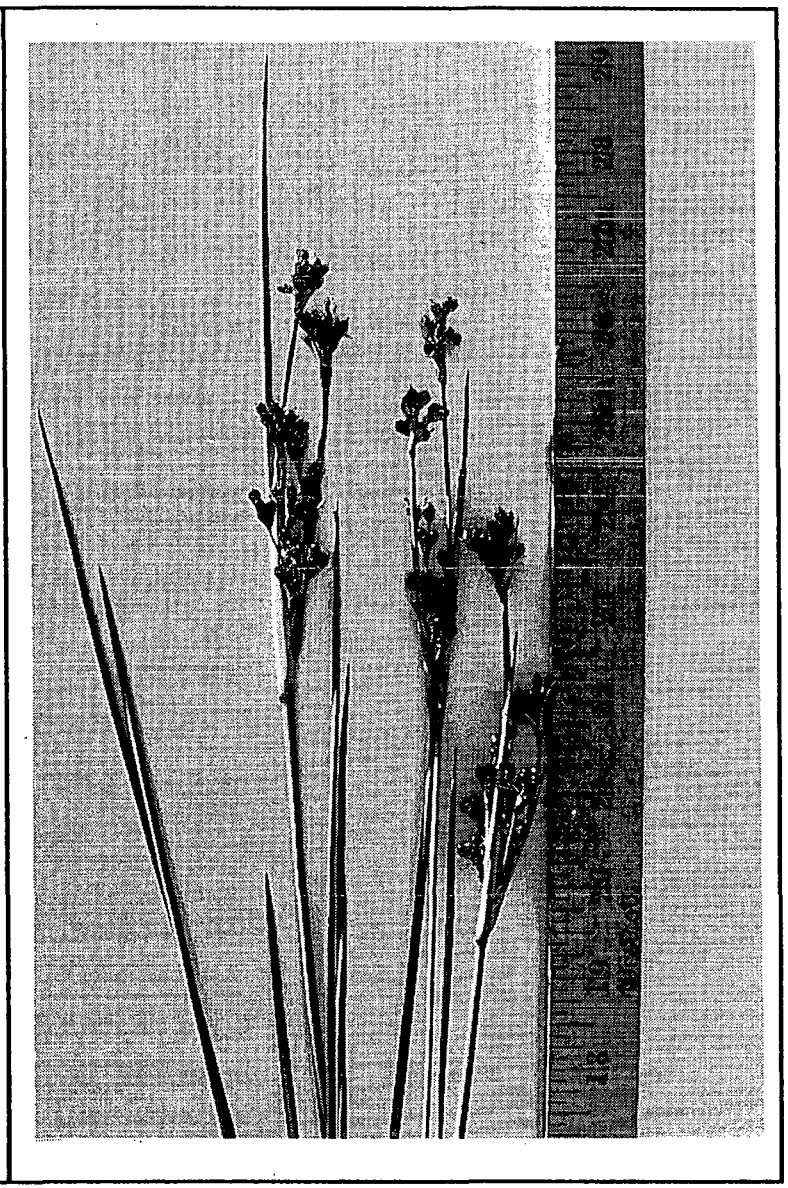
Cattail *(Typha latifolia)*

California Bulrush *(Scirpus californicus)*

Bull Tule *(Scipus robustus)*

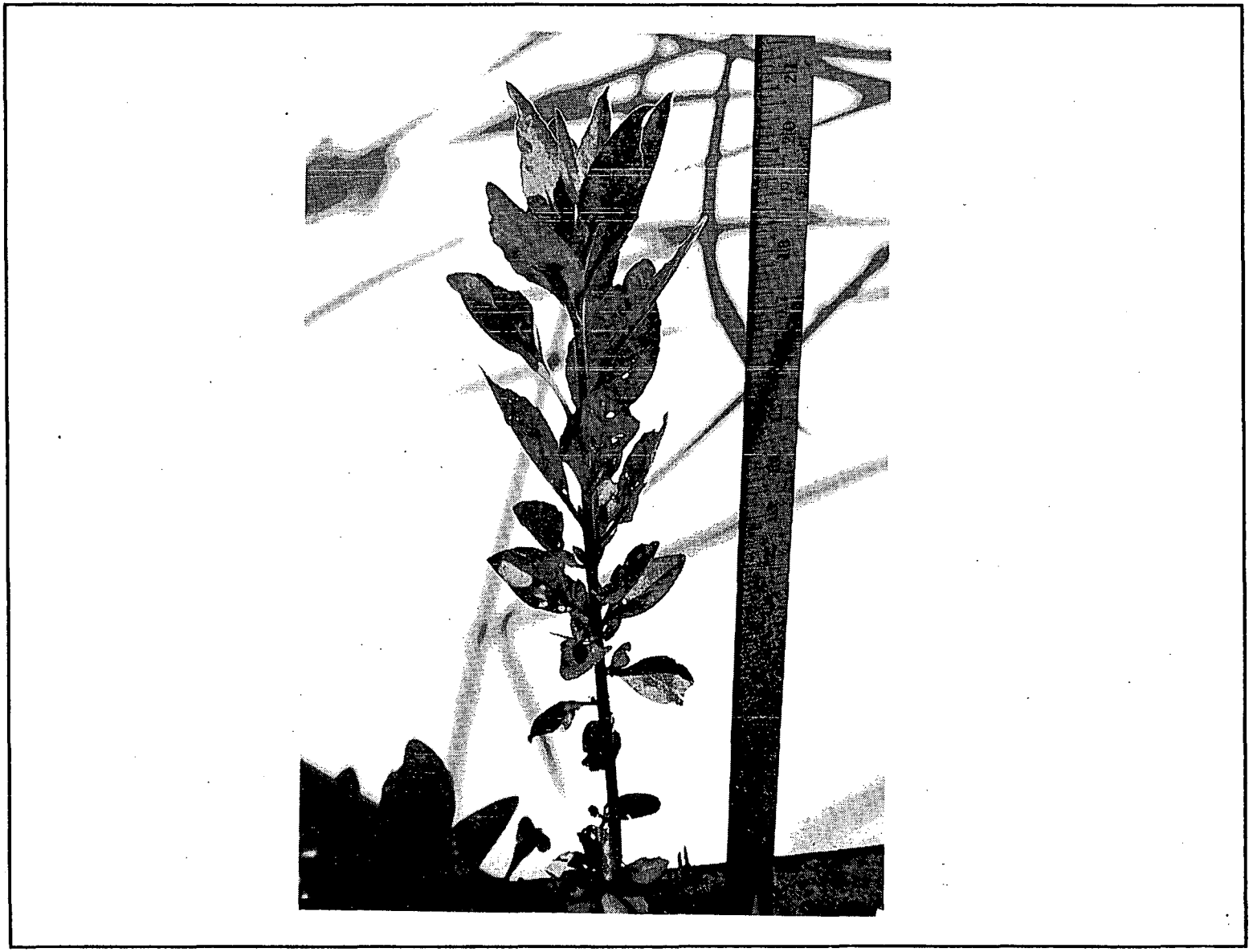
Umbrella-Sedge *(Cyperus species)*



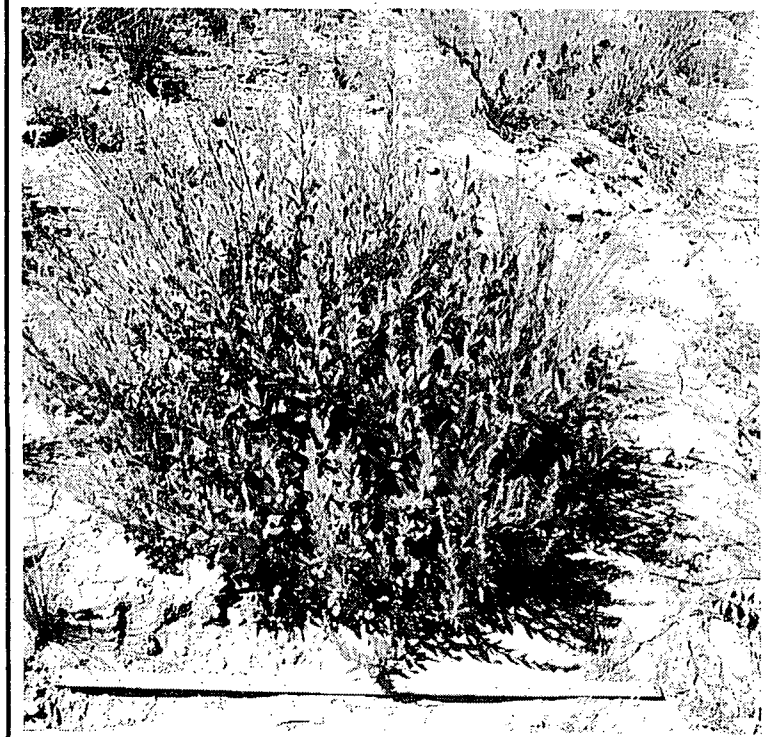


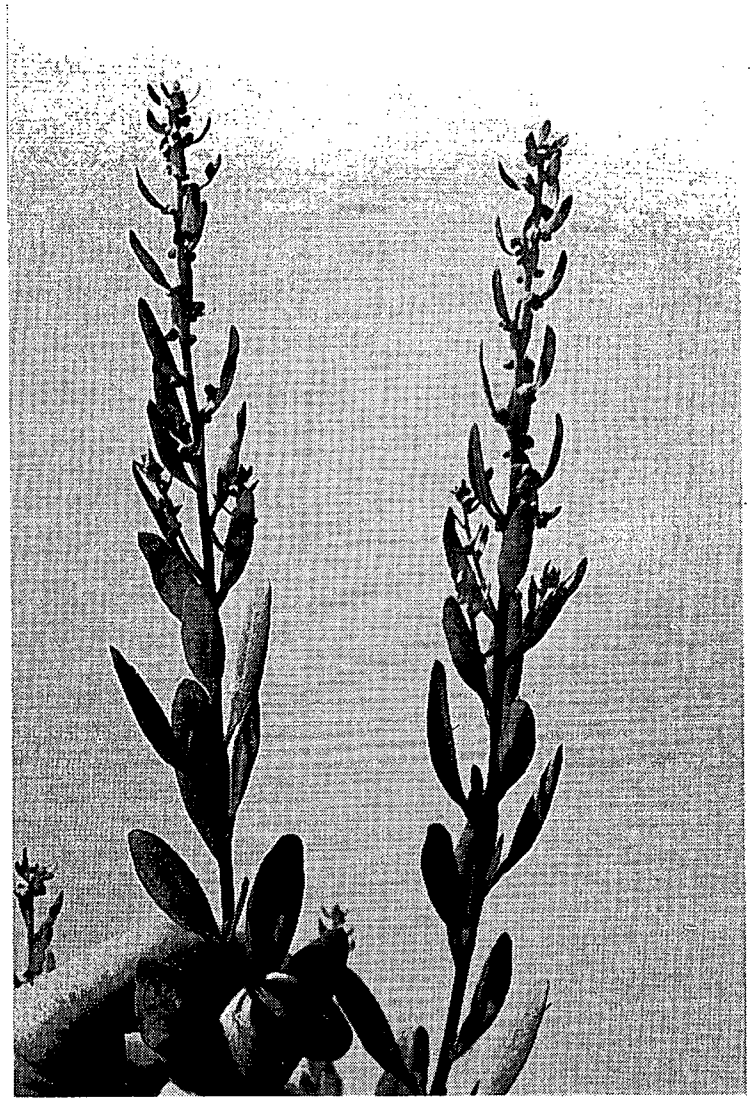
Spiny Rush *(Juncus acutus)*

Yerba Mansa *(Anemopsis californica)*



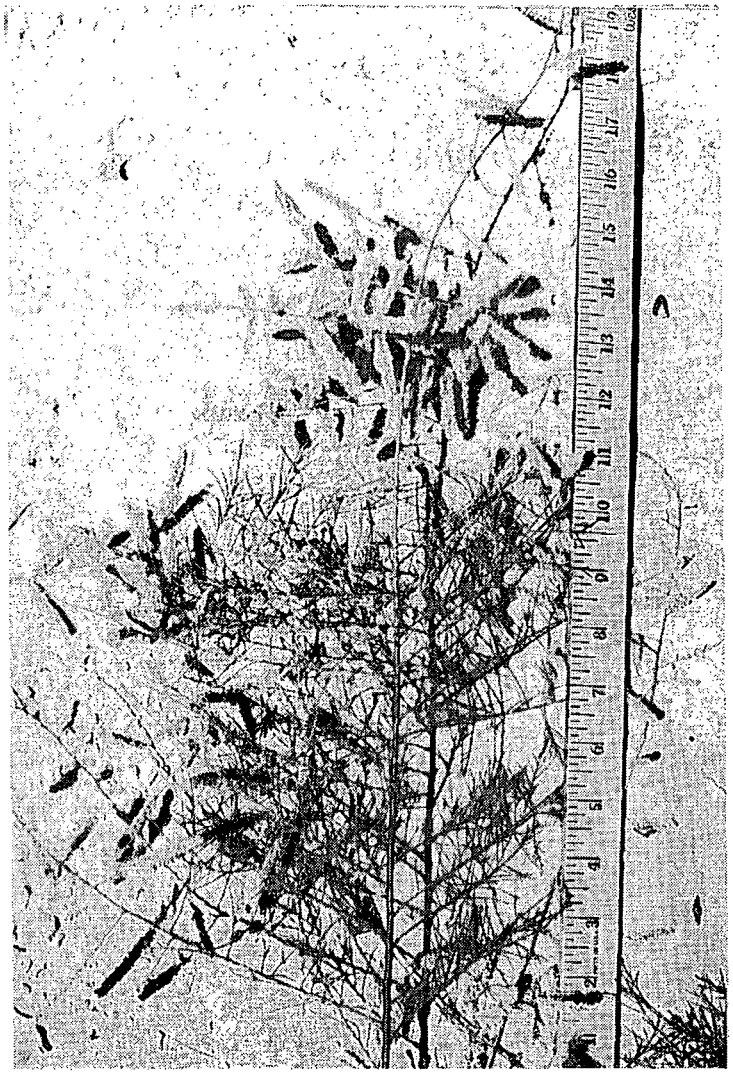
Marsh Fleabane *(Pluchea odorata)*



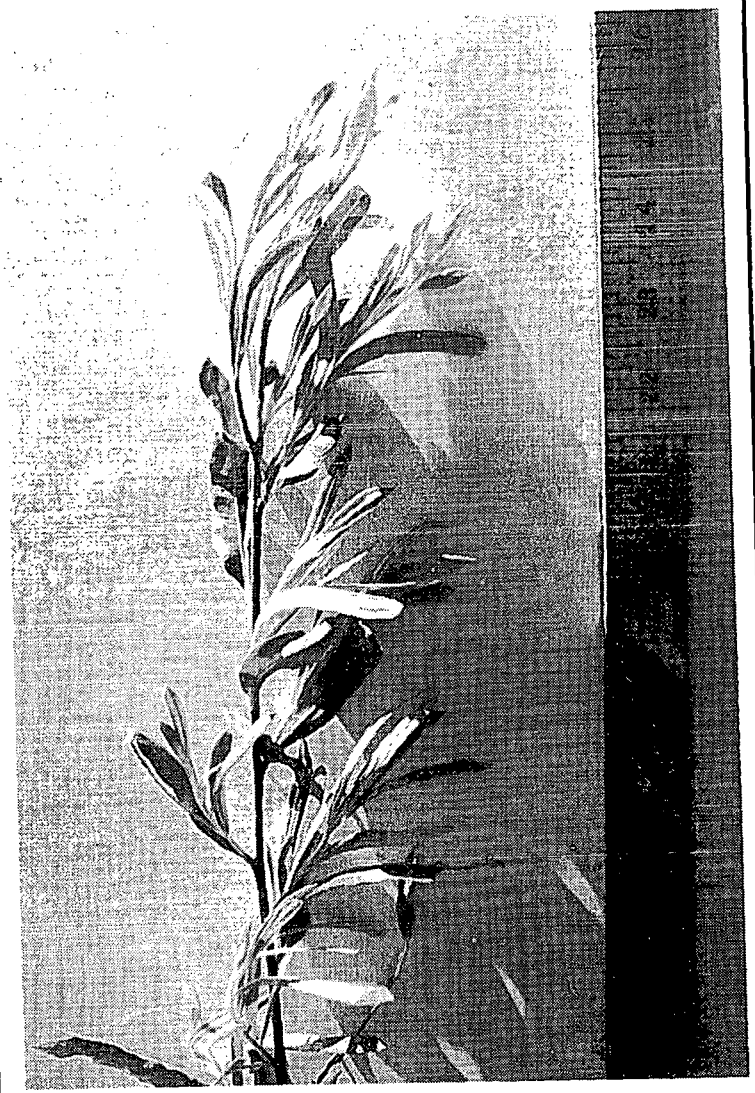


Poverty Weed *(Iva hayesiana)*

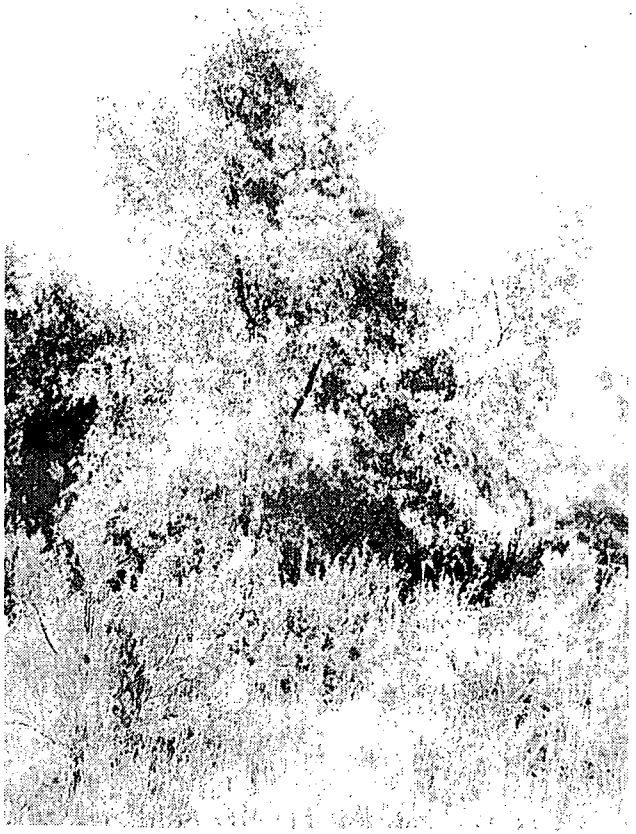
Giant Reed *(Arundo donax)*

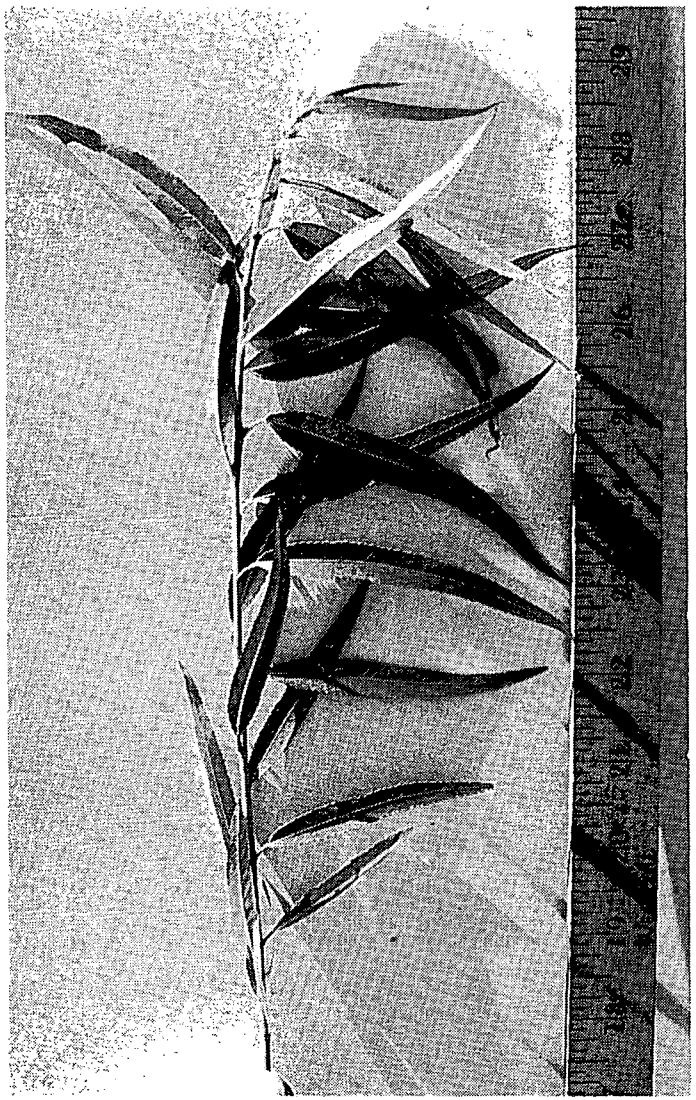


Tamarisk *(Tamarix species)*

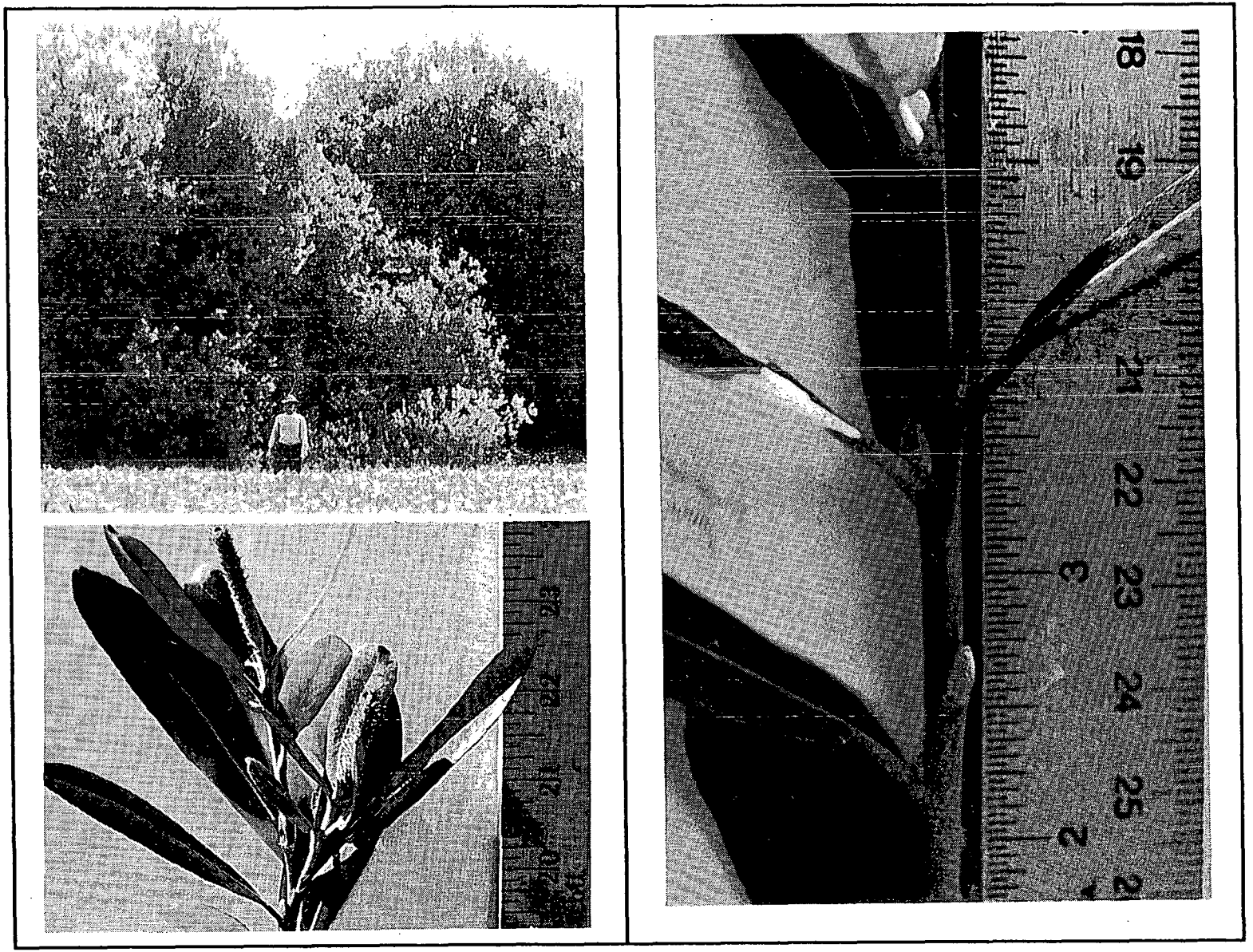


Sandbar Willow *(Salix hindsiana)*

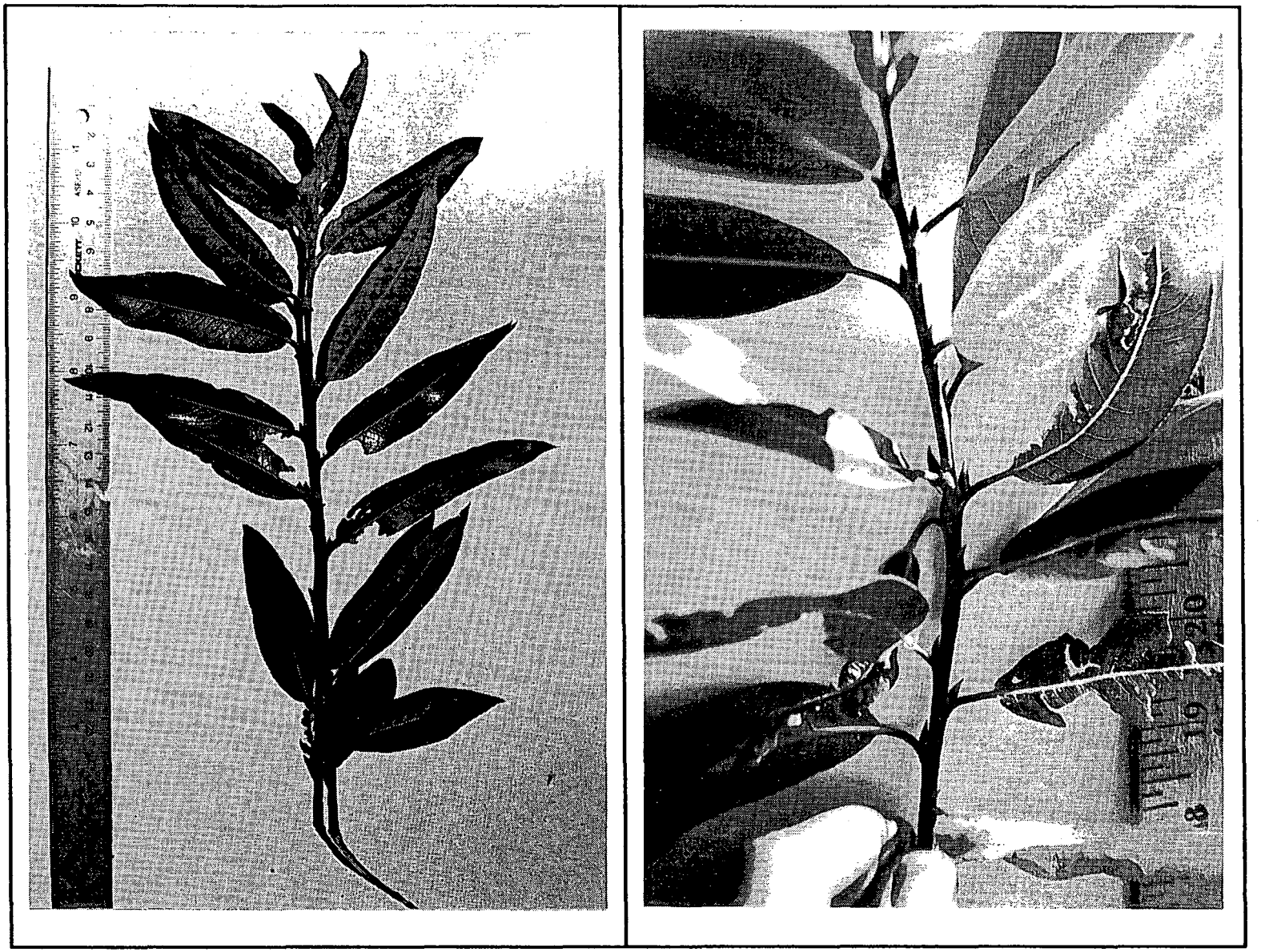




Black Willow *(Salix gooddingii)*

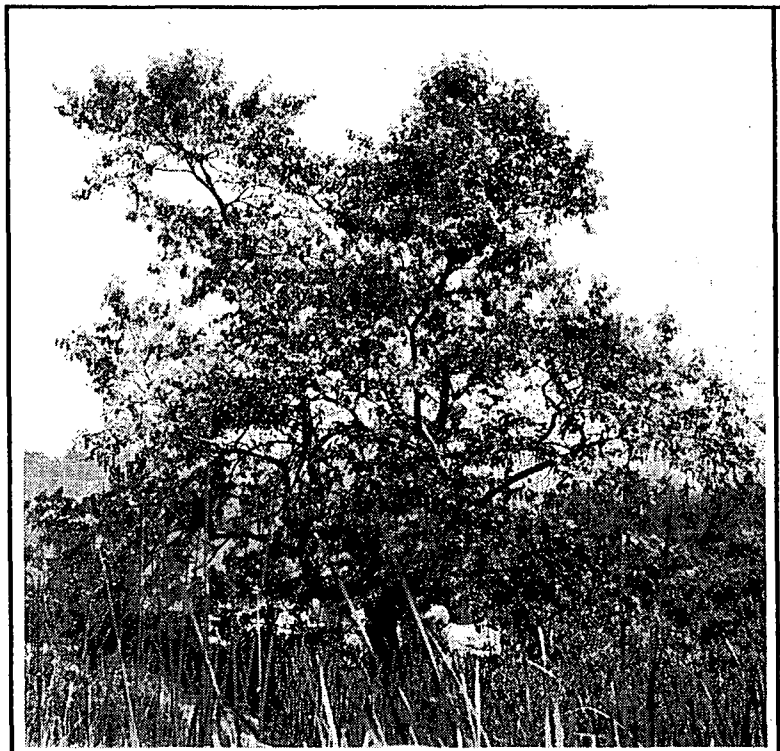


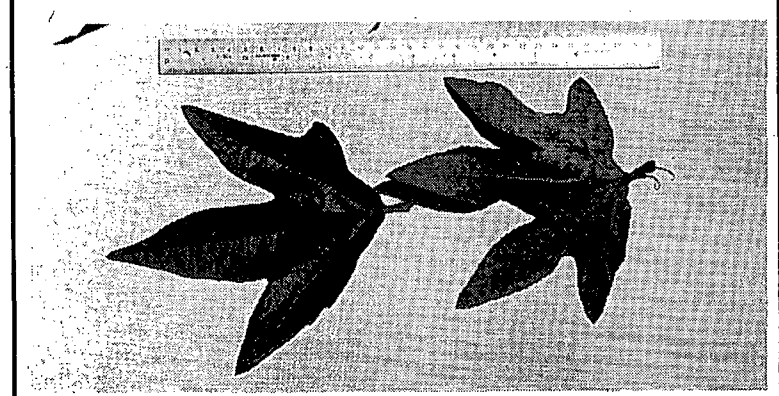
Arroyo Willow *(Salix lasiolepis)*



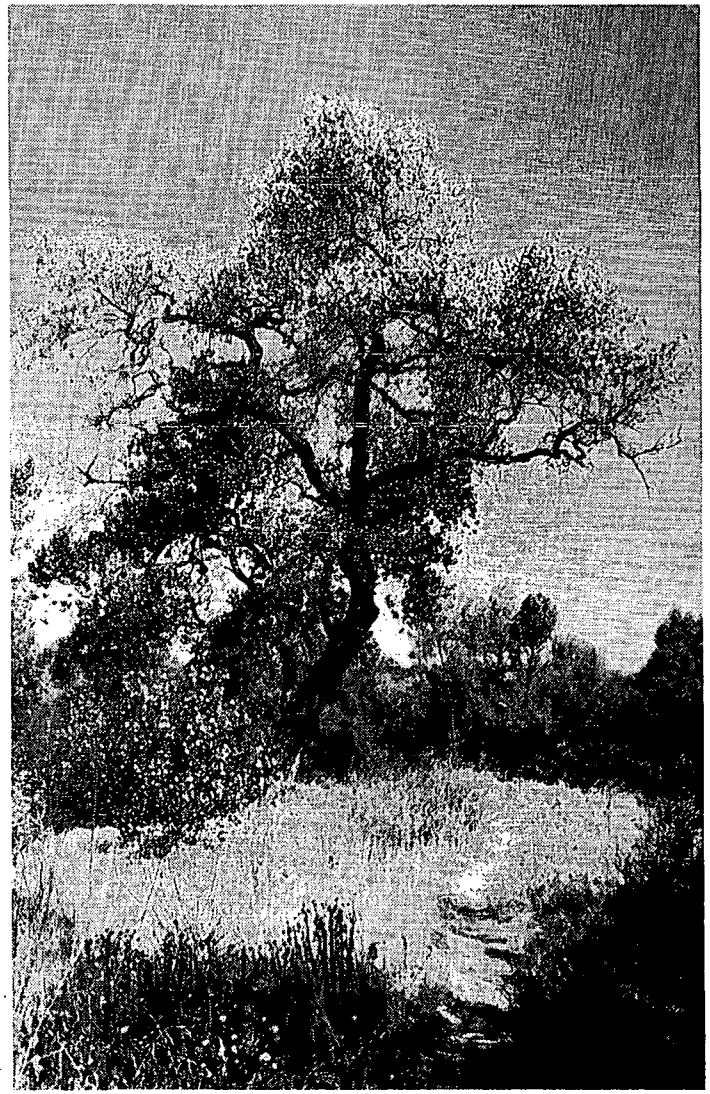
Red Willow *(Salix laevigata)*

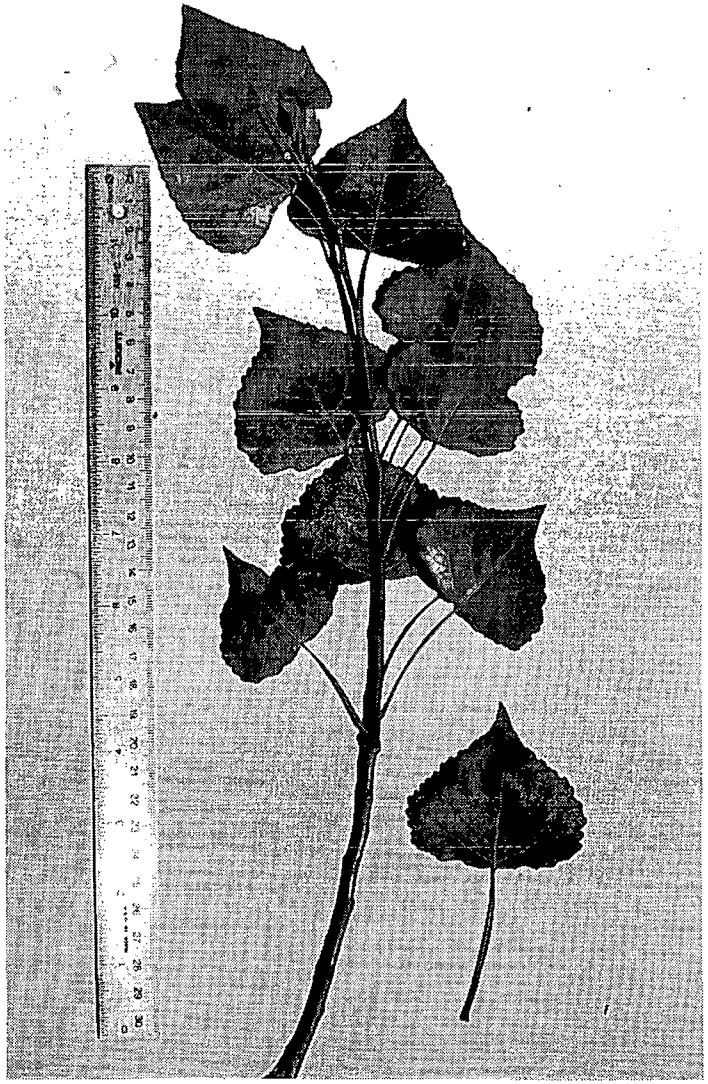
Yellow Willow *(Salix lasiandra)*



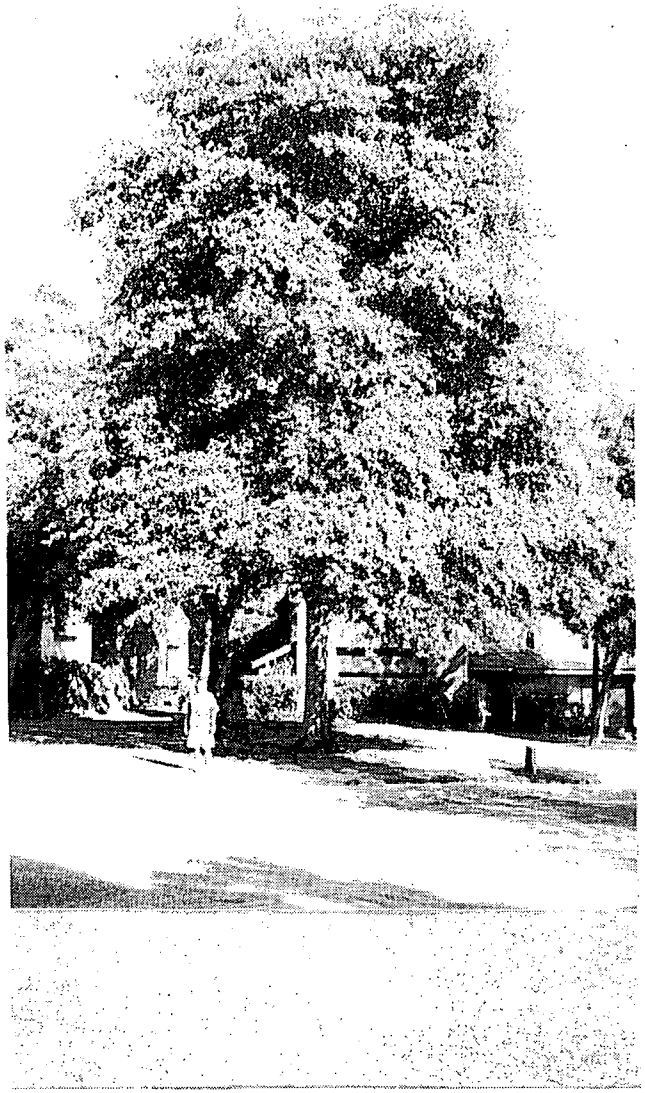


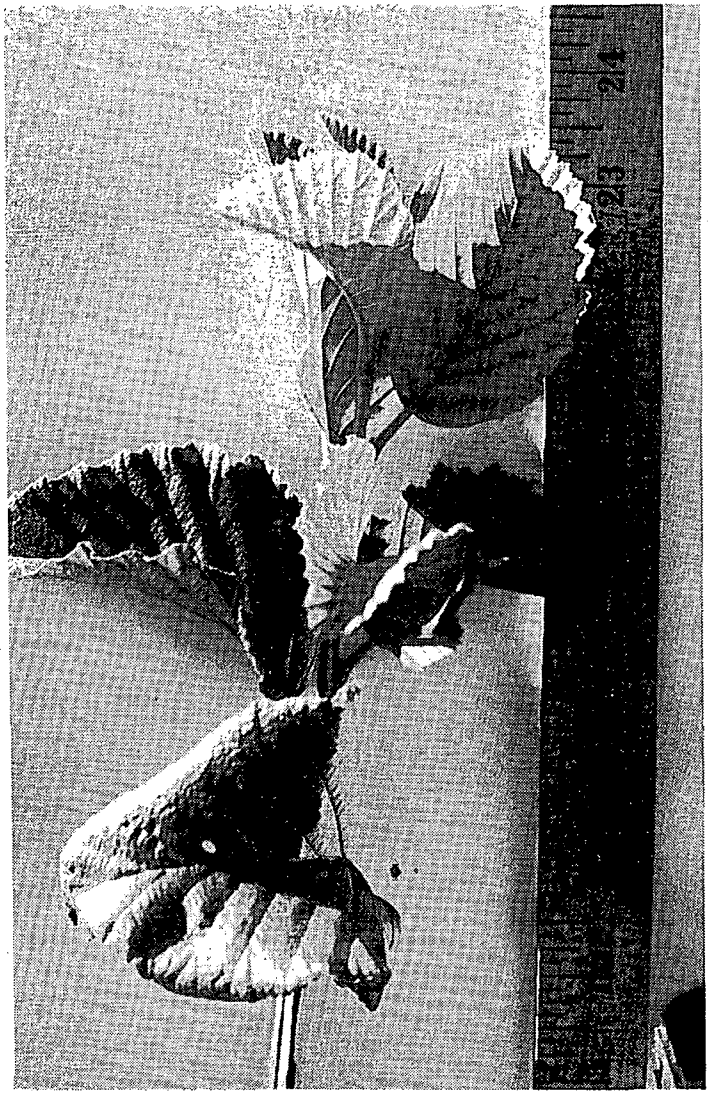
California Sycamore *(Platanus racemosa)*



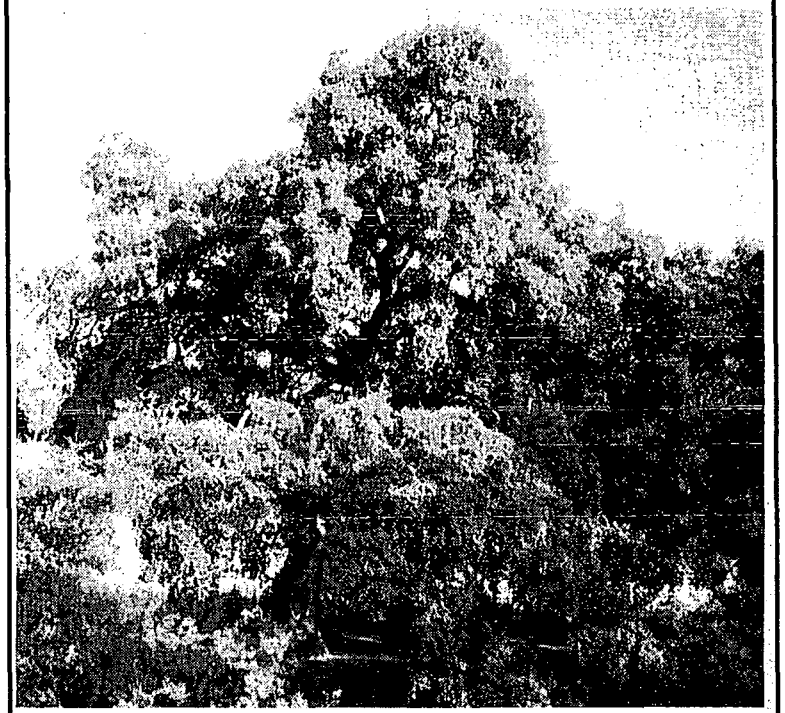


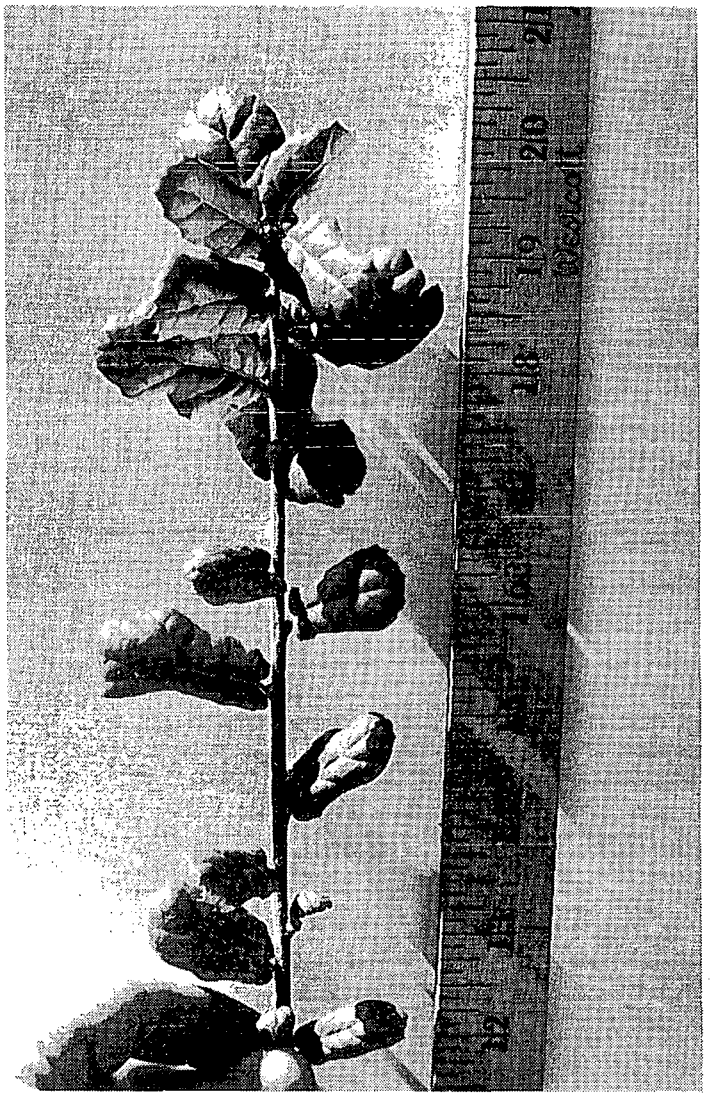
Fremont Cottonwood *(Populus fremontii)*



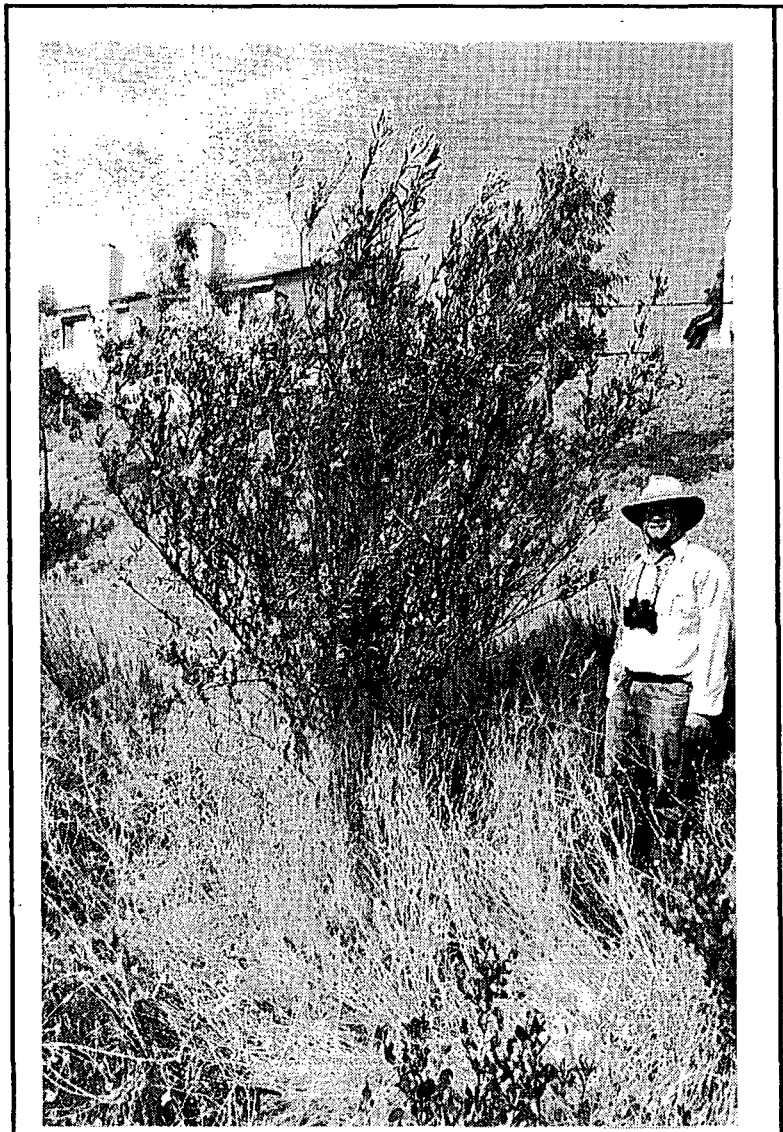


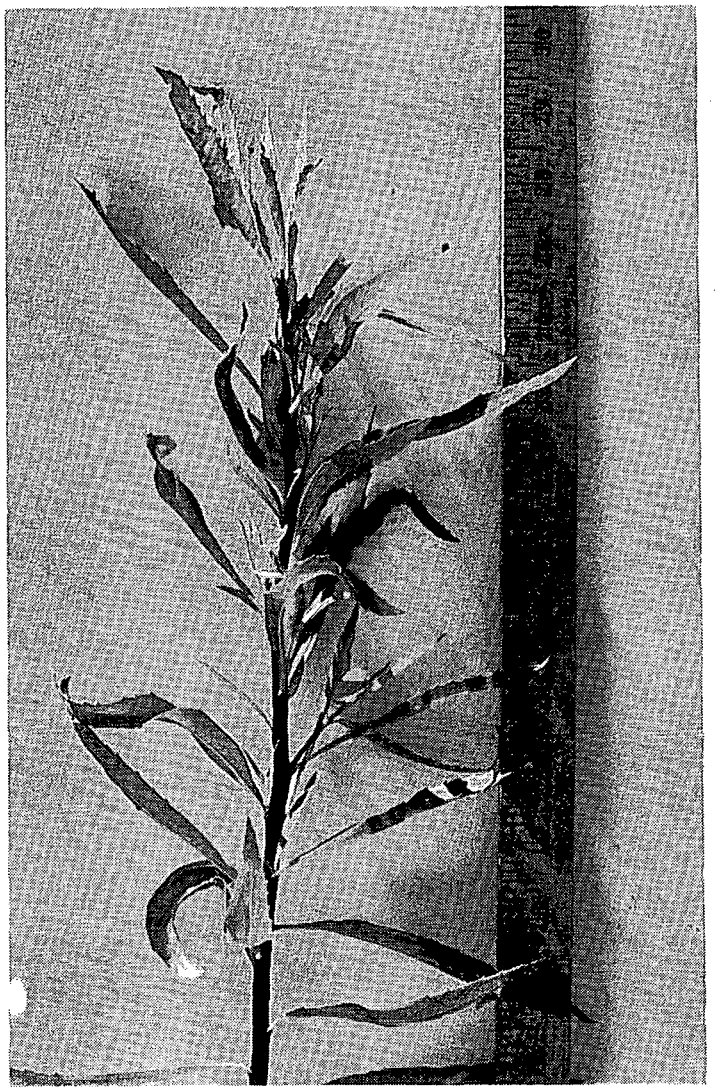
White Alder *(Alnus rhombifolia)*



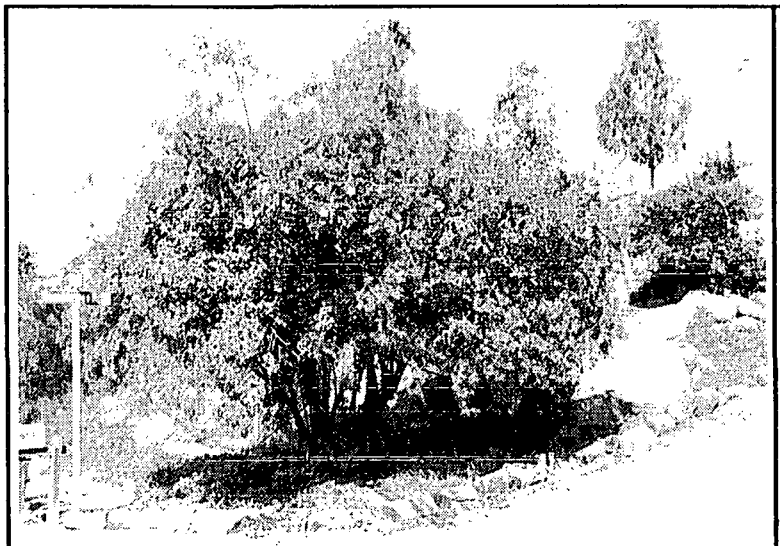


Calfornia Live Oak *(Quercus agrifolia)*

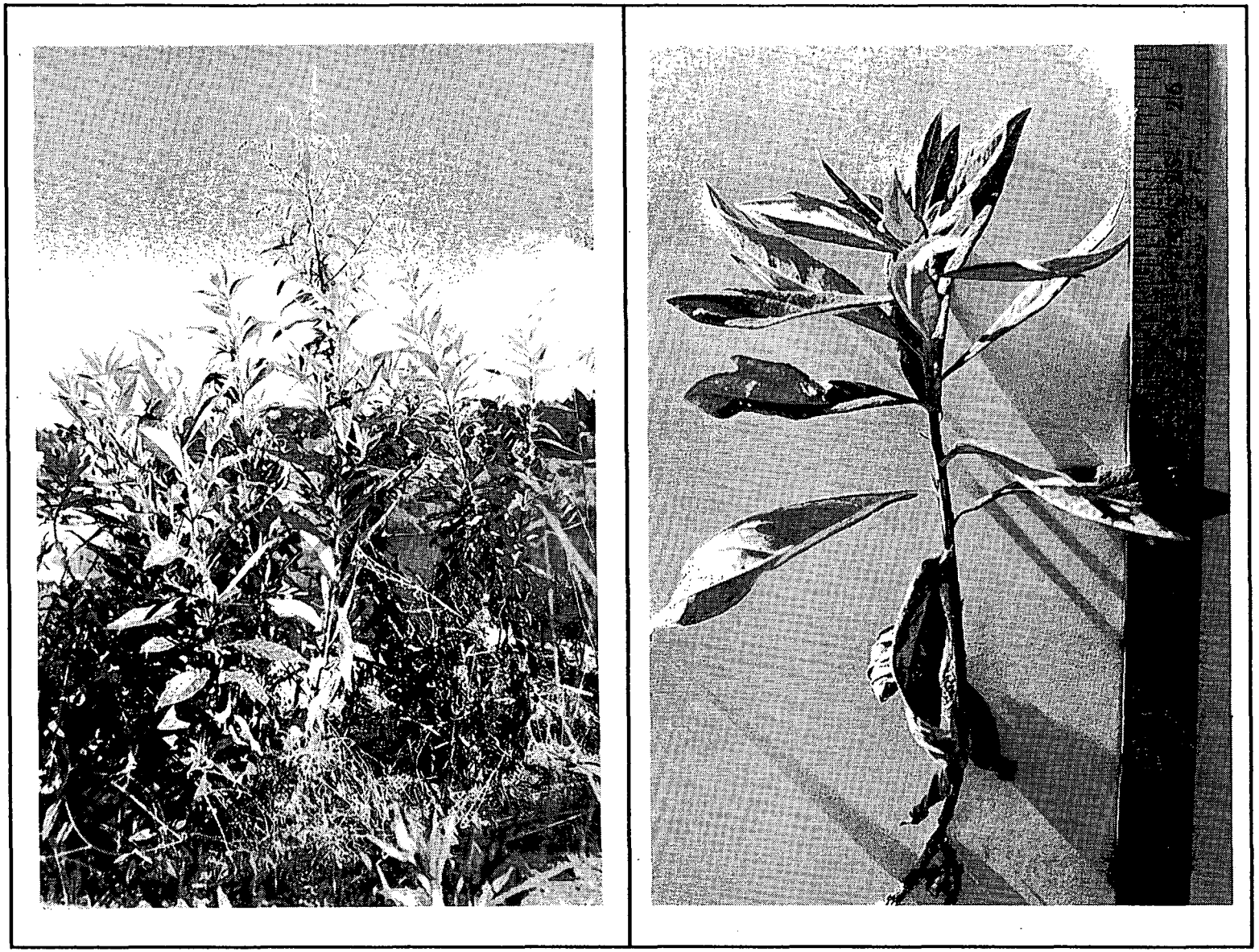




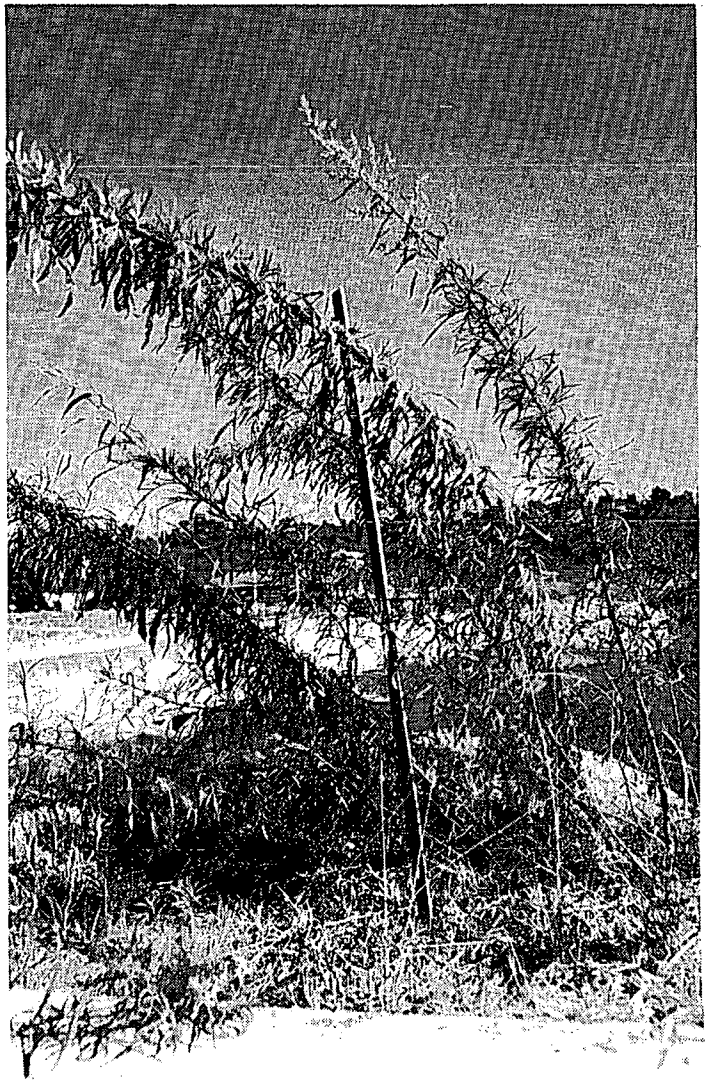
Mule Fat *(Baccharis glutinosa)*

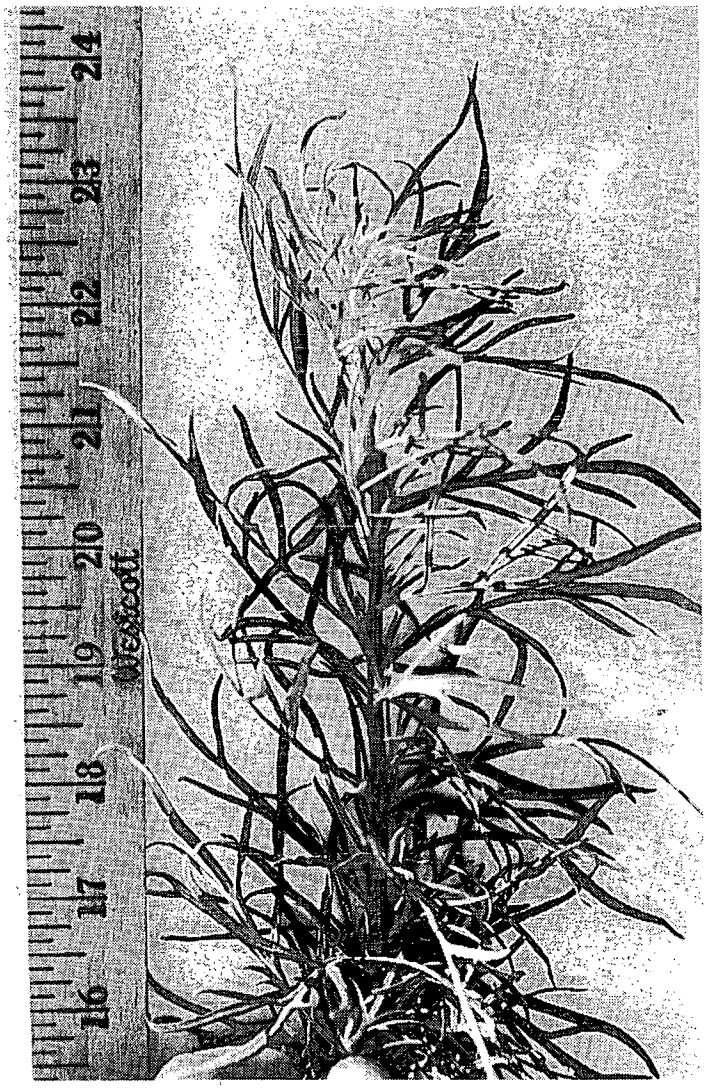


Mexican Elderberry *(Sambucus mexicana)*

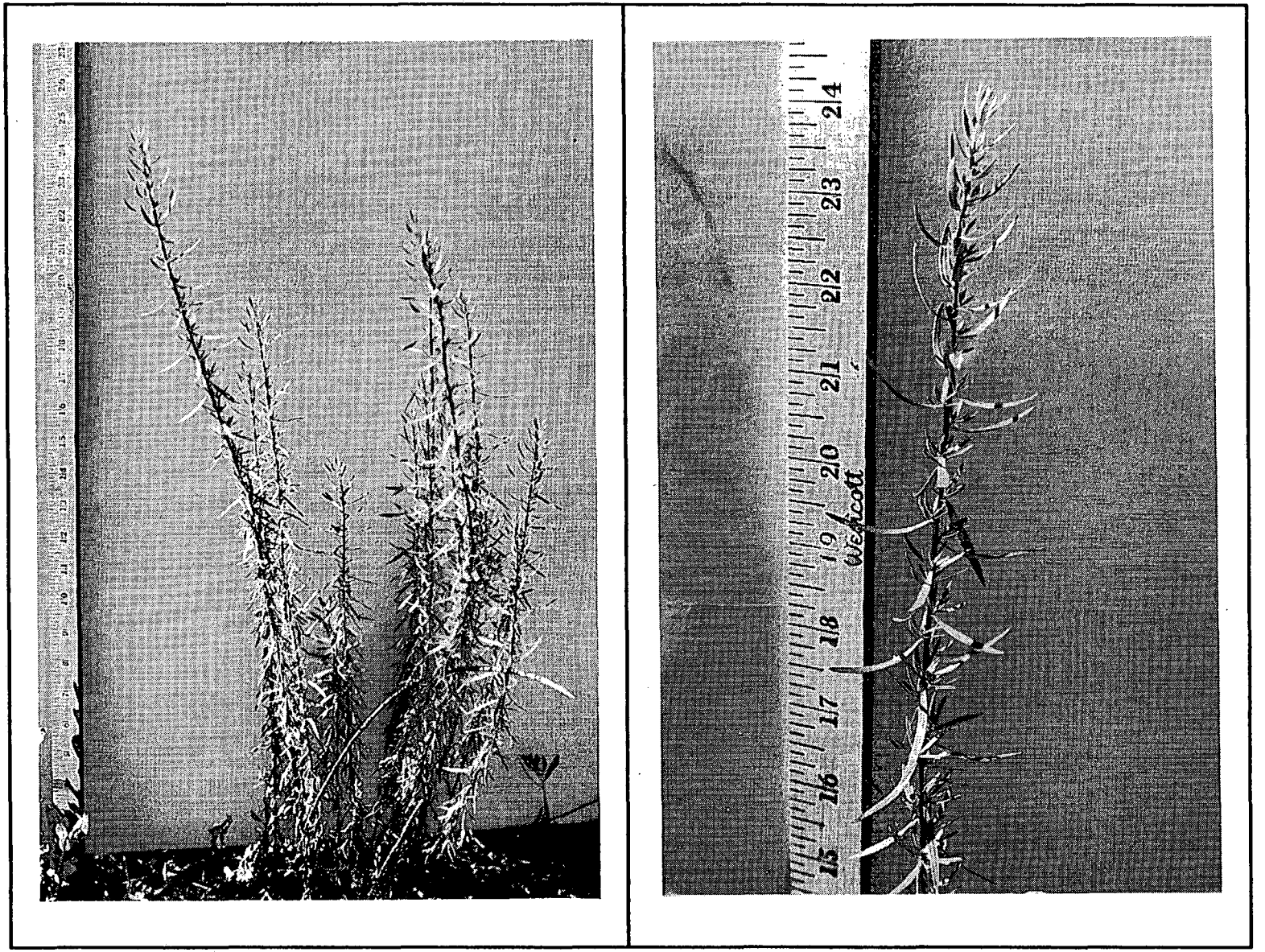


Douglas Mugwort *(Artemisia douglasiana)*

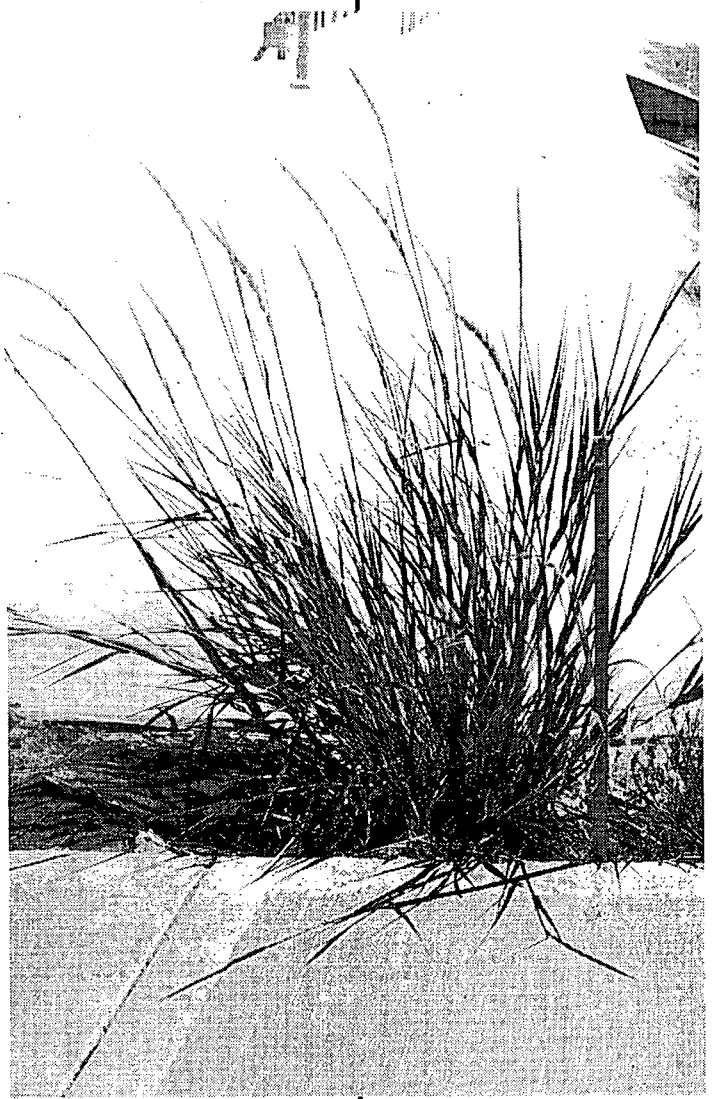




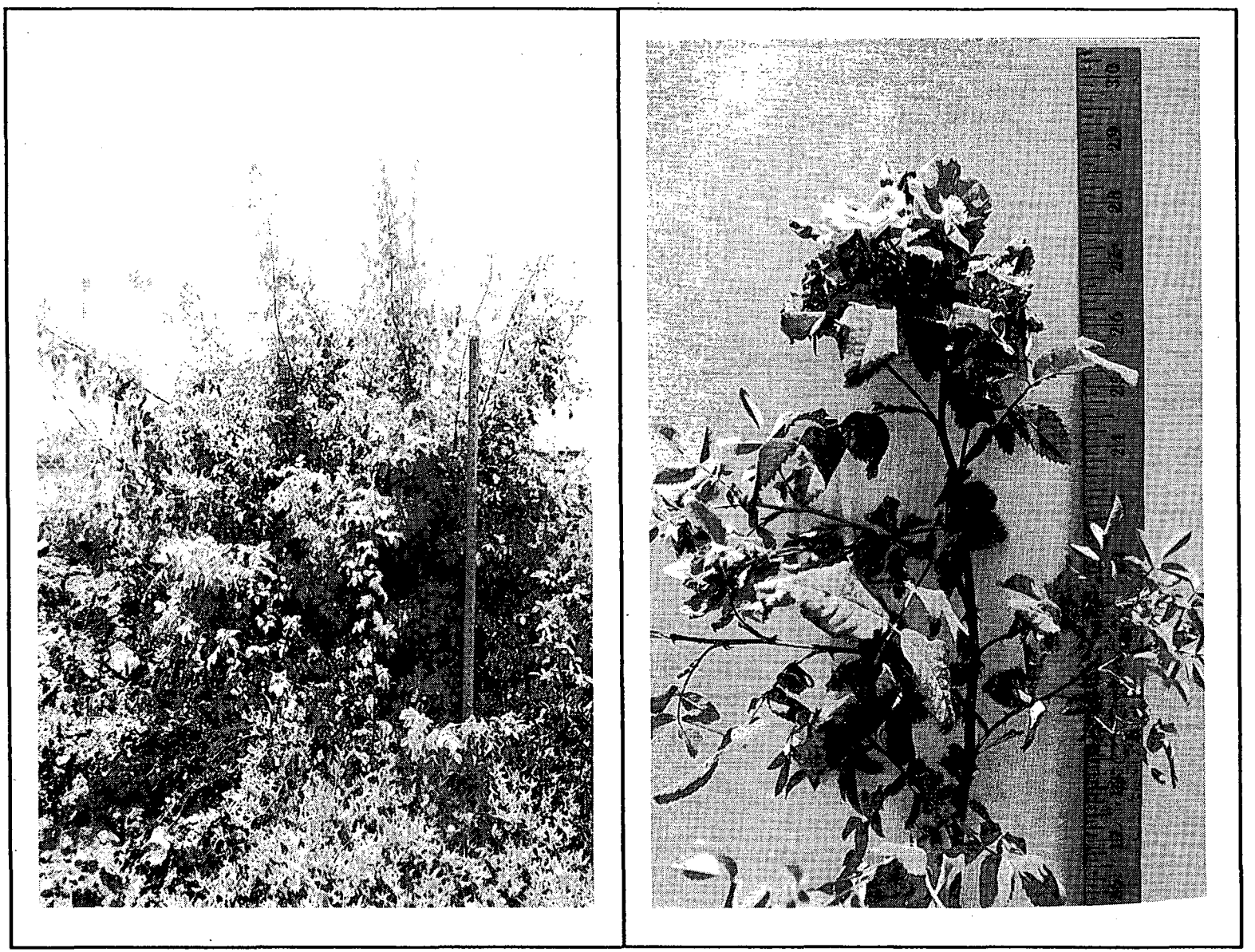
San Diego Sagewort *(Artemisia palmeri)*



Dragon Sagewort *(Artemisia dracunculus)*



Giant Wild Rye *(Elymus condensatus)*

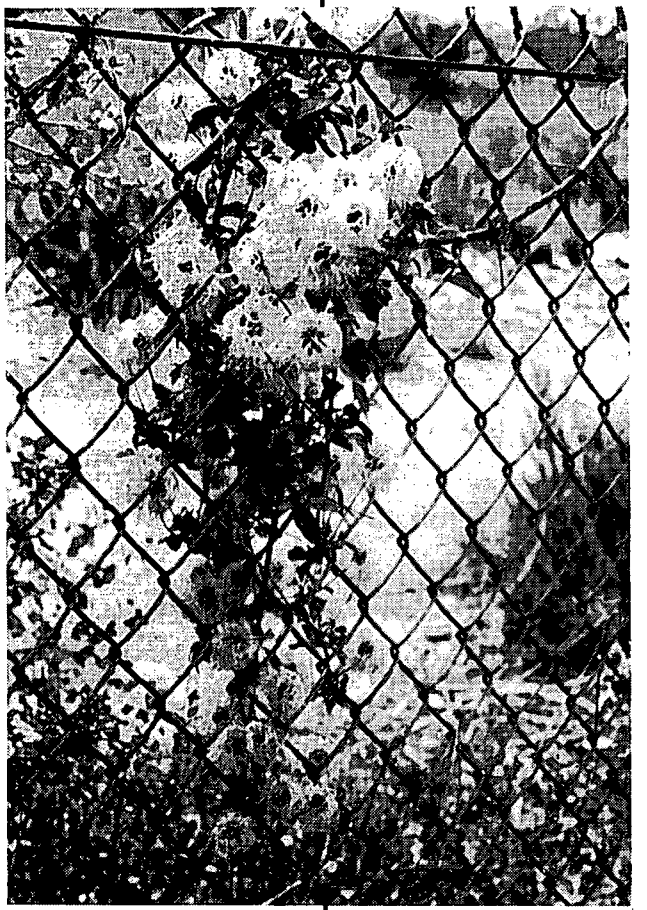


California Rose *(Rosa californica)*

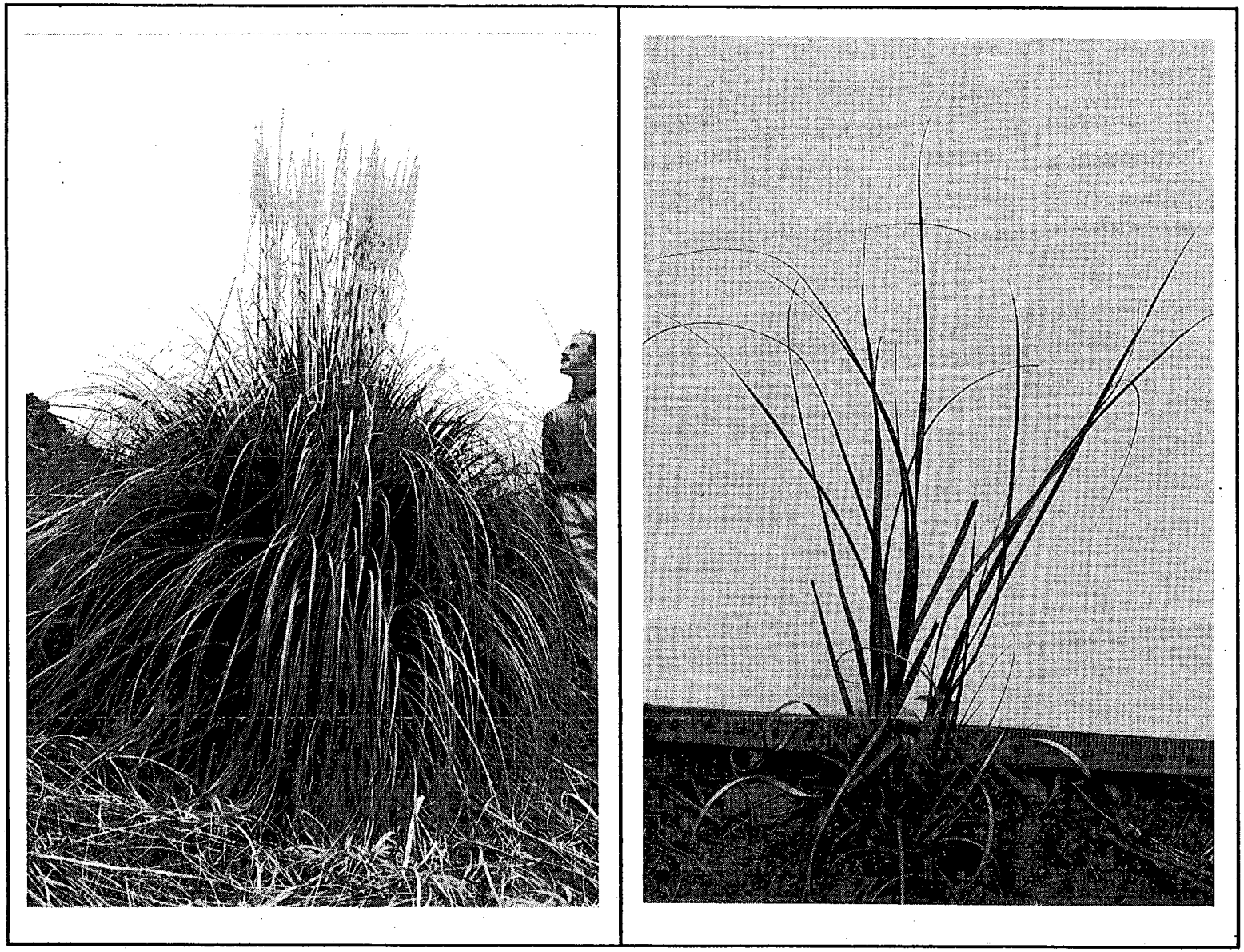
California Blackberry *(Rubus ursinus)*

Coast Sunflower *(Encelia californica)*

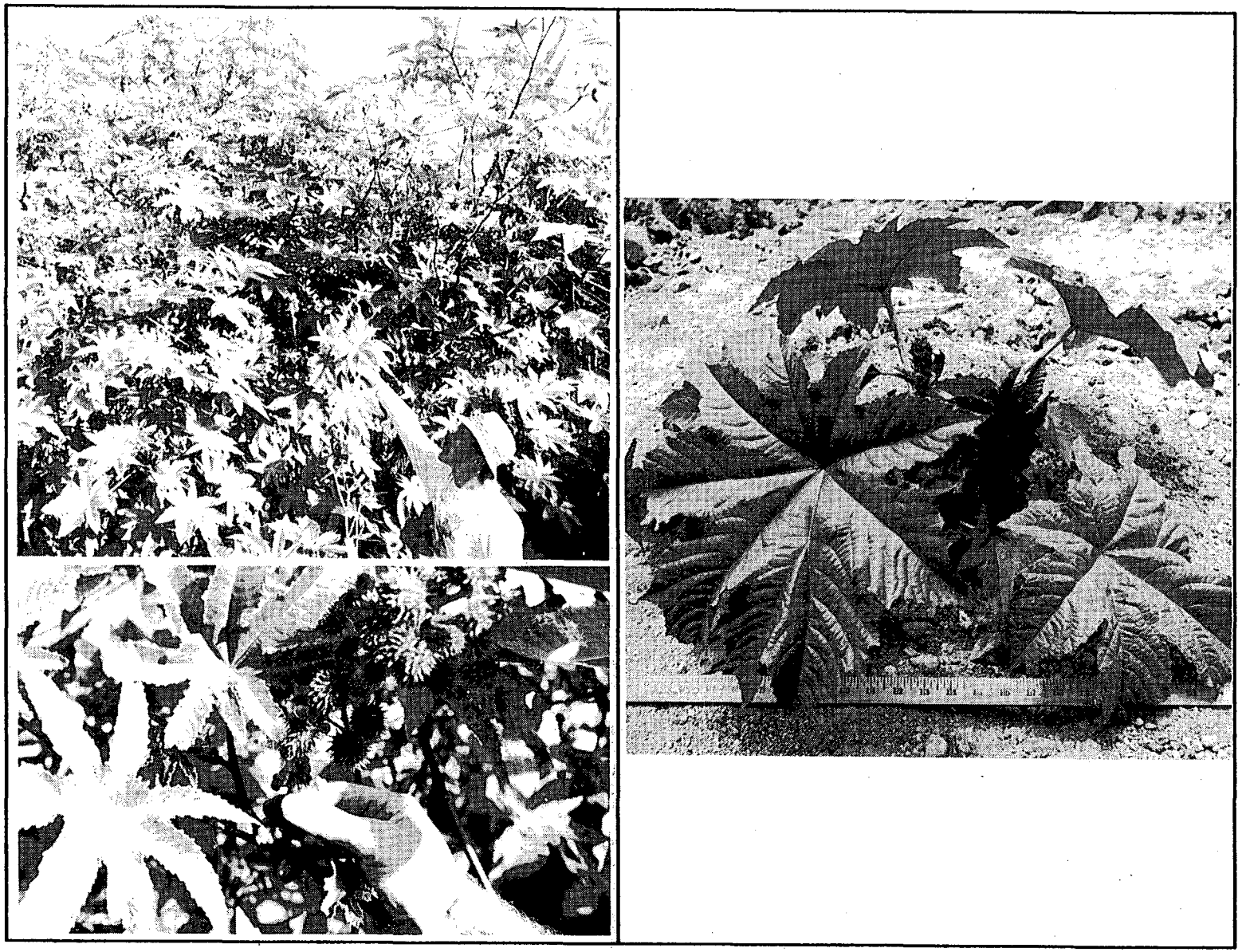
Desert Grape *(Vitis girdiana)*



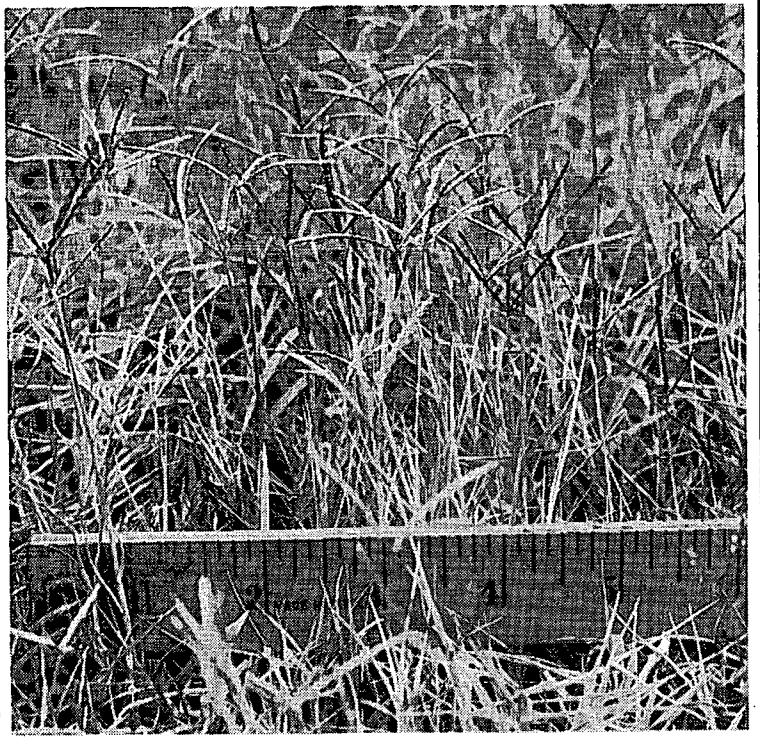
Pipestem Virgin's Bower (*Clematis lasiantha)*

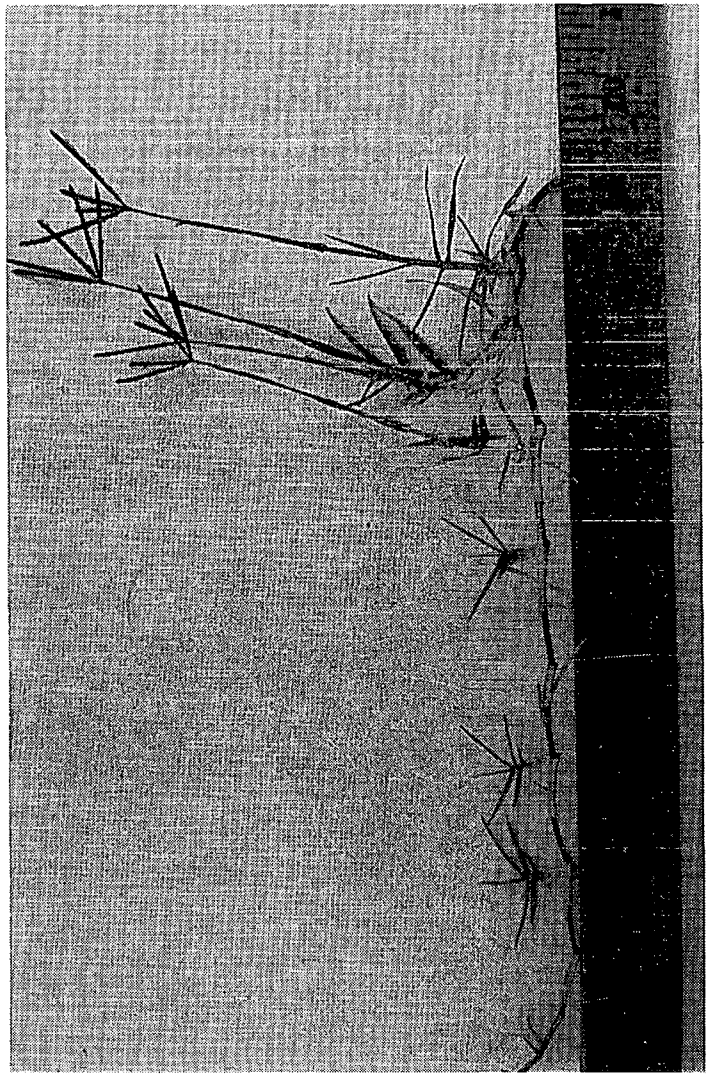


Pampas Grass *(Cortaderia selloana)*



Castor Bean *(Ricinis communis)*



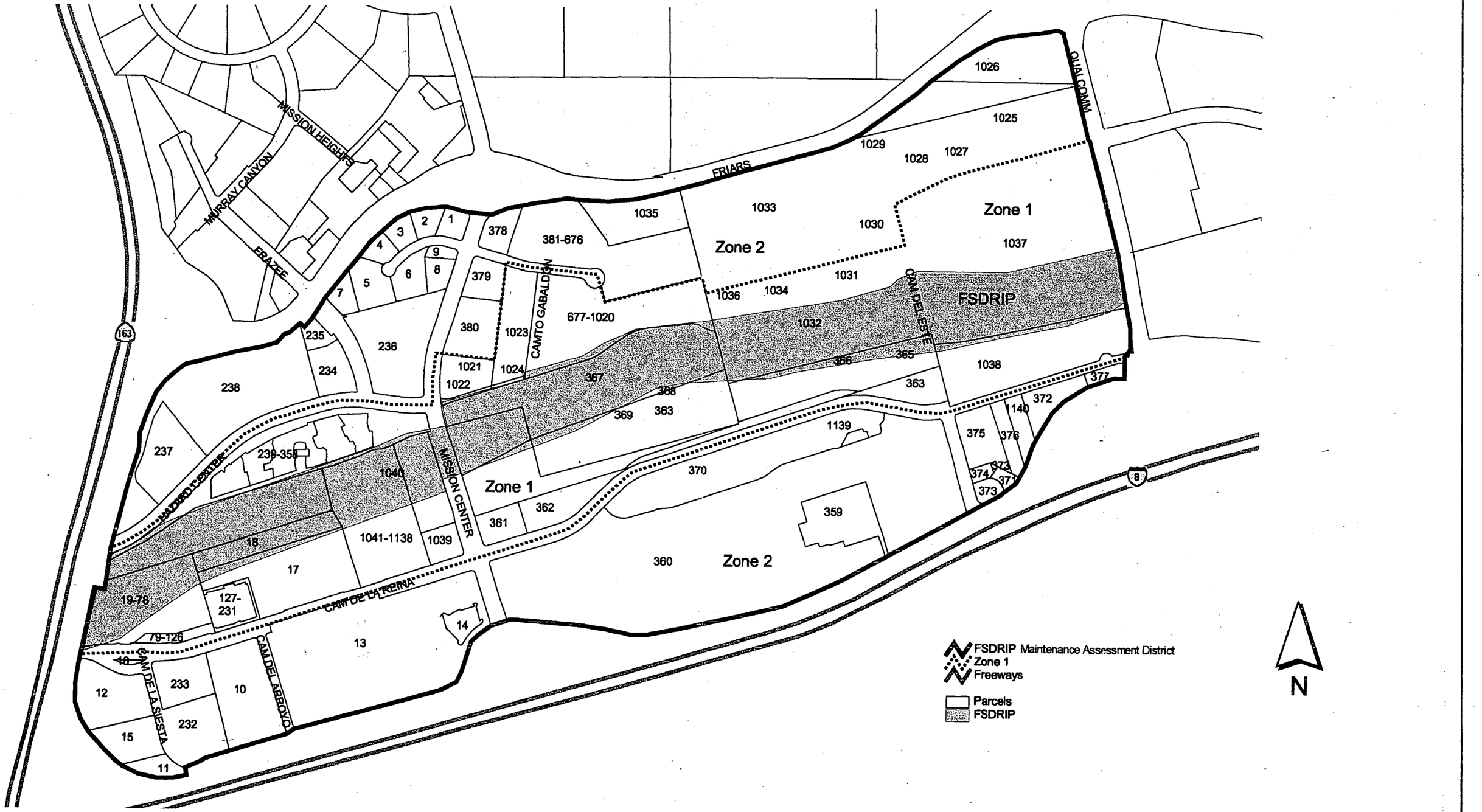


Bermuda Grass *(Cynodon dactylon)*

APPENDIX G

PROPERTY OWNERS WITHIN

FSDRIP MAINTENANCE ASSESSMENT DISTRICT



PROPERTY OWNERS WITHIN FSDRIP MAINTENANCE ASSESSMENT DISTRICT

FIGURE

G

CITY OF SAN DIEGO PARK & RECREATION DEPT.

KEY TO APPENDIX G FIGURE

REFERENCE NUMBER	ZONE	OWNERS NAME*
1	2	Mobil Oil Corp.
2	2	Esquiline Inc.
3	2	Parker Investment Corp.
4	2	City Line Mtg. Corp.
5	2	Peter Aadema; Ladene N Trs.
6	2	Monteagle Inc.
7	2	Hazard R. E. Contracting Co.
8, 9	2	Frazee Mission Valley Properties, Ltd.
10	2	Miller-Bond Land Co.
11, 15	2	British Pacific Properties Corp.
12	2	John Hancock Mutual Life Insurance Co.
13,14	2	Mission Valley Partnership
16	2	MBM West I
17	1 and 2	Essex Riverfront
18	1	Mission Colony Partners
19-78	1 and 2	River Scene Condominiums
79-126	2	River Scene Condominiums
127-231	2	Rio Del Oro Condominiums
232,233	2	Robert E. and Marilyn Townsend
234, 235	2	Crow-Hazard Associates
236	2	Hazard Center East Enterprises
237	2	Red Lion Hotels Inc.
238	2	Hazard Center Associates
239-358	1	Union Square Condominiums

KEY TO APPENDIX G - CONTINUED

REFERENCE NUMBER	ZONE	OWNERS NAME*
359	2	May Department Stores
360	2	Mission Valley Partnership
361	1	Great Western Bank
362	1	M V S C Ltd.
363	1	P I T V L P
364, 365, 366, 367	1	San Diego River Corp.
368	1	City of San Diego
369	1	Metropolitan Transit Development Board
370	2	Macy's Primary Real Est. Inc.
371, 372, 373, 374	2	Saddleback Valley M C
375, 376	2	Sdva Lic
377	2	Chevron U S A Inc.
378	2	Texaco Refining; Marketing Inc.
379, 380	2	K;B Fund
381- 676	2	Park Villa Condominiums
677 - 1020	1	Park Villa Condominiums
1021 - 1024	1	Property Asset Management Inc.
1025	2	Troy C M B S Property L L C
1026, 1027, 1028, 1029	2	R V S Retail
1030	2	Conrock Co.
1031, 1032, 1034, 1036, 1037	1	Conrock Co.
1033	2	M G I Rio Vista West L L C
1035	2	Mgi Rio Vista West
1038	1	River Colony Estates General Partnership
1039	1	Mission Center Road L L C
1040	1	S W H Corp<Lf> Delgado Mabel
REFERENCE NUMBER	ZONE	OWNERS NAME*

KEY TO APPENDIX G - CONTINUED

1041 - 1138	1	Mission Gate Condominiums
1139	2	Mission Valley Partnership
1140	2	SDVA L L C

* In cases of residential developments, individual owners are not named.