



**US Army Corps
of Engineers®**

Sepulveda Dam Basin

Los Angeles County, California

**Master Plan
and
Draft Environmental
Assessment**

AUGUST 2011

Prepared by the
**U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325**

Funding provided by
**The American Recovery
And Reinvestment Act
(Public Law 111-5)**





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EXECUTIVE SUMMARY

This 2011 *Master Plan and Draft Environmental Assessment for Sepulveda Dam Basin* is an update to the 1981 *Sepulveda Basin Master Plan and Final Environmental Impact Report/Statement* and 1995 *Supplement 1 to the 1981 Sepulveda Basin Master Plan Including Environmental Assessment*. The U.S. Army Corps of Engineers (Corps) Master Plan for an authorized civil works project is a conceptual document guiding Corps responsibilities pursuant to Federal laws and regulations to manage the project lands, water, and associated resources, and to preserve, conserve, develop, restore, and maintain those resources. The Master Plan provides direction and guidance for land development and utilization in the Basin consistent with Corps regulations, laws, and policies. The Federally-authorized project, Sepulveda Dam Flood Control Project, (Dam or Project) refers to the structures, amenities, and lands necessary for operation of the Dam. The Sepulveda Dam Basin (Basin) refers to the lands acquired for the construction, operation and maintenance of the Project.

A need exists to ensure that Federal lands are managed in a way that conforms to current Corps regulations, policy, and guidance. A Master Plan is intended to capture the Corps' assessment of land management needs, expressed public desires, and provides guidance for evaluation of specific developments, uses, and activities. A Master Plan defines land use classifications and provides guidance and foresight that allows the Basin to be managed in a way that balances the needs and desires of the public with legal, policy, and resource constraints.

Since the issuance of the 1981 Master Plan the land and resource uses within the Basin and surrounding community have changed significantly. Some recreation amenities proposed in the 1981 Master Plan were never built, the Sepulveda Basin Wildlife Area has been expanded, the Anthony C. Beilenson Park was built, and Bull Creek has been restored. New developments not previously identified in the 1981 Master Plan include the Sepulveda Basin Off-leash Dog Park, Pedlow Field Skate Park, and a Universally Accessible Playground. An updated Master Plan is needed to reflect the described changes in the Basin and changes to applicable Federal laws, regulations, policy, and guidance that have been amended or changed since the 1981 Master Plan.

This Master Plan and associated Environmental Assessment (EA) trace the history and development of Basin lands and provide the baseline condition of existing resources and amenities. Three community workshops were held to: (1) provide information to the public about the Corps' master planning process; (2) gain feedback on existing and proposed changes to the existing land use classifications in the Basin; and (3) identify the public's needs, desires, and concerns regarding current and future use of the Basin. Visitation data and secondary data about recreational needs and potential future demand for amenities were also analyzed. Meetings were held with Basin Lessees to gain insight on its current operations and maintenance, future plans, and current and future needs and goals. With these analyses taken together and in light of an integrated ecological approach to land management by the Corps, a set of resource objectives were identified for each land use classification to guide the development of the land and resource plan recommendations.

Based upon existing conditions and future projections, the plan recommends that the land at Sepulveda Dam Basin be classified into six land use classifications as defined by Corps guidance: 1) Project Operations; 2) Recreation; 3) Environmentally Sensitive; 4) Multiple Resource Management - Recreation - Low Density; 5) Multiple Resource Management - Vegetative Management; and 6) Multiple Resource Management - Inactive and/or Future Recreation. Corps guidance has been utilized to define each land use classification. Corps policies are summarized in the main body of this Master Plan and are attached in Appendix A. Specific recommendations are discussed for management of the Basin as a whole and for particular land use classifications. The Recommended Plan provides guidance for balancing flood risk

management requirements, recreational opportunities, and preservation of natural resources while managing the Basin water and land resources for current and future generations.

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1 INTRODUCTION

1.1 Purpose of a Master Plan

A U.S. Army Corps of Engineers (Corps) Master Plan for an authorized civil works project is a conceptual document guiding Corps responsibilities pursuant to Federal laws and regulations to manage project lands, water, and associated resources and to preserve, conserve, develop, restore, and maintain those resources. The Master Plan provides direction and guidance for land development and utilization in the Basin consistent with Corps regulations, laws, and policies. The Federally-authorized project, Sepulveda Dam Flood Control Project (Dam or Project), refers to the structures, amenities, and lands necessary for operation of the Dam. The Sepulveda Dam Basin (Basin) refers to the lands acquired for the construction, operation, and maintenance of the Project.

The Sepulveda Dam Basin Master Plan is intended to guide the orderly and coordinated use, development, and management of resources within the Sepulveda Dam Basin. Water, land, and other natural and human resources have been assessed and existing conditions documented for consideration of project purposes. The Corps guidance for the preparation of Master Plans identifies applicable policies and procedures including:

- Master Plans are developed and are to be kept current for all Civil Works projects and other fee-owned and easement lands for which the Corps has administrative responsibility for management;
- The Master Plan is an essential element in fostering an efficient and cost-effective project and natural resources management program;
- The Master Plan provides guidance for project development and use and for the responsible stewardship of project resources for the benefit of present and future generations; and
- The Master Plan promotes the protection, conservation, and enhancement of natural, cultural and man-made resources.

The primary goals of Corps Master Plans are to prescribe overall land and water management plans, resource objectives, and associated design and management concepts, which include:

- Provide the best possible combination of responses to regional needs, resource capabilities, land use suitability, and expressed public interest and desires consistent with authorized project purposes;
- Contribute toward a high degree of recreation diversity within the region;
- Emphasize the particular qualities, characteristics, and opportunities of the project; and
- Exhibit consistency and compatibility with national objectives and other state and regional goals and programs.

An Environmental Assessment (EA) has also been prepared in conjunction with this Master Plan update in accordance with the requirements of the National Environmental Policy Act (NEPA) (42 USC 4321 et seq.), Council on Environmental Quality (CEQ) regulations published at 42 CFR part 1500, and Corps regulations published at 33 CFR part 230. The purpose of the EA is to provide sufficient information on the existing environmental conditions within the Basin and the potential environmental effects of the No-Action Alternative (continuation of the 1981 Master Plan) and the Proposed Action (the updated Master Plan) so that decision makers can determine the need to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). The EA is included as Appendix D.

1.2 Project Location

The Sepulveda Dam Basin, comprised of a Dam and lands that support the construction, operation and maintenance of the Dam is on the upper Los Angeles River in the San Fernando Valley about 17 miles northwest of the downtown Los Angeles and 2 miles southwest of the community of Van Nuys. The Project area is entirely within the municipal limits of the City of Los Angeles, California. Map 1 shows the regional setting, and Appendix E, Map 2 shows the Sepulveda Dam watershed and vicinity. The purview of this Master Plan includes all Federally-owned lands managed by the Corps at the Basin (Appendix E, Map 3). The Dam is 43 miles upstream of the mouth of the Los Angeles River, and 6 miles upstream of the confluence of Tujunga Wash and the Los Angeles River. The Project is accessible by two freeways, the Ventura Freeway (U.S. Highway 101) and the San Diego Freeway (Interstate 405), and lies at the northwest corner of the junction of these freeways. The Project is also accessible from several local roads.



Sepulveda Dam Basin

1.3 Authorized Project Purpose

Flood Risk Management A U.S. Army Corps of Engineers (Corps) Master Plan for an authorized civil works project is a conceptual document guiding Corps responsibilities pursuant to Federal laws and regulations to manage the project lands, water, and associated resources and to preserve, conserve, develop, restore, and maintain those resources. Although the authorized Project purpose in the legislation for the Project was originally referred to as flood control, it is now referred to as flood risk management. The Project purpose is to provide flood risk management to the communities downstream of the Basin, and all other activities that may occur within the Basin must not impede or diminish the purpose of flood risk management.

Sepulveda Dam Basin was authorized pursuant to two acts of Congress. The Flood Control Act (FCA) of 1936 (Public Law [P.L.] 74-738) provides for the construction of the dam and related flood risk management works for the protection of metropolitan Los Angeles County, California. The FCA of 1938 (P.L. 75-761), amended the 1936 Act by providing for the acquisition by the United States of land, easements, and right-of-way for Dam and Basin projects, channel improvements, and channel rectification for flood risk management. The Project is an important part of a comprehensive plan for flood risk management in Los Angeles County known as the Los Angeles County Drainage Area (LACDA). Sepulveda Dam is managed by the Corps, Los Angeles District.



Sepulveda Dam and Channel

Recreation Section 4 of the FCA of 1944, (P.L. 78-534), as amended authorizes the Corps to construct, maintain, and operate public park and recreation amenities at water resource development projects and to permit the construction, maintenance, and operation of such amenities. It authorizes the Corps to grant leases of lands, including structures or amenities that are suitable for public parks and recreation purposes to Federal, state, or local government agencies when such action is determined to be in the public interest. Since 1959, recreation amenities have been developed throughout the Basin by the City of Los Angeles Department of Recreation and Parks (City) in accordance with the lease between the Corps and City. Recreation amenities are described in detail in Section 4.

1.4 Need for Updated Master Plan

A need exists to ensure that Federal lands are managed in a way that conforms to current Corps regulations, policy and guidance. A Corps Master Plan is intended to capture the Corps' assessment of land management needs, expressed public desires, and provides guidance for evaluation of specific developments, uses and activities. A Master Plan defines land use classifications and provides guidance and foresight that allows the Basin to be managed in a way that balances the needs and desires of the public with legal, policy, and resource constraints.

Over the past several years, Corps policy and guidance has come to recognize a greater need for environmental stewardship that includes conservation and protection of the Nation's natural resources. The updated Master Plan must reflect this policy in order to guide future development within the Basin. Federal laws, regulations, and Executive Orders have changed in response to increasing needs for environmental protection and conservation. These changes in Corps environmental regulations and policy must be considered in the management of the Basin's land and water resources.

This Master Plan provides a review of existing land and resources uses within the Basin, describes the needs and desires of the surrounding community and other stakeholders, prescribes land use classifications for Basin land based on Corps guidance, offers resource and land use objectives for guidance in land management, and identifies recommendations for future development as well as preserving and conserving the Basin's natural resources.

1.5 History of the Basin

The need for flood risk management in the coastal drainages of Los Angeles County was recognized before 1900, but increased after the floods of January and February 1914. On 12 June 1915, Los Angeles County Flood Control District (LACFCD) was created. This new County agency worked with the Corps on various minor flood risk management projects, but it was not until two decades later that major flood risk management projects were given serious consideration. The flood of 1 January 1934 emphasized the need for flood control projects in southern California, and the New Deal Relief and Public Works Program provided the financial vehicle for comprehensive construction programs.

In 1935 and 1936, the Corps and LACFCD became partners in a large Works Progress Administration (WPA) contract to design a comprehensive flood risk management plan for the Los Angeles, Santa Ana, the San Gabriel Rivers and their tributaries in Los Angeles County (Corps 1938). The Definite Project Report for the control of the Los Angeles River was submitted in December 1936. The severe storms and floods of February-March 1938 provided additional impetus for a comprehensive flood risk management program in southern California.



Los Angeles River Central Branch Tujunga Wash, March 1938

Sepulveda Dam forms part of the LACDA system of flood risk management structures located on the San Gabriel and the Los Angeles Rivers and their tributaries. The analysis of design, completed in 1939 and revised in 1941, established the location and design of the Dam and appurtenant flood risk management amenities. Construction of the Dam, spillway, and outlet works that exist today was completed in December 1941 at a Federal first cost of \$6,650,561.

Until the housing boom following World War II, the San Fernando Valley (Valley) was a major agricultural center of California. Following the war, development of housing units increased dramatically and with it a growing population. In 1950, at the time of development of the 1953 Master Plan, the “Master Recreation Plan Flood Control Reservoir”, the population of the City of Los Angeles stood at 1,970,358. This compares to a population of 3,694,820 in 2000 according to the U.S. Census Bureau. According to the 1953 plan, the population of the San Fernando Valley in 1950 was 311,016 and the future population based on ultimate development under existing zoning and trends was expected to be 1,848,093.



Sepulveda Dam Construction 1940

Residential development of the Valley increased the need for recreation amenities. Effective 11 June 1951, the Corps and City of Los Angeles entered into a lease for 50 years “to use and occupy for public park and recreational purposes and purposes incidental thereto, approximately 2,000 acres of land...” (Corps 1953). With the approval of the 1953 Master Plan recreational development of the Basin began in



Sepulveda Ball Park Being Constructed, June 1955

earnest with actual construction commencing in 1959. The City continues to develop, operate, and maintain recreation amenities at the Basin in conjunction with the Corps.

1.6 Applicable Laws, Executive Orders, Regulations, and Policy Guidance

The following Federal laws, Executive Orders, and Corps regulations and guidance are pertinent to the Master Plan update.

1.6.1 Public Laws

The Flood Control Act of 1944, Section 4, as amended (16 USC Section 460d) authorizes the Corps to construct, maintain and operate public park and recreation amenities at water resource development projects; to permit construction of such amenities by local interests; to permit the maintenance and operation and maintenance of such amenities by local and interests; and to grant leases for public park and recreational purposes on Federally-owned lands controlled by the Corps, including structure or amenities thereon. Preference for use shall be given to Federal, state, or local governmental agencies. The authority to issue licenses is included under this authorization and may be granted without monetary consideration.

The National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.) provides a framework for Federal agencies to minimize environmental damage and requires Federal agencies to evaluate the potential of environmental impacts of their proposed actions. Under NEPA, a Federal agency prepares an Environmental Assessment (EA) describing the environmental effects of any proposed action and alternatives to that action to determine if there are significant impacts requiring development of an Environmental Impact Statement (EIS) or if a Finding of No Significant Impact (FONSI) is appropriate. The EA must identify measures necessary to avoid or minimize adverse impacts, and all impacts must be reduced to a level below significance in order to rely upon a FONSI.

The Migratory Bird Treaty Act, as amended (16 USC 703-712) prohibits the taking or harming of any migratory bird, the living bird, any part of the bird, its eggs, or eggs without an appropriate Federal permit. This Act covers birds specifically listed therein or named in wildlife treaties between the United States and countries, including Great Britain, Mexican States, Japan and countries once part of the former Soviet Socialist Republics. Disturbance of the nest of a migratory bird requires a permit issued by the United States Fish and Wildlife Service (USFWS) pursuant to Title 50 of the Code of Federal Regulations.

The Fish and Wildlife Coordination Act of 1958 (16 USC 661-667e) requires that any agency impounding, diverting, channel deepening, controlling or otherwise modifying a stream or body of water for any purpose whatever, including navigation and drainage, consult with the United States, Fish and Wildlife Service. The Act is intended to give fish and wildlife conservation equal consideration with the purposes of water resource development projects.

The Federal Water Project Recreation Act of 1965, as amended (16 USC 4601-12 to 4601-21), requires that recreation and fish and wildlife enhancement be given full consideration in Federal water development projects. The Act authorizes the use of Federal water resource project funds for land acquisition in order to establish refuges for migratory waterfowl.

The Clean Water Act, as amended (33 USC 1251-1387) authorizes water quality programs; requires certification from the state water control agencies that a proposed water resource project is in compliance with established effluent limitations and water quality standards (Section 401); establishes conditions and permitting for discharges of pollutants under the national pollutant discharge elimination system (NPDES) (Section 402); and requires that any non-Corps entity acquire a permit from the Corps for any discharges of dredged materials into the waters of the United States, including wetlands (Section 4040). The Act also defines the conditions which must be met by Federal projects before they may make

discharges into the waters of the United States. Under the Section 404(b)(1) guidelines, as published in 40 CFR 122.6, only the Least Environmentally Damaging Practicable Alternative should be recommended. The United States Environmental Protection Agency (EPA) has primary responsibility for implementing the programs designed to clean up waters of the United States.

The Clean Air Act, as amended (42 USC 7401-7671q), establishes Federal standards for seven toxic air pollutants. It also establishes attainment and maintenance of National Ambient Air Quality Standards (Title I), motor vehicles and reformulation (Title II), hazardous air pollutant (Title III), acid deposition (Title IV), operation permits (Title V), stratospheric ozone protection (Title VI), and enforcement (Title VII). Under Section 176(c) of the Clean Air Act Amendments of 1990, the Lead Agency is required to make a determination of whether the Proposed Actions “conform” to the State Implementation Plan (SIP). Conformity is defined in Section 176(c); compliance with the SIPs is for the purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. If the total direct and indirect emissions from a Proposed Action are below the General Conformity Rule “*de minimus*” emission thresholds, then a Proposed Action would be exempt from performing a comprehensive Air Quality Conformity Analysis, and would be in conformity with the SIP. In addition, the analysis must consider whether the emissions would be “regionally significant” before determining no comprehensive Air Quality Conformity Analysis is required.

The Endangered Species Act of 1973, as amended (16 USC 1531 et seq.), protects threatened and endangered species, as listed by the USFWS, from unauthorized take, and directs Federal agencies to ensure that their actions do not jeopardize the continued existence of such species. Section 7 of the Act defines Federal agency responsibilities for consultation with USFWS.

The Archaeological and Historic Preservation Act, as amended (16 USC 469), requires that Federal agencies consider the effect of their undertakings, including Federally-licensed activity or program, on historic American sites, buildings, objects, and antiquities of national significance when taking actions that include, but are not limited to, flooding, the building of access roads, relocation of railroads or highways, and other alterations of the terrain caused by the construction of a dam.

The National Historic Preservation Act of 1966, as amended (16 USC 470 et seq.), requires that Federal agencies consider the effect of their undertakings, including federally licensed activities or programs, on properties eligible for the National Register of Historic Places (NRHP).

The American with Disabilities Act of 1990, as amended, (42 USC 126 et seq.), prohibits public entities, defined as any state or local government, or division thereof, from excluding any individual with a disability from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity. A "qualified individual with a disability" is an individual with a disability who, with or without reasonable modifications to rules, policies, or practices, the removal of architectural, communication, or transportation barriers, or the provision of auxiliary aids and services, meets the essential eligibility requirements for the receipt of services or the participation in programs or activities provided by a public entity.

Leases: Non-Excess Property of Military Departments and Defense Agencies, as amended, (10 USC 2667(a)), authorizes the Corps to lease Federal land under its control to non-Federal entities when such use will promote the national defense or to be in the public interest. Lands considered for lease under this authority must not be necessary for public use and is not considered excess. This leasing authority typically applies to uses that are considered “non-recreational.”

Easements for Rights of Way, as amended (10 USC 2688), authorizes the Corps to issue easements for rights-of-way over, in, and upon Federal land controlled by the Corps when such use will not be against the public interest.

1.6.2 Executive Orders

Executive Order (EO)11514, Protection and Enhancement of Environmental Quality, amended by Executive Order 11991, Relating to Protection and Enhancement of Environmental Quality, mandates that the Federal government provide leadership in protecting and enhancing the quality of the nation's environment to sustain and enrich human life. Federal agencies must initiate measures needed to direct their policies, plans and programs so as to meet national environmental goals. Section 1 of EO 11990 amends Section 3(h) of EO 11514, by directing the CEQ to issue guidelines to Federal agencies for implementing procedural provisions of the NEPA 1969. These regulations include procedures for early environmental impact statement (EIS) preparation and require impact statements to be concise, clear, and supported by evidence that agencies have made the necessary analyses.

Executive Order 11988, Floodplain Management, outlines the responsibilities of Federal agencies in the role of floodplain management. Federal agencies are required to evaluate the potential effects of actions on floodplains, and should avoid undertaking actions which directly or indirectly induce growth in the floodplain or adversely affect natural floodplain values. Agency regulations and operating procedures for licenses and permits are directed to include provisions for the evaluation and consideration of flood hazards. Construction of structures and amenities in floodplains must consider alternative approaches that avoid adverse effects and incorporate flood proofing and other accepted flood risk management measures. Agencies shall attach appropriate use restrictions to property proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties. This EO requires Federal agencies to provide leadership and take action to: (1) avoid development in the base (100-year) floodplain unless it is the only practicable alternative; (2) reduce the hazards and risk associated with floods; (3) minimize the impact of floods on human safety, health and welfare; and (4) restore and preserve the natural and beneficial values of the base floodplain.

Executive Order 11990, Protection of Wetlands, states that the Federal agencies shall take action to minimize destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agencies responsibilities. Each agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental, and other pertinent factors. Federal agencies shall also provide opportunity for early public review of any plans or proposals for new construction in wetlands.

Executive Order 12088, Federal Compliance with Pollution Control Standards, requires all Federal agencies to ensure that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to Federal amenities and activities under control of the agency.

Executive Order 12898, Environmental Justice in Minority Populations and Low-Income Populations, requires Federal agencies to identify and address disproportionately high and adverse impacts of Federal Actions, including Federal licensed actions, programs, policies, or activities, on minority or low income populations in the United States.

Executive Order 13112, Invasive Species, requires Federal agencies to expand and coordinate efforts to prevent the introduction of invasive species and to minimize the economic, ecological, and human health impacts that invasive species may cause.

Executive Order 13148, Greening the Government through Leadership in Environmental Management, mandates that environmental management considerations must be a fundamental and integral component of Federal Government policies, operations, planning, and management. The primary goal of this EO in the natural resources arena is for each agency to strive to promote the sustainable management of Federal facility lands through the implementation of cost-effective, environmentally sound landscaping practices, and programs to reduce adverse impacts to the natural environment.

1.6.3 Corps' Guidance

The following paragraphs list Engineer Regulations (ER), Engineer Pamphlets (EP), and Engineer Manuals (EM) published by the Corps that are pertinent for planning, development, and management of the Basin. These Corps documents are cited with their initial publication date and updates using a system of changes to specific pages to incorporate modifications to the guidance resulting from new legislation or policy changes. The documents including changes are available in digital format at the publications page on The Corps' Headquarters website (<http://140.194.76.129/publications/>).

- Engineer regulations (ER) establish topic-specific procedural practices that must be followed at Corps District levels.
- Engineer pamphlets (EP) provide clarification guidance and/or detailed implementation guidance in support of Federal laws and regulations.
- Engineer manuals (EM) are documents which provide comprehensive planning and design guidance for a wide range of technical and functional activities.

1.6.4 Engineering Regulations

ER 200-1-5, Policy for Implementation and Integrated Application of the U.S. Army Corps of Engineers Environmental Operating Procedures (EOP) and Doctrine, 30 Oct 2003, provides specific policy and guidance for implementation and the integrated application of the Corps' EOP and associated doctrine across the full spectrum of Corps' program management initiatives and business processes.

ER 200-2-2, Environmental Quality: Policy and Procedures of Implementing NEPA, 04 Mar 1988, (33 CFR part 230), provides policy and procedural guidance to supplement the Council of Environmental Quality's final regulations implementing the procedural provisions of the NEPA for the Civil Works Program of the Corps.

ER 200-2-3, Environmental Compliance Policies, 29 Oct 2010, provides the policy for the management of environmental compliance-related operations and maintenance activities for the U.S. Army Corps of Engineers Civil Works Projects.

ER 405-1-12, Real Estate Handbook, 20 Nov 1985, provides guidance on real estate requirements and procedures, including guidance on appraisals, acquisitions, relocation assistance, homeowners' assistance, real estate claims, audits, and recording and reporting.

ER 1105-2-100, Planning Guidance Notebook, 22 Apr 2000 (original); 30 Jun 2004 (Appendix D - Amendment 1); 31 Jan 2007 (Appendix F - Amendment 2); 30 Jun 2004 (Appendix G - Amendment 1); 20 Nov 2007 (Appendix H - Amendment 1), provides overall direction by which the Corps Civil Works

projects are formulated, evaluated and selected for implementation. It contains a description of the Corps planning process, Corps missions and programs, specific policies applicable to each mission and program, and analytical requirements.

ER 1110-2-240, Water Control Management, 08 Oct 1982; 30 Apr 1987 (change 1); 01 Mar 1994 (change 2), prescribes policies and procedures to be followed by the Corps in carrying out water control management activities, including the establishment of water control plans for Corps and non-Corps projects, as required by Federal laws and directives.

ER 1110-2-400, Design of Recreation Sites, Area and Amenities, 31 May 1988, establishes policy, and guidance for the design of recreation sites, areas, and amenities.

ER 1130-2-530, Flood Control Operations and Maintenance Policies, 30 Oct 1996, establishes the policy for the operation and maintenance (O&M) of Corps flood risk management and related structures at civil works water resource projects and of Corps-built flood risk management projects operated and maintained by non-Federal sponsors.

ER 1130-2-540, Environmental Stewardship Operations and Maintenance Guidance Procedures, 15 Nov 1996 (Original); 04 Nov 2002 (change 1); 31 Jul 2005 (change 2); 11 Aug 2008 (change 3), establishes land management policy for Corps-administered project lands and water, based on various authorizing legislation and the principles of good environmental stewardship. Environmental stewardship includes both passive and proactive management to sustain healthy ecosystems and biodiversity, and conserve natural resources, such that Corps lands and waters are left in a condition equal to or better than their condition when acquired, and such that those natural and cultural resources are available to serve the needs of present and future generations. Management plans will be prepared for all Corps administered lands and waters.

ER 1130-2-550, Recreation Operations and Maintenance Policies, 15 Nov 1996 (Original); 01 Oct 1999 (change 1); 01 Mar 2002 (change 2); 15 Aug 2002 (change 3); 30 Aug 2008 (change 4); 30 Mar 2009 (change 5), establishes the policy for management of recreation programs and activities, and for the operation and maintenance of U.S. Army Corps of Engineers recreation amenities and related structures, at civil works water resource projects. Chapter 3 of this regulation calls for preparation and implementation of project Master Plans and operational management plans.

ER 1165-2-26, Implementation of Executive Order 11988 on Floodplain Management, 30 Mar 1984, sets forth general policy and guidance for Corps implementation of Executive Order 11988, Floodplain Management, as it pertains to planning, design, and construction of Civil Works projects, to activities under the operation and maintenance program, and to the real estate program of the Corps. The policy of the Corps with respect to floodplain management is to formulate projects which, to the extent possible, avoid or minimize adverse impacts associated with use of the base (100-year) floodplain and avoid inducing development in the base floodplain unless there is no practicable alternative. The decision on whether a practicable alternative exists will be based on weighing the advantages and disadvantages of floodplain sites and non-floodplain sites. Factors to be taken into consideration include, but are not limited to, conservation, economics, esthetics, natural and beneficial values served by floodplains, impact of floods on human safety, locational advantage, the functional need for locating the development in the floodplain, historic values, fish and wildlife habitat values, endangered and threatened species, Federal and State designations of wild and scenic rivers, refuges, etc. and, in general, the needs and welfare of the people. The test of practicability will apply to both the proposed Corps action and to any induced development likely to be caused by the action. Identification and evaluation of practicable alternatives shall include consideration of alternative sites (carrying out the proposed action outside the floodplain); alternative actions (other means which accomplish the same purpose as the proposed action); and no

action. When a determination is made that no practicable alternative to undertaking an action in the floodplain exists, it will be appropriately documented and the features or qualities of the floodplain that make it advantageous over alternative non-floodplain sites shall be described and adequately supported.

ER 1165-2-119, Modifications to Completed Projects, 20 Sep 1982, provides guidance on the use of available authorities, as compared to the need of new project authorizations, for study and accomplishment of modification to completed projects.

ER 1165-2-400, Recreational Planning, Development, and Management Policies, CH1, 09 Aug 1985, defines the objectives, philosophies, and basic policies for the planning, development and management of outdoor recreation and enhancement of fish and wildlife resources at Corps water resource development projects.

ER 1165-2-501, Civil Works Ecosystem Restoration Policy, 30 Sep 1999, provides policy on Corps involvement in ecosystem restoration and protection through Civil Works programs and activities.

1.6.5 Engineering Pamphlets

EP 1165-2-316, Rules and Regulations Governing Public Use of Water Resources Development Projects Administered by the Chief of Engineers, May 2000; codified as 36 CFR part 327, establishes rules and regulations pertaining to the recreational land use and safety measures at Corps administered water resource and development projects.

EP 310-1-6, Corporate Information: Graphic Standards Manual, 01 Sep 1994 (original); 01 Jun 2006 (change 1), establishes a unified approach regarding the use of Corps logotype and preparation of visual communications. The manual covers the use of the logo in business cards, signs, publications, forms, vehicles, and miscellaneous items.

EP 310-1-6a, 232 Sign Standards Manual, VOL 1, 01 Jun 2006, provides direction and guidance for signage, including planning, use, placement, materials, and maintenance, at Corps Civil Works water resource projects.

EP 310-1-6b, Sign Standards Manual, VOL 2, Appendices, 01 Jun 2006, provides guidance on procurement procedures, materials and specifications, sign maintenance procedures, typography reference, reference material, and reproduction materials for signage at Corps water resource projects.

EP 1130-2-429, Volunteer Coordinator's Handbook, 30 Apr 1993, provides assistance to volunteer program coordinators in preparing volunteer management plans, and guidance on procedures for administrating effective volunteer programs at Corps projects and offices.

EP 1130-2-540, Environmental Stewardship and Maintenance Guidance and Procedures, 15 Nov 1996 (original); 04 Nov 2002 (change 1); 31 Jul 2005 (change 2); 11 Aug 2008 (change 3), establishes guidance for the management of environmental stewardship-related operations and maintenance activities at Corps civil works water resource projects and supplements ER 1130-2-540, Environmental Stewardship Operations and Maintenance Policies.

EP 1130-2-550, Project Operations-Recreation Operation and Maintenance Guidance and Procedures, 15 Nov 1996 (original); 01 Oct 1999 (change 1); 01 Mar 2002 (change 2); 15 Aug 2002 (change 3); 30 Aug 2008 (change 4), establishes guidance for the management of recreation programs and activities, and for the operation and maintenance of Corps recreation amenities and related structures, at civil works water resource projects and supplements ER 1130-2-510, Recreation Operation and Maintenance Policies.

Master Plans and operational management plans are to be developed in accordance with the guidance on master planning and report content contained in Chapter 3 of both ER and EP 1130-2-550.

EP 1165-2-502, Ecosystem Restoration – Supporting Policy Information, 30 Sep 1999, provides policy information in support of ER 1165-2-501 to guide Corps of Engineers involvement in ecosystem restoration and protection through Civil Works programs and activities.

1.6.6 Engineering Manuals

EM 1110-1-400, Recreation Facility and Customer Services Standards, 01 Nov 2004, provides general guidance for the rehabilitation of existing, and the design and construction of new recreation areas and amenities, the provision of customer services, and recreation program evaluation activities at recreation areas managed by the Corps of Engineers. The overall purpose of this document is to establish a uniform level of quality nationwide by which Corps-managed parks will meet the needs of current and future park customers.

EM 1110-2-410, Design of Recreation Areas and Amenities – Access and Circulation, 31 Dec 1982, presents data compiled from experience and research that may be useful to Corps personnel concerned with the design of access and circulation to recreation sites, areas and amenities. The material presented in the manual is intended as design guidance for obtaining an end product which results in safe, useable, economical recreation developments and accessible to all.

1.6.7 South Pacific Division Regulations

SPDR 1110-2-1, Land Development Proposals at Corps Reservoir Projects, Nov 2001, establishes South Pacific Division (SPD) policy for evaluating land development proposals within Basins of the Corps, and documenting the results of the evaluation. The policies of this division regulation detail the procedures to be followed in evaluating land development proposals by any entity (companies, organizations, private parties, governments, or agencies) to construct buildings, roads, or other amenities, or in any way would modify the land forms, vegetation, surface characteristics, or use lands within a Basin operated by the Corps for flood risk management. The objective is to assure that project purposes are not compromised, that the public is not endangered, and that natural and cultural resources associated with project lands are not harmed.

1.7 Pertinent Publications

U.S. Army Corps of Engineers Publications

U.S. Army Corps of Engineers, Los Angeles District, *Analysis of Design, 57'x10' Crest Gates for Sepulveda Dam*, 1937

U.S. Army Corps of Engineers, Los Angeles District, *Flood Control in the Los Angeles County Drainage Area*, 1938

U.S. Army Corps of Engineers, Los Angeles District, *Analysis of Design, Sepulveda Dam, Vol. I.* (Revised 1941)

U.S. Army Corps of Engineers, Los Angeles District, *Flood Control in the Los Angeles County Drainage Area*, 1939

- U.S. Army Corps of Engineers, Los Angeles District, *Hydrology in the Los Angeles County Drainage Area*, 1939
- U.S. Army Corps of Engineers, Los Angeles District, *Analysis of Design, Balboa Blvd, Bridge Vol. III*, 1940
- U.S. Army Corps of Engineers, Los Angeles District, *Preliminary Report, Recreational Development, Sepulveda Flood Control Basin*, 1947
- U.S. Army Corps of Engineers, Los Angeles District, *Report, Master Recreation Plan Sepulveda Flood Control Reservoir*, 1953
- U.S. Army Corps of Engineers, Los Angeles District, *Administration and Development of Project Land and Water Areas*, 1956
- U.S. Army Corps of Engineers, Los Angeles District, *Sepulveda Dam and Reservoir, Periodic Inspection and Continuing Evaluation Report*, 1970.
- U.S. Army Corps of Engineers, Los Angeles District, *Operation and Maintenance Manual for Sepulveda Dam, Los Angeles River Improvement, Los Angeles County Drainage Area, California*, 1970
- U.S. Army Corps of Engineers, Los Angeles District, *Revised Recreation Master Plan for Sepulveda Flood Control Reservoir, Los Angeles River Feature Design Memorandum No. 1*, 1973
- U.S. Army Corps of Engineers, Los Angeles District, *Final Environmental Impact Report for Sepulveda Water Reclamation Plant, Bureau of Engineering, City of Los Angeles*, 1975
- U.S. Army Corps of Engineers, Los Angeles District, *Operations and Maintenance Manual, Los Angeles County Drainage Area*, 1975
- U.S. Army Corps of Engineers, Los Angeles District, *Plan of Study, Review Report for Flood Control and Allied Purposes, Los Angeles County Drainage Area*, 1976
- U.S. Army Corps of Engineers, Los Angeles District, *Supplement No. 2 to Feature Design Memorandum/Proposal Fiscal Year 1978, Recreational Development*, 1978
- U.S. Army Corps of Engineers, Los Angeles District, *Interim Report on Hydrology and Hydraulic Review of Design Features of Existing Dams for LACDA Dam*, 1978.
- U.S. Army Corps of Engineers, Los Angeles District, *Sepulveda Basin Master Plan and Final Environmental Impact Report/Statement, Los Angeles, California*, 1981
- U.S. Army Corps of Engineers, Los Angeles District, *Final Report, Review of Water Resources within the Los Angeles County Drainage Area*, 1985
- U.S. Army Corps of Engineers, Los Angeles District, *Conceptual Design Material Sepulveda Basin Recreation Lake Water Supply and Discharge Amenities*, 1986
- U.S. Army Corps of Engineers, Los Angeles District, *An Evaluation Report, Sepulveda Recreation Lake*, 1986

- U.S. Army Corps of Engineers, Los Angeles District, *Final Environmental Assessment Sepulveda Recreation Lake and Wildlife Area Los Angeles County, California*, 1987
- U.S. Army Corps of Engineers, Los Angeles District, *Sepulveda Basin Recreation Lake Feature Design Memorandum*, 1987
- U.S. Army Corps of Engineers, Los Angeles District, *Los Angeles County Drainage Area, Recreation Review*, 1988
- U.S. Army Corps of Engineers, Los Angeles District, *Supplemental Environmental Assessment for the Design Refinements to the Sepulveda Recreation Lake, Los Angeles County, California*, 1988
- US Army Corps of Engineers, Los Angeles District (Corps), *Water Control Manual, Sepulveda Dam & Reservoir, Los Angeles River, California*, 1989
- U.S. Army Corps of Engineers, Los Angeles District, *Los Angeles County Drainage Area Review, Final Feasibility Report*, 1991
- U.S. Army Corps of Engineers, Los Angeles District, *Final Report, Biological Assessment of Haskell Creek, Los Angeles, California*, 1992
- U.S. Army Corps of Engineers, Los Angeles District, *Conceptual Management Plan for the Sepulveda Basin Wildlife Area*, 1994
- U.S. Army Corps of Engineers, Los Angeles District, *Supplement 1 to the 1981 Sepulveda Basin Master Plan, Including Environmental Assessment*, 1995
- U.S. Army Corps of Engineers, Los Angeles District, *Los Angeles River Feature Design Memorandum*, 1996
- U.S. Army Corps of Engineers, Los Angeles District, *Detailed Project Report Bull Creek Channel Ecosystem Restoration, Los Angeles County, California*, 2003
- U.S. Army Corps of Engineers, Los Angeles District, *Final Special Needs Ball Field at Anthony C. Beilenson Park, Environmental Assessment/Initial Study/Mitigated Negative Declaration*, 2009

City of Los Angeles Publications

- City of Los Angeles, Department of Recreation and Parks, *Draft Environmental Impact Report for Sepulveda Basin Tennis Complex*, 1976
- City of Los Angeles, Department of Public Works, *Environmental Assessment/ Mitigated Negative Declaration and Initial Study for the Sepulveda Basin Sports Complex*, 2006
- City of Los Angeles, Department of Public Works, *Los Angeles River Revitalization Master Plan*, 2007
- City of Los Angeles, Department of Recreation and Parks, *Citywide Community Needs Assessment*, 2009

2 PROJECT DESCRIPTION

2.1 Project Data

The Project consists of an earth-fill embankment with a reinforced concrete spillway and outlet works. Pertinent project data has been summarized in Table 2.1. The Dam is an un-zoned, impervious, rolled-earth embankment with a crest length, including outlet works and spillway, of 15,444 feet (2.93 miles) at top-of-dam elevation 725 feet National Geodetic Vertical Datum (NGVD) and a crest width of 30 feet. The maximum height above the original Los Angeles River streambed is 57 feet. The upstream slope is 1 vertical (V): 3 horizontal (H) and the downstream slope is 1V:4H. The upstream slope is protected by grouted stone paving. One flank of the Dam's embankment extends southwest from the outlet works, then west alongside the Ventura Freeway (merging with the freeway embankment for approximately 0.6 miles). The other flank extends northeast, then north, along the San Diego Freeway (merging with the freeway embankment for approximately 1.1 miles).

The outlet works are located at the southwest end of the spillway and aligned to discharge into the Los Angeles River. Inflow to the outlet works is from the northwest via the approach channel of the Los Angeles River. The outlets of the Dam are installed in a concrete section, 83 feet in width. Outflow is discharged through four gated outlets, 6 feet wide by 9 feet high, and four un-gated outlets, 6 feet wide by 6.5 feet high. All outlet entrance inverts (sometimes referred to as the gated sill) are at elevation 668 feet. The four gated outlets are in the center of the outlet works, with two un-gated outlets on each side. The hydraulically operated, vertical lift type gates open and close about one foot per minute and may be locked in any position. The outlet works are equipped with trash racks on the upstream side to prevent debris from obstructing the outlets or washing downstream. Downstream of the conduit outlet portals, piers 13 feet in length provide a smooth transition to the flow from the eight conduits to the downstream channel. Below the piers, the outflow discharges into a rectangular concrete channel, which is 83 feet wide for a distance of 294 feet, then tapers over a 400-foot transition, to a width of 50 feet. The channel invert, from the portal piers through the transition taper, is designed on a slope of 0.00924, which is sufficient to prevent backwater in the conduits and to ensure smooth flow through the transition for discharges up to at least 15,300 cubic feet per second (cfs). The combined maximum capacity of the outlets is 16,500 cfs at a Basin water surface elevation of 710 feet, which is the elevation of the top of the spillway gates in closed position. The flow conveyance capacity of the Los Angeles River channel increases progressively as water flows downstream of the Dam. A control house is located on top of the Dam. Commercial power is supplied for lighting with standby power available (Corps 1989).



Sepulveda Dam

Table 2.1 Sepulveda Dam and Basin Pertinent Data	
General Information	
Construction Completed	May 1941
Stream System	Los Angeles River
Drainage Area	152 square miles
Basin	
Elevation	
Top of spillway gates (raised position)	10 ft, NGVD
Flood control pool ¹	712 ft, NGVD
Spillway design surcharge level	716.7 ft, NGVD
Top of Dam	725 ft, NGVD
Spillway gates begin to automatically lower	712 ft, NGVD
Spillway gates complete automatic lowering	715 ft, NGVD
Area²	
Top of spillway gates (raised position)	1,348 acres
Flood control pool	1,444 acres
Fixed spillway crest	794 acres
Fixed spillway design surcharge level	1,715 acres
Top of Dam	2,591 acres
Capacity, Gross¹	
Top of spillway gates (raised position)	18,12 ac-ft
Flood control pool	20,920 ac-ft
Fixed spillway crest	7,280 ac-ft
Spillway design surcharge level	28,713 ac-ft
Top of Dam	46,764 ac-ft
Allowance for sediment	0 ac-ft
Dam: Type	
Earthfill	
Height above original streambed	57 ft
Top length	15,440 ft
Freeboard	30 ft
Spillway: Type	
Concrete ogee	
Crest length	399ft
Crest elevation	700 ft, NGVD
Design surcharge	6.7 ft
Design discharge	99,540cfs
Outlets	
Uncontrolled	
Number and Size	4- 6'W x 6.5'H
Entrance invert elevation	668 ft, NGVD

Table 2.1 Sepulveda Dam and Basin Pertinent Data

Controlled	
Gates - type	Vertical Lift
Number and size	4 - 6'W x 9'H
Entrance invert elevation	668 ft, NGVD
Rectangular Conduits (Number and Size)	
Ungated	4 - 6'W x 6.5'H
Gated	4 - 6'W x 9'H
Length	40 ft
Maximum capacity at spillway crest	16,500cfs
Regulated capacity at spillway crest	16,500 cfs
Standard Project Flood	
Duration (inflow)	3 days
Total volume (including base flow)	68,200 ac-ft
Inflow peak	50,000 cfs
Probable Maximum Flood	
Duration (Inflow)	4 days
Total volume	163,200 ac-ft
Inflow peak	114,000 cfs
Historic Maximums	
Maximum mean hourly inflow (Date)	58,970 cfs (2-16-1980)
Maximum outflow (Date)	15,320 cfs (2-16-1980)
Maximum storage (Date)	11,470 ac-ft (2-16-1980)
Maximum water surface elevation	705.1 ft, NGVD (2-16-1980)
¹ Storage below elevation 710 ft is exclusively dedicated to flood control. Between elevation 710 ft and 712 ft the storage is used for flood control until the spillway gates begin to lower when the pool exceeds elevation 712 ft.	
² Based on November 2004 Survey. Source: Corps 1989.	

The spillway is a reinforced concrete ogee section of the overflow gravity type, having a gross length of 469 feet and a crest elevation of 700 feet, NGVD. The spillway has seven submersible drum gates, each 57 feet long. A drum gate is designed to float on water in a chamber located in the spillway crest. The water, which is being spilled, flows over the top of the drum onto the ogee section of the spillway. The drum is raised by hydrostatic pressure and its range of operation is from its lower limit where the top of the drum is at the spillway crest elevation (fully open) to its upper limit where the top of the drum corresponds to full pool level (fully closed). The drum gates are separated by six 10-foot-wide piers, with a 5-foot-wide pier abutting each end of the spillway. The total net spillway width over which water can pass is thus 399 feet. The approach to the spillway is a gently sloping unpaved earthen ramp, rising from the approach channel to an elevation of 680 feet (Corps 1989).



Channel

Sepulveda Dam was designed with operable crest gates instead of with a fixed spillway. This was done in order to minimize the water surface elevation of a spillway design flood, and hence minimize the height of the top of the Dam, saving on both construction costs and the amount of land acquired for the Basin. With a fixed spillway elevation, flow over the spillway crest would increase gradually as the water would rise above the Basin design flood elevation (and spillway crest elevation) of 710 feet. With moveable spillway crest gates, on the other hand, the lowering of these gates would allow for a much greater discharge from the Basin at heights not greatly in excess of the spillway crest. The seven crest gates (submersible drum gates) are made of structural steel, with each complete gate assembly weighing about 50 tons. These gates are designed to rise with the ogee section in unison to a maximum elevation of 710 feet, which is the elevation that an uncontrolled spill begins to occur. The gates are set for fully automatic operations, but can also be operated in semi-automatic or emergency manual modes. The crest gates are designed to operate automatically as the water surface elevation rises above 692.5 feet. This operation is essential to prevent overtopping and failure of the embankment of the Dam by a probable maximum flood (Corps 1989).

2.2 Real Estate

A total acreage of 2,131.9 acres was acquired in fee for construction, operations, and maintenance of the Sepulveda Dam Basin. The Corps reserves 313.0 acres, which includes 157.8 acres of roads, exclusively for operation of the Dam.

The City of Los Angeles was originally granted a 50-year lease, effective 11 June 1951 through 10 June 2001, to develop 2,000 acres in the Sepulveda Dam Basin for park and recreational purposes. The lease was supplemented on 5 January 1967, reducing the acreage to approximately 1,641 acres and extended the lease to 2017. The acreage was reduced so that leases for other purposes could be granted. Additional supplements to the lease further reduced the acreage to approximately 1,542.12 acres. The lease was extended for a 75-year term in Supplement 4 expiring on 4 January 2042.

In 1954, a lease was granted to the West Valley Youth, Inc., a California nonprofit corporation to develop 5.5 acres as a baseball park for children. In 1979, the lease was modified and granted to Franklin Field, Inc., a California nonprofit corporation which increased the amount of leased land from 5.5 acres to approximately 28 acres and extended the lease for 25 years, to 2004. On 19 March 2003, a new lease was granted to Franklin Field, Inc., for 22 years to run from 1 January 2003 to 31 December 2025. In June 2010, a request was granted to change the name on the lease from Franklin Field, Inc. to Encino Franklin Field, Inc. See Map 4.

The Corps approved the use of Basin land for several other non-recreational uses determined to be in the public interest, discussed below.

2.2.1 Non-Recreational Leases

Several leases have been granted in the Sepulveda Basin for non-recreational purposes. These include a lease for 96.59 acres to the City of Los Angeles Department of Public Works for the Donald C. Tillman Water Reclamation Plant, another lease for 10.53 acres to the City of Los Angeles Department of Public Works for a fire station, and a lease for 6 acres to the state of California for a National Guard Armory. Two permits have been granted to the U.S. 6th Army. One permit was for 5.1 acres for maintenance shops and another for 25.91 acres for California Air National Guard amenities. A permit for 9.1 acres was granted to the Department of Navy for a Reserve Training Center. In addition to these leases and permits, several parcels in the Basin are leased for agriculture purposes. Easements have also been granted for waterlines, power-lines, sewer-lines, storm drains, gas-lines, and traffic arteries, such as freeways and city streets.

2.3 Recreation Amenities

A variety of recreation amenities are available in the Sepulveda Dam Basin. Amenities include three golf courses, park land, a sports center, baseball and soccer fields, a garden center, model airplane center, cricket fields, tennis courts, trails for hiking/jogging, bicycle trails, and a lake for fishing and boating. See Map 10.

2.4 Watershed

The drainage area of the Los Angeles River and its tributaries above Sepulveda Dam Basin is 152 square miles, comprising the northwestern most portion of the Los Angeles River watershed, covering the western half of the San Fernando Valley and surrounding mountain slopes west of Interstate 405 (San Diego Freeway). The drainage area boundary on the south is formed by the Santa Monica Mountains; on the west by the Simi Hills; on the north by the Santa Susana Mountains; and on the east by a line extending approximately north and south across the valley and generally along the San Diego Freeway. The headwaters of the Los Angeles River are in the Simi Hills formed by Chatsworth Creek, Dayton Canyon Wash, Bell Creek, and Arroyo Calabasas. The longest watercourse above the Basin is formed by the series of reaches of Devil Canyon, Brown's Canyon, and the Los Angeles River, about 19 miles long with an average slope of 143 feet per mile.



Los Angeles River Upstream of Sepulveda Dam

The Los Angeles River immediately downstream of the Dam is a rectangular reinforced concrete channel with a hydraulic capacity of 16,900 cfs. The River continues in an easterly then southerly direction in a lined channel of varying cross section shapes that increases in size as it picks up largely urban tributary runoff on its way to the Pacific Ocean (Corps 1989). Appendix E, Map 1 and Map 5 show the watershed and Basin boundaries.

Sediment production within the drainage area above Sepulveda Dam Basin varies considerably according to terrain. In the urbanized valley areas, sediment production is at a minimum, and has been decreasing over the years as the extent and intensity of urbanization has increased. Upstream debris basins intercept part of this sediment load. The rate of sediment accumulation in the Basin, according to periodic surveys appears to be relatively minor, and is thus considered insignificant with respect to maintaining the Basin storage capacity (Corps 1989).

2.5 Surrounding Land Uses

The communities of Encino, Lake Balboa, Reseda, Sherman Oaks, Tarzana, and Van Nuys completely surround the Basin. The surrounding area is intensely developed with the Basin providing the only large open space in the area. The development surrounding the Basin is primarily residential with some commercial businesses and industrial development located to the east of the Dam, along Sepulveda Boulevard and a mixture of residential and commercial development along Victory Boulevard. A high school and golf course are also located along Victory Boulevard north of the Basin. Two major freeways, the Ventura Freeway (U.S. Highway 101) and the San Diego Freeway (Interstate 405) border the Basin on the southern and eastern sides. The Orange Line Bus-way runs along the northern edge of the Basin.

2.6 Surrounding Community/Market Area

The surrounding community, or market area, refers to the population that lives within a reasonable proximity to the Basin and that is expected to travel from their home in order to take part in the Basin's recreation opportunities. Populations that utilize the recreational and natural areas of the Basin are considered the market demographic. The primary market demographic is expected to include the people of the immediately adjacent communities including Encino, Lake Balboa, Reseda, Sherman Oaks, Tarzana, and Van Nuys, as well as the City and County of Los Angeles. This demographic is considered when identifying recreation and resource needs for the Basin.

Categories of statistics considered in the master planning process include the 2000 population, estimated 2008 population, age distribution, ethnic heritage, household size, density of people per square mile, median household income, the percent of individuals living below the poverty level, and other statistics (Table 2.2). Overall population, household size, and density describe the sheer numbers of people that may utilize the Basin area for recreation purposes. The statistics obtained for the median household income and number of people living below the poverty level in the market area help to determine the need for free, or low cost, recreation activities. Ethnic and educational background assist in determining the need for signage, interpretative programs, educational enhancement, recreation types, and other activities to meet a broad spectrum of socioeconomic needs.

Population density describes the distribution of people in the market area and is an important demographic to consider in meeting the needs of the community. Los Angeles County is the third most densely populated county in California with 2,344 living in each square mile. The high density of people per square mile indicates that pressure on the natural environment and demand for open space, recreational opportunities, and environmental protections is greater than other less densely populated areas in the state of California.

Table 2.2 Demographics of Greater Market Area for Sepulveda Dam Basin

Community		Los Angeles County ¹	City of Los Angeles ¹	Local Communities ²
2000 Population		9,519,338	3,694,820	328,845
2008 Population Estimation		9,832,137	3,833,995	351,311
Age Distribution	≤ 9 yrs.	16.1%	15.8%	16.0% ≤ 10 yrs.
	10-19	14.8%	13.7%	9.1% 11-18
	20-54	52.0%	53.7%	49.0% 19-49
	≥ 55	17.0%	16.7%	26.9% ≥ 50
Ethnicity ³	Asian	11.9%	10.0%	6.9%
	Black	9.8%	11.2%	4.0%
	Latino	44.6%	46.5%	28.9%
	Native American	0.8%	0.8%	n/a
	Pacific Islander	0.3%	0.2%	n/a
	White	48.7%	46.9%	55.6%
	Other	23.5%	25.7%	4.5%
Household Size		3.0	2.8	2.6
Density (People per Square Mile)		2,344	7,877	7,505
Median Household Income		\$42,189	\$36,687	\$63,769
Individuals Living Below Poverty Level		17.4%	22.1%	n/a
High School Graduates		69.9%	66.6%	n/a
Bachelor's Degree or Higher		24.9%	25.5%	n/a
Living With a Disability		20.4%	21.7%	n/a

¹Data taken from 2000 Census Data, American FactFinder. ² Data averaged from Table 2.1 above.
³Mixed-race ethnicities reported resulting in a total greater than 100%. n/a; data not reported in 2000 Census.

Table 2.3 Demographics from Communities Surrounding the Basin.

Community	Encino	Lake Balboa	Reseda	Sherman Oaks	Tarzana	Van Nuys	
2000 Census Population	41,905	24,238	62,174	61,166	35,502	103,770	
2008 Estimated Population	44,581	26,195	66,574	65,436	37,778	110,747	
Age Distribution	≤ 10 yrs	10%	16.1%	17.8%	10.4%	13.5%	21.1%
	11-18	8%	9.7%	11.0%	6.0%	9.2%	10.5%
	19-49	43%	49.8%	48.9%	55.0%	44.9%	52.6%
	≥ 50	38%	24.3%	22.2%	28.5%	32.4%	15.8%
Ethnicity	Asian	4.9%	8.8%	11.1%	5.6%	5.0%	6.2%
	Black	2.4%	3.5%	4.2%	4.4%	3.6%	6.0%
	Latino	8.5%	34.1%	43.5%	11.8%	15.1%	60.5%
	Native American	n/a	n/a	n/a	n/a	n/a	n/a
	Pacific Islander	n/a	n/a	n/a	n/a	n/a	n/a
	White	80%	49.0%	37.2%	73.8%	70.7%	23.1%
	Other	4.1%	4.6%	4.0%	4.5%	5.7%	4.2%
Household Size	2.3	2.7	3.0	2.0	2.5	3.0	
Density in People per Square Mile	4,411	7,753	10,599	6,687	4,038	11,541	
Median Household Income	\$78,529	\$65,336	\$54,771	\$69,651	\$73,195	\$41,134	

¹Data taken from L.A. Times L.A. Mapper online (2010).

2.7 Regional Context

Los Angeles County provides approximately 87,000 acres of parkland (just under 9 acres per 1,000 people); 37,000 acres of recreation area (3.6 acres per 1,000 people); a roughly equivalent amount of wilderness area; 2,900 acres of beaches; 13,000 acres of golf courses; and 645,000 acres of forest. The range of recreation options within and adjacent to the County is very diverse and responds to a broad spectrum of recreation and leisure preferences.

The National Parks and Recreation Association recommends 10 acres of open space per 1,000 residents, so the County as a whole has nearly adequate park space. Yet disparities exist at the local level in the more urbanized areas, especially when the access and proximity to open space are considered. The recreation amenities in Sepulveda Dam Basin play an important role in filling this local need.

The range of recreation options within and adjacent to the County is very diverse and responds to a broad spectrum of recreation and leisure preferences. Map 6 shows the locations of open space and park lands throughout the region.

2.8 Hydrology and Basin Operations

Sepulveda Dam provides flood risk management to the areas and communities adjacent to the Los Angeles River. The control or regulation of flood runoff into the Basin is governed by the Water Control Manual (Corp 1989). In addition to the description of the water control plan, the manual provides extensive background information on the history of the project, watershed characteristics, hydrologic data collection systems, hydrologic forecasting, agency responsibilities, and coordination for water control management. The water control manuals as well as the current hydrologic status of the Dam are available on the Corps' Reservoir Regulation website (Corps 2010a).

Sepulveda Dam consists of an 57-foot high earthen embankment with a crest length of 15,440 feet at top of Dam elevation 725 feet, National Geodetic Vertical Datum (NGVD); an outlet works with 4 vertical lift gates plus 4 un-gated conduits to regulate the release of floodwaters to the downstream Los Angeles River channel; and a concrete ogee spillway with 7 automated submersible drum gates located near the center of the Dam embankment that serves as a safety valve to pass floodwaters that exceed the storage capacity of the Basin. The lowest point in the Basin is the entrance to the outlet works at elevation 668 feet NGVD, and the fixed spillway crest elevation is 700 feet NGVD. With the spillway gates in fully raised position the water surface can rise to elevation 710 feet before spillway flow begins. When water surface elevation exceeds 712 feet NGVD, the spillway gates begin to gradually lower to pass larger flood flows.

The basic water control operation described in the water control plan uses the Basin storage space (18,129 acre-feet at elevation 710 feet NGVD as of 2004) in conjunction with the maximum scheduled release of 16,500 cfs to control flood inflow events to the authorized carrying capacity of the downstream Los Angeles River channel. The authorized carrying capacity of the downstream channel varies throughout flood events depending on rainfall and flood runoff downstream of the Dam that use up a portion of the channel conveyance capacity. Therefore releases are reduced as necessary so as not to exceed the hydraulic capacity of the downstream channel.

2.8.1 Basin Filling Frequency

The frequency and areal extent of flood inundation needs to be considered in the management of Basin lands. The operation of the Dam to control flood inflows for flood risk management results in periodic storage of flood waters within the Basin pool. A statistical analysis of water surface elevations over the

historical period of time the Dam has been operational enables the determination of filling frequency. Filling frequency refers to the relationship between the maximum water in the Basin and how frequently these elevations are reached. Corps filling frequency values for Sepulveda Dam are presented in Table 2.4 (Corps 2010b).

The Basin’s water surface elevation gage produces a continuous record of the Basin stage. The filling frequency of the Basin is used to develop a statistical relationship between water surface elevation and frequency. This statistically derived relationship was augmented by using the results of prior Corps hydrology studies that used inflow volume frequency and hydrograph routing procedures to estimate the frequency of occurrence of the less frequent (rarer) floods such as the 100-year, 200-year, and 500-year events. In Table 2.4, percent chance exceedance means, for example, that every year there is a 1-percent (1 out of 100) chance for the indicated Basin water surface (712 feet NGVD) elevation to be equaled or exceeded due to flood inflows. The elevation-frequency contours in Map 7 shows the Basin area inundated for the 10-, 50-, and 100-year return period flood events as well as area inundated when the Basin pool elevation is at top of flood control pool (712 feet). With regard to duration of Basin inundation, the project operation for flood risk management produces short periods of Basin inundation. Flood waters are released quickly (a matter of hours or days) in order to regain Basin storage space to capture future flood inflows.

Percent Chance Exceedance	Return Period	Basin Stage (feet)
0.2	500	714.6
0.5	200	713.5
1.0	100	712.0
2.0	50	705.0
5.0	20	699.5
10.0	10	697.7
20.0	5	692.5
50.0	2	687.4
80.0	1.25	685.0
90.0	1.11	684.2
95.0	1.05	683.6
99.0	1.01	683.5

2.8.2 Operational Issues

Due to the urbanized nature of the watershed, the runoff response to rainfall is rapid with typically high peak discharges of relatively short duration. With the intensive use of the Basin for recreation and for transportation corridors (e.g., Burbank Boulevard and Woodley Avenue), Sepulveda Dam inflows require that sufficient advance warning be given to affected agencies and the public to minimize potential flood impacts to ensure public safety. The trash rack in front of the outlet works occasionally becomes clogged from vegetative debris and trash accumulation that must be manually cleared. The lower portion of the trash-rack has been permanently removed to prevent trash buildup that would affect the capability of the Dam to make scheduled releases of flood waters.

The City of Los Angeles Department of Public Works, Donald C. Tillman Water Reclamation Plant (TWRP) is located within the Basin. A floodwall surrounding the TWRP protects the plant from inundation up to the one-percent chance exceedance event which is estimated as elevation 712 feet NGVD (Corps 1989). At higher water surface elevations, inundation of the treatment plant would result in contamination of surface waters from untreated or partially treated wastewater sewage. Continued increase of the water surface elevation will result in plant shut down and diversion of untreated sewage to the Los Angeles Hyperion Treatment Plant in Playa del Rey.



Donald C. Tillman Water Reclamation Plant

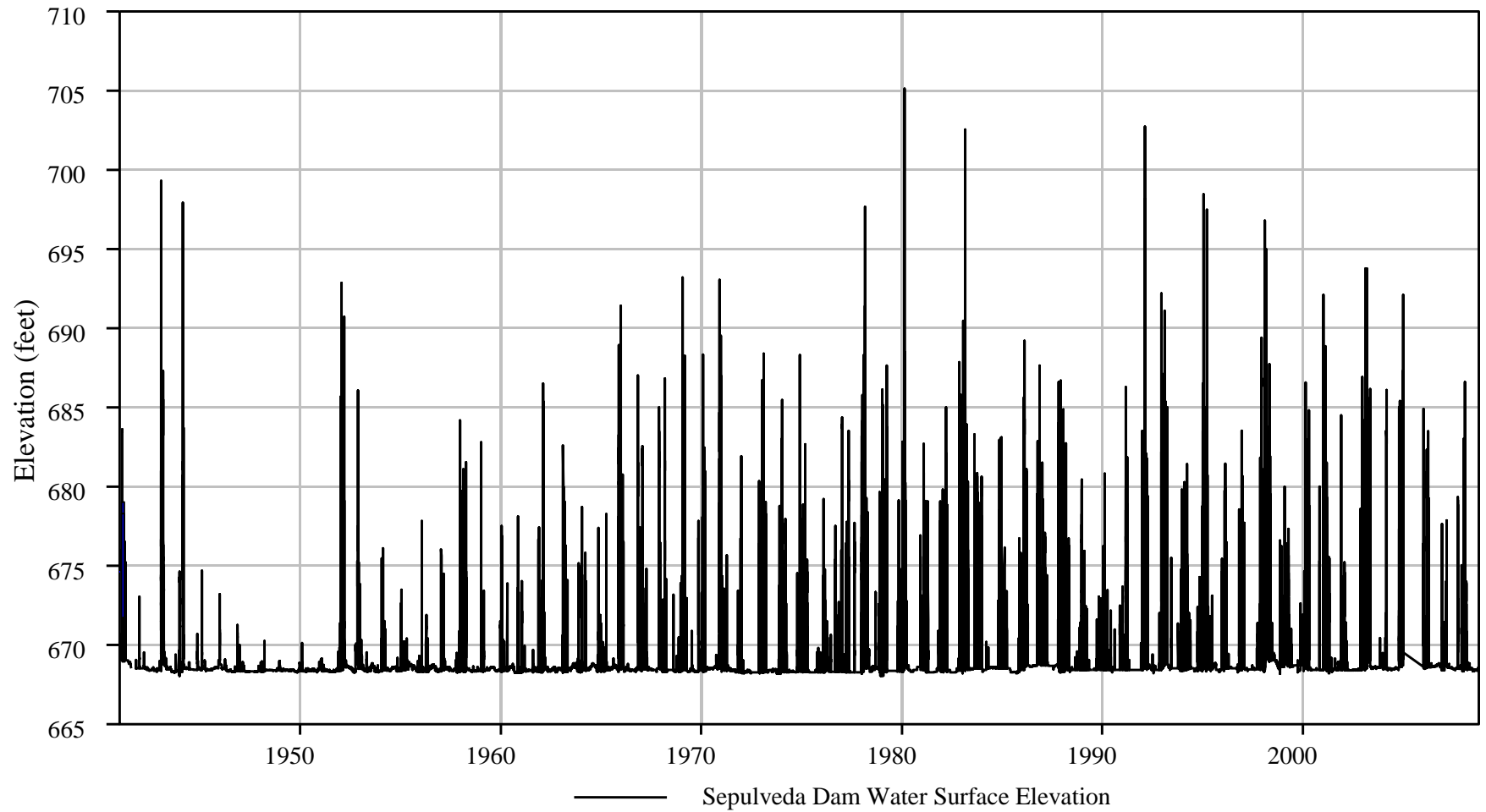


Figure 2.1 Historic Water Surface Elevation

3 PLANNING PROCESS

The planning process for the approval of a Master Plan requires: (1) establishment of the Corps' vision and mission; (2) establishment of what and how the Plan will be used; (3) input of needs and desires from stakeholders and the surrounding community; and (4) defining the guiding principles that reflect the Corps guidance and policy.

3.1 Vision and Mission

According to Corps guidance, the ongoing vision of water resources management is one of sustainability and environmental stewardship in natural resources management. The Corps' mission states that:

“The Army Corps of Engineers is the steward of the lands and waters at Corps water resources projects. Its Natural Resources Management Mission is to manage and conserve those natural resources, consistent with eco-system management principles, while providing quality public outdoor recreation experiences to serve the needs of present and future generations. In all aspects of natural and cultural resources management, the Corps promotes awareness of environmental values and adheres to sound environmental stewardship, protection, compliance, and restoration practices. The Corps manages for long-term public access to, and use of, the natural resources [of the Basin] in cooperation with other Federal, State, and local agencies as well as the private sector. The Corps integrates the management of diverse natural resource components such as fish, wildlife, forests, wetlands, grasslands, soil, air, and water with the provision of public recreation opportunities. The Corps conserves natural resources and provides public recreation opportunities that contribute to the quality of American life” (ER 1130-2-550, Chapter 2, Paragraph 2-2.a(1) (15 November 1996).

3.2 Use of Master Plan

The Master Plan is an essential tool in fostering an efficient and cost-effective use of natural resources, recreational development, and management programs. The Master Plan provides guidance for land use and development. It is a vital tool for the responsible stewardship of Basin resources for the benefit of future generations; and promotes the protection, conservation, and enhancement of natural, cultural, and human made resources.

The primary goals of the Master Plan are to identify a water and land management plan, resource objectives, and associated management concepts including:

- Providing the best possible combination of responses to regional needs, resource capabilities and suitabilities, and expressed public interests and desires consistent with authorized project purposes.
- Contributing towards a high degree of recreation diversity within the region.
- Emphasizing the qualities, characteristics, and potential development of the Basin.
- Exhibiting consistency and compatibility with national objectives and other state and regional goals and programs.

The Master Plan addresses resources including but not limited to fish and wildlife, vegetation, cultural, esthetic, interpretive, recreational, mineral, commercial water, and outgranted lands and easements. This Master Plan describes and identifies: (1) an inventory of Basin lands, resources, and uses; (2) a summary of the public participation input; (3) a summary of resource and ecosystem use objectives; and (4) the recommended land use plan based on public input, existing resources, and resource objectives.

3.3 Public Participation

Public participation is an essential element in the development of this Master Plan. Community involvement offers an opportunity for the public to voice their concerns and desires for activities permitted in the Basin and also enriches the process with local knowledge of the Basin. The objectives of the public involvement are to:

- Provide information about proposed Corps activities to the public;
- Make the public's desires, needs, and concerns known to decision-makers;
- Provide for consultation with the public before decisions are reached; and
- Consider the public's views in reaching decisions (EP 1130-2-550).

The public has expressed a strong desire for public spaces to meet the diverse and evolving needs of the surrounding communities. The process must recognize the limitations of capital improvement and maintenance budgets within the context of the regulations of the Corps and the Project purpose. While public input is solicited and encouraged under the master planning process, the Corps cannot relinquish decision making authority, nor deviate from legal or policy constraints.

3.3.1 Outreach

Community workshops were held to foster collaboration among the interested parties of the Sepulveda Dam Basin Master Planning process. Three community workshops were held at the Sepulveda Basin Community Garden Center. The first community workshop was held on Saturday, 5 December 2009, the second workshop was held on Saturday, 20 February 2010, and the third workshop was held on Saturday, 24 April 2010. Approximately 50 people attended each of the first two workshops, with most of the same people attending both. Approximately one-hundred and thirty (130) people attended the third workshop. The increase can be attributed to Basin user concern about possible closure of some amenities due to the changes to be made in the Master Plan.

At the first workshop, the Corps team asked for a formal report back to the entire group to provide a summary of their ideas, concerns and recommendations. At the second and third workshops, the team visited with each group and listened to their issues, concerns, and suggestions. Detailed information on Workshop and Public Participation may be found in Appendix C.

3.3.2 Feedback

The views of workshop attendees may not necessarily reflect the views of the broader public, but are provided here for informational purposes. A number of "comment sheets" were filled out during the meetings. Additional comments were also received via mail and email and these have also been incorporated as part of the public participation process. A graph showing the top 5 comments from all the workshops is shown in Figure 3.1.

Issues and comments raised by attendees at the first workshop included:

- Longer and broader notice must be given for all subsequent meetings.
- Maps need to be generated that show the correct boundaries with leaseholders identified.
 - Clear boundaries for use areas need to delineated, for example the wildlife area.
- All creeks/channels should be restored.
- Policies, definitions of uses, and guidelines need to be clearly spelled out:
 - Passive vs. active recreation.
 - Recreation vs. entertainment (this is very large scale events).

- Public notice should be given when major changes or events are proposed.
 - Do not close off the entire Basin when special events are taking place.
 - Provide special events policy.
 - Preclude events such as 5K and 10K runs from environmentally sensitive areas such as Bull Creek.
 - Ensure that events are properly permitted and funds collected for restoration of any damages after the event. Some attendees voiced concerns that costs of restoration are not being fully recovered from event operators.
- Signage and way finding are woefully inadequate with great difficulty in telling emergency personnel where one can be found.
- Trails should be created along the Los Angeles River.
- Provide a walking path connection from Bull Creek to Los Angeles River.
- Review utilization of golf courses on a routine basis to assess whether demands are shifting. Require the use of native vegetation only.
- Consider water conservation measures.
- Limit recreational use in Balboa Park area – some concerns that “carrying capacity” is being exceeded: Consider limiting park access when parking areas are full.
- Do not build additional sports fields there.
- Extend park hours.
- Increase park patrols.
- No new development.
- Better vector control needed.

Issues and comments raised by attendees at the second workshop included:

- Offensive odors are generated by the Tillman treatment plant.
- Human-wildlife interface education is needed:
 - People are feeding the wildlife.
 - People are bringing pets into wildlife areas, and fishing in the wildlife lake.
 - Patrols are needed to prevent off-leash dogs being trained to hunt rabbits and waterfowl.
- Clarify Corps and City guidelines and policies.
 - Agreements (leases and concessions) and operations should be transparent.
 - Uphold lease requirements.
- There are air quality impacts from increased traffic in and around the Basin.
- Large festivals are impacting the Basin.
- The Bull Creek restoration is a failure.
- Sustainable practices should be implemented throughout the Basin.
- Mitigate conflicts on multi-use paths through redesign, such as installing parallel decomposed granite path for runners and walkers and restore designated bike path.
- Extend Environmentally Sensitive classification to Bull Creek and area behind the Dam.

Issues and comments raised by attendees at the third workshop included :

- Maintain golf courses and model airplane field at their current location and configuration.
- Allow cricket games only in designated field areas, not in other areas of the park.
- Identify potential future uses for agricultural areas if it is not maintained as such.
- Clarify the terms of the lease and footprint of the Donald C. Tillman Water Reclamation Plant.
- Designate buffers around the Los Angeles River and tributaries as vegetative management.
- Uphold lease requirements and provide clear direction regarding management of large special events.

- Better coordination of activities of recreational lessees is needed.
 - Separate uses such as Bull Creek from special events such as 5K and 10K runs.
- Need for increased patrols and cleanups of the wildlife area to remove homeless encampments.
- Provide space not programmed solely for athletics, but available for multi-use by a variety of age groups (examples: chess tables, handball wall).

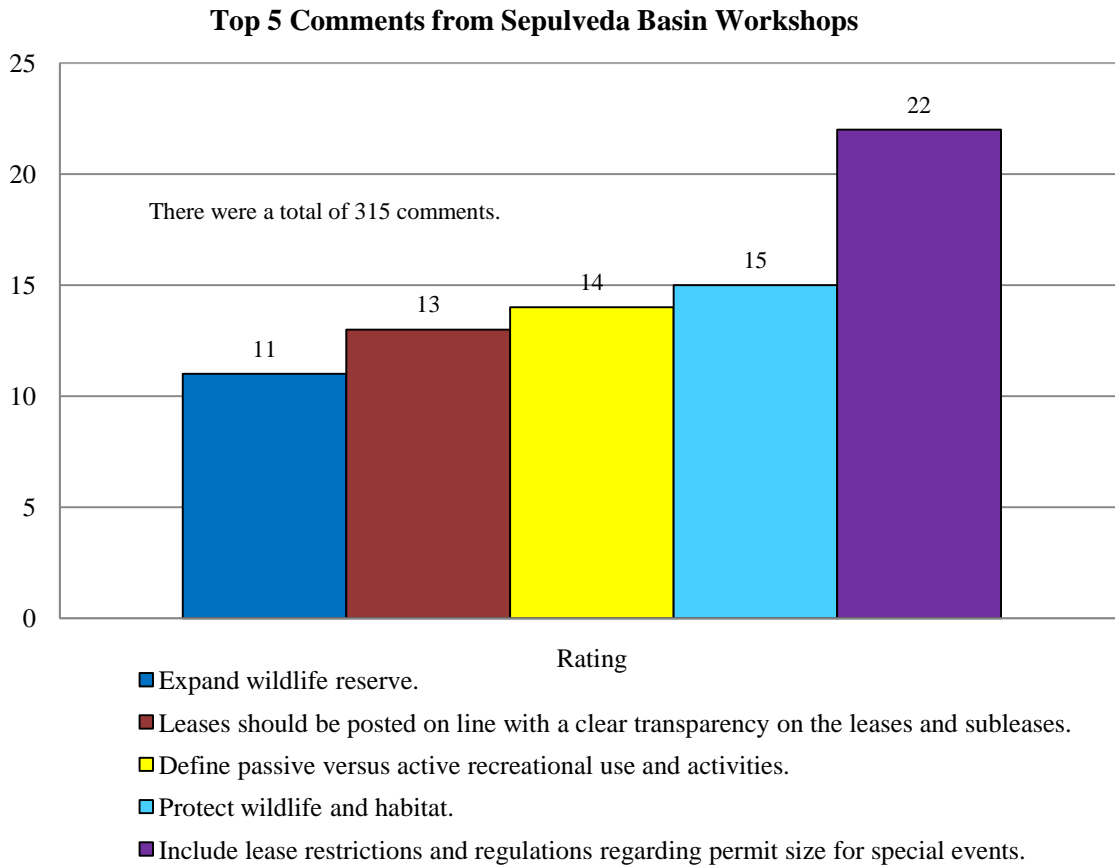


Figure 3.1 Top 5 Comments

3.3.3 Inclusion

The feedback from the community was carefully considered and along with research on recreational needs, and input from the lessees and Corps staff became part of the formation of the Land Use and Resource Plan Recommendations. As a result of this Master Planning process, specific policies on special events, filming, and other activities have been formulated by the Corps and these are included in Appendix A, Outgrant Policies, along with the current leases to the City in Appendix B. In addition, the concerns and issues raised by the public have been communicated to the lessees since many of these concerns fall into the realm of ongoing maintenance which is the responsibility of the lessees, rather than specific plan recommendations.

3.4 Guiding Principles

Following the completion of public workshops, community input was utilized in concert with existing Corps guidance to compile a list of guiding principles for the management of the Basin. Five guiding principles have been identified include:

- Ensure that all uses within the Basin are consistent with the primary project purpose of operating the Dam for downstream flood risk management;
- Ensure that a variety of recreational opportunities exist;
- Stakeholders recognize the importance of fostering environmental responsibility and preservation of cultural and historical resources.
- Provide guidance in protecting and restoring ecosystem function crucial to human, plant, and animal life in the region; and
- Management of the Basin lands and activities should integrate sustainable practices.

4 LAND ALLOCATION, EXISTING LAND USE CLASSIFICATION, AND RESOURCE INVENTORY AND ANALYSIS

The Corps land use classification system is defined in EP 1130-2-550. The Corps acquires land for a specific purpose. This purpose is its “allocation.” Allocated lands may be utilized under the opportunities and constraints of “land use classifications.” This section describes land allocations and land use classifications, and provides a complete description of all lands within the Basin and their existing classifications, uses, conditions, and needs.

4.1 Land Allocation

Land allocation refers to the identification and documentation of lands at Civil Works projects in accordance with the authorized purposes for which they were or are to be acquired. There are four land allocation categories applicable to Corps projects; (1) operations (e.g., flood risk management, water supply, hydropower, etc.), (2) recreation, (3) fish and wildlife, and (4) mitigation (Corps EP 1130-2-550). In the case of Sepulveda Dam, the total Basin area of 2,131.90 acres was originally acquired for the purpose of flood risk management, which falls under the allocation of operations. This allocation establishes that the primary and uncompromising purpose of the Basin is operations for the purpose of flood risk management. All land use classifications are secondary to this purpose and must be compatible with flood risk management.

<p>Land Allocation Operations</p> <p>Land Use Classifications Project Operations Recreation Environmentally Sensitive Multiple Resource Management*</p> <p>*Multiple Resource Management Recreation – Low Density Vegetative Management Inactive and/or Future Recreation</p>
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4.2 Land Use Classifications

Allocated project lands will be further classified to provide for development and resource management consistent with authorized project purposes, the provisions of NEPA, and other Federal laws. The classification process refines the land allocations to fully utilize project lands and must consider public desires, legislative authority, as well as regional and project specific resource requirements and suitability. The Project Operations allocation takes precedent over any other classification categories. Agricultural or grazing use of project land is not a land use classification but may be an interim or corollary use to meet management objectives. Land shall be classified into one of the following categories:

Project Operations This classification category should include those lands required for the structure, operations center, office, maintenance compound, and other areas that are used solely for Project Operations. In many cases the majority of lands (rim lands, etc.) on Corps projects will be allocated to Project Operations.

Recreation Land developed for intensive outdoor recreational activities by the visiting public, including developed recreation areas, and areas for concession, resort, and quasi-public development. At new projects, recreation areas planned for initial development will be included in this classification. Future areas will be classified as Multiple Resource Management until initiation of the development.

Mitigation This will only include land acquired or designated specifically for mitigation. Land classified in this category should be evaluated for consideration for lease or license to the Department of the Interior or the state.

Environmentally Sensitive Lands with scientific, ecological, cultural or esthetic features have been identified. The identification of these areas on the map must be supported by narrative explaining the rationale for the classification. These areas, normally within one of the other classification categories, must be considered by management to ensure the sensitive areas are not adversely impacted. Normally limited or no development of public use is contemplated on land in this classification. No agricultural or grazing uses are permitted on this land.

Multiple Resource Management Lands managed for one or more of, but not limited to, these activities to the extent that they are compatible with the primary allocation(s). The activities should be fully explained in the narrative portion of the Master Plan.

Recreation - Low Density Low density recreation activities such as hiking, primitive camping, wildlife observation, hunting, or similar low density recreational activities.

Wildlife Management Lands in this sub-category shall be evaluated for consideration for lease or license to the Department of the Interior or the state, or shall be designated for direct management by the Corps.

Vegetative Management Lands in this in this sub-category shall be managed for the protection and development of forest and vegetative cover.

Inactive and/or Future Recreation Areas Recreation areas planned for the future or that have been temporarily closed. These lands will be classified as Multiple Resource Management in the interim.

Easement lands All lands for which the Corps holds an easement interest but not fee title. Planned use and management of easement lands will be in strict accordance with the terms and conditions of the easement estate acquired for the Project.

4.2.1 Land Use Classification Restrictions

Certain uses of and activities at the Basin are not compatible in all classifications, or are limited within classifications. Uses and activities designated as incompatible within a classification are not permitted. Additional guidelines and restrictions applicable to all land use classifications can be found in Appendix C, Outgrant Policies and Leases.

4.2.1.1 Project Operations

- Recreation is generally incompatible with the Project Operations classification. No recreation activities are permitted within Operations areas except on specifically designated trails or by permission of the District Commander.
- Potentially compatible activities that require review and approval by the District Commander include: filming, training activities for public organizations (e.g., police and fire departments), biological surveys, and volunteer activities. Filming, training and biological surveys must comply with the procedures and requirements outlined in the applicable appendices to this Master Plan. Volunteer activities require case-by-case analyses.

- Use by government personnel during emergencies (fire department staging, etc.) is potentially compatible but shall require case-by-case analysis under the applicable procedures and requirements, including Federal environmental laws.

4.2.1.2 Recreation

- Structures/development are allowed to support high density recreational uses and users (e.g., restrooms, drinking/water fountains, garbage & recycling cans, informational signage/kiosks, benches, picnic tables, group picnic areas, etc.). Sports fields and amenities requiring improvements to the land, grading, excavation, or installation of structures requires specific analysis.
- Dogs are allowed only on-leash, 6' in length or less, except where dog parks for off-leash use are specifically designated.
- Bicycles are allowed on designated trails, paths, and roads. Trails may be closed in the event of excessive erosion.
- Horses are allowed on trails, paths, and roads, but no grazing is allowed.
- Organized volunteer activities that are non-invasive or minimally invasive, such as trash pickup, held outside of breeding season (15 March – 15 September) or over 100 feet from habitat areas are considered compatible.
- Limited special events may be compatible. Special events are preferred at the areas designated in the Special Events Policy. Special events may be permitted outside these designated areas in certain circumstances subject to event-specific review. See Appendix A, Outgrant Policies and Leases, Special Events Policy for additional guidance.
- Filming and training activities may be compatible and should be coordinated with the lessee.

4.2.1.3 Environmentally Sensitive

- Structures/development are considered compatible only to support trail users (e.g., restrooms, drinking/water fountains, garbage & recycling cans, informational signage/kiosks, and benches). Picnic tables shall be limited and generally located in close proximity to trailheads or other developed areas.
- Dogs are compatible only on leashes six feet or less in length, on designated trails. No dogs are allowed off designated trails, whether on- or off-leash.
- Bicycles are allowed only on designated trails. Use of bicycles on dirt trails can contribute to erosion. Trails may be closed to bicycles in the event of safety or environmental concerns.
- Horses are compatible on existing trails, but no grazing is allowed.
- Organized volunteer activities that are non-invasive or minimally invasive, such as trash pickup, held outside of breeding season (15 March – 15 September), may be considered compatible but may require specific environmental analysis.
- Special events are not compatible with this classification. No special events may be held within or traverse Environmentally Sensitive areas. This restriction includes, but is not limited to, organized walk/run events and bicycle races.
- Boating and swimming are not compatible with this classification.
- Restoration proposals may be compatible. However, all requests will require request-specific analysis.
- Biological surveys may be compatible subject to certain restrictions and should be coordinated with the lessee, or the Corps, if the area has not been leased to others.
- Still photography is compatible with this classification. Professional still photography may be compatible subject to certain restrictions and should be coordinated with the lessee or the Corps, if the area has not been leased to others.

4.2.1.4 Multiple Resource Management (MRM)

MRM - Recreation - Low Density

- Structures/development are allowed only to support low density uses and users (e.g., restrooms, drinking/water fountains, garbage & recycling cans, informational signage/kiosks, benches, picnic tables, group picnic areas, etc.). No designated, organized sports fields are compatible with this classification.
- Dogs are compatible only on leashes six feet or less in length, except where dog parks for off-leash use are specifically designated.
- Bicycles allowed on designated trails, paths, and roads. Trails may be closed in the event of excessive erosion.
- Horses are allowed on trails, paths, and roads, but no grazing is allowed.
- Organized volunteer activities that are non-invasive or minimally invasive, such as trash pickup, held outside of breeding season or over 100 feet from habitat areas, are considered compatible.
- Limited special events may be compatible. Special events are preferred in the land use classification Recreation; however, special events may be permitted in this land use classification area in certain circumstances subject to event-specific review. See the Appendix A, Outgrant Policies and Leases for additional guidance.
- Still photography is compatible with this classification. Professional still photography may be compatible subject to certain restrictions and should be coordinated with the lessee or the Corps, if the area has not been leased to others.
- Restoration proposals may be compatible with the MRM classification. However, all requests will require specific analysis.

MRM - Vegetative Management

- Structures/development are generally considered compatible only to support trail users (e.g., restrooms, drinking/water fountains, garbage & recycling cans, informational signage/kiosks, and benches). Picnic tables shall be limited and generally located in close proximity to trailheads or other developed areas.
- Dogs are compatible only on leashes six feet or less in length, on designated trails. No dogs are allowed off designated trails, whether on- or off-leash.
- Bicycles are allowed only on designated trails. Use of bicycles on dirt trails can contribute to erosion. Trails may be closed to bicycles in the event of safety or environmental concerns.
- Horses are compatible on existing trails, but no grazing is allowed.
- Organized volunteer activities that are non-invasive or minimally invasive, such as trash pickup, held outside of breeding season (15 March to 15 September), may be considered compatible but may require specific environmental analysis.
- Special events are not compatible with this classification. No special events may be held within or traverse MRM-Vegetation Management or -Wildlife Management areas. This restriction includes, but is not limited to, organized walk/run events and bicycle races.
- Still photography is compatible with this classification. Professional still photography may be compatible subject to certain restrictions and should be coordinated with the lessee, or the Corps, if the area has not been leased to others.
- Restoration proposals may be compatible with the MRM –Vegetative Management and MRM-Wildlife Management classifications. However, all requests will require specific analysis. These areas are generally favored for restoration projects such as Corps Civil Works ecosystem restoration projects.

- Biological surveys may be compatible subject to certain restrictions and should be coordinated with the lessee, or the Corps, if the area has not been leased to others.

MRM – Inactive or Future Recreation

- Areas may include recreation leased area and leases for non-recreational purposes.
- Dogs are compatible only on recreation-leased area, on leashes six feet or less.
- Limited special events may be compatible. Special events are preferred at the areas designated in the Special Events Policy. Special events may be permitted outside these designated areas in certain circumstances subject to event-specific review. See Appendix C, Outgrant Policies and Leases, Special Events Policy for additional guidance.
- Filming, training, and volunteer activities may be compatible and should be coordinated with the lessee or the Corps if the area is not leased.

4.3 Existing Land Use Classifications

The existing land use classifications for the Sepulveda Dam Basin as shown on Plate 11 of the 1981 Master Plan are 1) Operations-service; non-recreational; freeways, 2) Operations-natural area, 3) Recreation-high intensity use, 4) Recreation-low intensity use, and 5) Wildlife management area. *Supplement 1 to the 1981 Sepulveda Basin Plan Including Environmental Assessment dated July 1995* made land use classification changes on three parcels of land. Plate 3 from the 1995 Supplement 1 to the 1981 Sepulveda Basin Master Plan (Appendix E, Map 9) shows the location of the reclassified areas.

4.3.1 Project Operations

This area within the Basin is limited to Project Operations. This includes the Dam itself, the spillway, saddle dike, and any other structures or lands necessary for the operation of the flood risk management project. Also included is a parcel of land adjacent to the outlet works and located south of Encino Creek, southwest of the Los Angeles River, and north of the Dam which is occasionally planted to crops that can be utilized as a feeding area for wildlife. This use does not interfere with the operation of the Basin.

Within the Basin, areas that had leases for permanent structures were also given the classification of Project Operations. These included a lease to the National Guard for an armory, a permit to the Navy for a reserve training center, a permit to the Air National Guard, a lease to the Los Angeles City Department of Public Works for a water reclamation plant, and a lease to the City of Los Angeles Fire Department for a fire station. Also located on project operation land is the Sherman Oaks Castle Park (miniature golf-park). In addition to these leases, easements have been granted to Caltrans to place portions of the Interstate 405 and U.S. Route 101 on Project Operations land.

4.3.2 Recreation

The Recreation-high intensity use identified in the 1981 Master Plan falls under the Recreation classification under current Corps policy. The 1981 Master Plan identified approximately 220 acres for the Recreation classification. The area is mostly located on the west side of Balboa Boulevard with a small portion located to the east of Balboa Boulevard and north of the Los Angeles River. Within this area is the Balboa Sports Complex with its baseball diamonds, basketball courts, children's play areas, football and soccer fields, and tennis courts. Also in this area are the Encino Franklin Fields with baseball fields, concession stands, and bleachers, and the velodrome.

4.3.3 Multiple Resource Management - Recreation - Low Density

Approximately 1,300 acres was placed into the Multiple Resource Management - Recreation - Low Density classification in the 1981 Master Plan. The majority of this area is located to the east of Balboa Boulevard with a small area located at the far western portion of the Basin located southeast of the intersection of Victory Boulevard and White Oak Avenue and a small portion located south of U.S. Route 101.

A majority of the land in this classification is located east of Balboa Boulevard. Five-hundred (500) acres is occupied by the Balboa Municipal, Encino Municipal, and Woodley Lakes Municipal Golf Courses and their associated amenities. Woodley Park, the Woodley Park Archery Range, and the Sepulveda Basin Cricket Fields are also located in this area. The 1981 Master Plan identified one project then under construction and since completed, the Hjelte Sports Center, which includes fields for soccer, softball, and little league baseball.

In the western portion of the Basin, amenities that are located in the MRM - Recreation - Low Density are the Pedlow Field Skate Park and the ONEgeneration S. Mark Taper Intergenerational Center (formerly known as the Valley Youth Center). In the area located south of the U.S. Route 101, amenities located in the area classified as MRM- Recreation - Low Density include the Encino Baseball Complex and the Sepulveda Garden Center.

4.3.4 Multiple Resource Management - Wildlife Management

The 1981 Master Plan designated approximately 110 acres to this classification. This area is located at the far eastern portion of the Basin adjacent to the Basin side of the Dam embankment and north of the Los Angeles River. The Sepulveda Basin Wildlife Area is in this part of the basin.

4.4 Existing Recreation Amenities

4.4.1 Existing Facility Inventory

4.4.1.1 Golf Courses

Sepulveda Golf Courses The Sepulveda Golf Courses consist of two 18-hole public golf courses, Encino Municipal and Balboa Municipal on approximately 313 acres of land bounded on the north/northeast by the Los Angeles River, on the south by Burbank Boulevard, and on the west by Balboa Boulevard. The golf course complex includes a pro shop, a lighted driving range, practice putting greens, practice chipping greens, cart rentals, club rentals, restrooms, and a restaurant with banquet rooms and a lounge. The courses are irrigated with water from the Donald C. Tillman Water Reclamation Plant. The golf courses and associated amenities were developed by the City.

Woodley Lakes Municipal Golf Course Woodley Lakes Municipal Golf Course, built in 1976, is a public course with 18 holes with a total length of 6,803 yards. The course is located south of Victory Boulevard and west of Woodley Boulevard, and occupies approximately 184 acres of land. The course includes a pro shop, a lighted driving range, practice putting greens, practice chipping greens, cart rental, club rental, and a restaurant with a banquet facilities and lounge, and restroom amenities and a concession stand. The course is irrigated using water from the Donald C. Tillman Water Reclamation Plant. The golf course and associated amenities were developed by the City.



Golf Course Clubhouses

4.4.1.2 Anthony C. Beilenson Park

This park occupies approximately 80 acres of land and is bounded by the Los Angeles River to the south, Balboa Blvd to the west, Victory Boulevard on the north, and the Woodley Lakes Municipal Golf Course on the east. The centerpiece of the park is Lake Balboa, a 27 acre recreation lake filled with water from the Donald C. Tillman Water Reclamation Plant. Surrounding the lake are picnic areas which include barbecue pits and picnic tables, drinking fountains, rest rooms, shelters, a 1.3 mile jogging/walking path with covered benches provided along the path. Amenities include a first aid/lifeguard station, a fly casting area, fishing, boat, and remote-control boating. No swimming is allowed in the lake and power boats are not permitted. The park was developed jointly by the City and the Corps.



Anthony C. Beilenson Park and Lake Balboa

Universally Accessible Playground The Universally Accessible Playground (UAP) is located south of Lake Balboa in Anthony C. Beilenson Park. The UAP was completed in June 2008 and has two separate play areas, one section for two to five-year-olds, and one for five to twelve-year-olds. The areas feature swings, ladders, a variety of balancing elements, climbers and slides. The ground in the play area is covered with rubber matting to provide fall protection. The UAP was developed by the City.



Bull Creek Restoration Area The Bull Creek Restoration Area is located east of Balboa Boulevard and to the west of the Lake Balboa in Anthony C. Beilenson Park. The area is located on approximately 28 acres. The area includes 3,000 feet of restored Bull Creek. An oxbow channel has been excavated to the west of the Creek. Reclaimed water from Lake Balboa is released into the channel to supplement the existing flow. Aquatic, riparian, and native upland habitat has been established on the site. Pedestrian bridges and walkways provide access. Interpretative nodes offer educational opportunities to visitors. The Bull Creek Restoration Area was completed in 2009. The area was restored jointly by the City and the Corps.



4.4.1.3 Balboa Sports Complex

Balboa Sports Complex The complex is an 85-acre facility located northwest of the intersection of Balboa and Burbank Boulevards. It includes four lighted baseball diamonds with bleachers for spectator seating, a tennis center with 16 lighted courts, a tennis pro shop, outdoor basketball courts which are lighted, children's play areas at two locations with metal and plastic play equipment and sand and rubber ground cover, an unlighted soccer field, a lighted football field, and lighted volleyball courts. Three structures with restrooms are located on the Sports Center grounds. The Sports Complex also includes the Balboa Park Community Center which has an indoor gymnasium. The Balboa Sports Complex was developed by the City.



Top to Bottom: Universally Accessible Playground, Bull Creek, Gymnasium, and Woodley Park

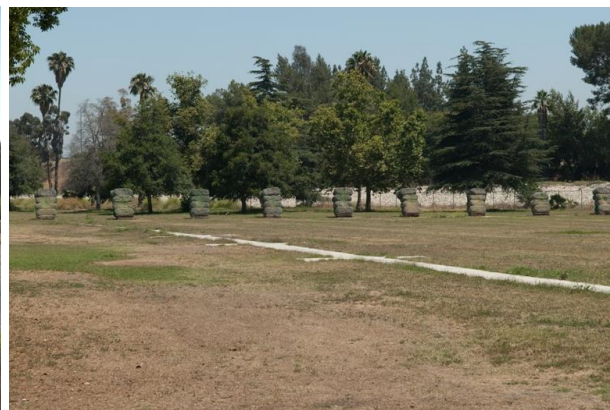
4.4.1.4 Woodley Park and Adjacent Amenities

Woodley Park Woodley Park is 80-acres that borders the western and southern sides of the Donald C. Tillman Water Reclamation Plant. The park includes barbeque pits, an unlighted baseball diamond, children’s play area, picnic tables, and restrooms. The park is divided into two sections with similar amenities in each. Section 1 has 154 parking places. The section has 26 picnic tables, six barbeques and is shaded by trees. Section 2 has 80 parking places. This section has 32 picnic tables. Restroom amenities are located nearby. The park was developed jointly by the City and the Corps.

The Japanese Garden The garden is located on the grounds of the Donald C. Tillman Water Reclamation Plant. The garden covers an area of 6.5 acres. Reclaimed water from the Donald C. Tillman Water Reclamation Plant is used to supply the water features in the garden. An admission fee is charged to enter the garden. The garden was developed by the City of Los Angeles Department of Public Works, Bureau of Sanitation.



Japanese Gardens



Archery Range

Woodley Park Archery Range The archery range is located in the far northeastern portion of the Basin on approximately 8 acres adjacent to Woodley Park. Amenities include a partially enclosed 18 meter short range and a 90 meter long range which has 12 lanes and is equipped with compressed bales. The long range is ADA-accessible. Restrooms are located in the area. The range was developed by the City.

Sepulveda Basin Cricket Fields The cricket fields are located in the northeastern portion of the Basin. The facility has two cricket fields. They are located on land leased to the City of Los Angeles Department of Public Works, Bureau of Sanitation. The Cricket Fields include bleachers, a picnic area with picnic tables, restrooms, and a parking lot.



Cricket Fields



Model Airplane Field



Wildlife Area

Model Airplane Field The Model Airplane Field is located at the confluence of Woodley Creek and the Los Angeles River. The field occupies approximately 15 acres and includes an open graded field for radio controlled and tethered model airplanes. The field has a parking lot and restroom amenities. The field was developed by the City. The restrooms were developed jointly by the Corps and the City.

Sepulveda Basin Wildlife Area The wildlife area covers an area of 130 acres and is located in the northeastern portion of the Basin, bounded by Burbank Boulevard on the south, Woodley Avenue on the west, Woodley Park on the north, and the Sepulveda Dam Embankment to the east. The wildlife area features a 12- acre wildlife lake with a .75- acre bird-refuge island. Water is supplied to the wildlife lake from the Donald C. Tillman Water Reclamation Plant. Native annuals, shrubs, and trees have been planted throughout the area. The area also has an educational staging area and amphitheatre, various pathways with signage and viewing areas, Haskell Creek which has been reconfigured and revegetated, and pedestrian bridges over Haskell Creek. Work on the wildlife area began in 1979 with the establishment of a 48 acre riparian area. Over the years, the refuge has been improved and expanded, with the last major expansion in 1998.

4.4.1.5 Hjelte Sports Center and Adjacent Amenities

Hjelte Sports Center The sports center is an approximately 12-acre facility located in the southern portion of the Basin between Burbank Boulevard and Encino Creek to the north and the Dam embankment to the south. The complex has four lighted baseball fields, bleachers at each field, restroom amenities, a concession stand, and a storage facility. It was developed jointly by the City and the Corps.

Sepulveda Garden Center The garden center is approximately 12-acres located south of U.S Route 101, west of Hayvenhurst Avenue, and north of Magnolia Boulevard. The garden center provides 800 garden plots for local citizens to grow fruits, vegetables, flowers, and herbs. Each plot is 10 feet wide by 20 feet wide. A fee is charged for use of the garden plots. Additional amenities include public telephones, first aid supplies, and restrooms. A greenhouse is available for gardeners for germinating of seeds for transplanting. The Sepulveda Garden Center is located at 16333 Magnolia Boulevard and was developed by the City.



Hjelte Sports Center



Garden Center

Libbit Park Libbit Park is located south of U.S. Route 101, on a narrow strip of land east of the Sepulveda Dam Saddle Dike and west of Libbit Avenue. The park occupies approximately 3.6 acres. The park is landscaped but does not include any formal amenities. The park was developed by the City.



Encino Ball Field

Encino Baseball Complex The baseball complex is located south of US Route 101 and east of Hayvenhurst Avenue. The 12-acre complex consists of five lighted baseball fields, rest room amenities, snack stand, batting cages, and lighted scoreboards. The complex was developed by the Little League on property leased to the City.

Sherman Oaks Castle Park The miniature golf course occupies approximately 5.3 acres and is located in an area bounded by U.S. Route 101 on the north, Interstate 405 on the west, the Los Angeles River on the north, and Sepulveda

Boulevard on the east. The facility has three landscaped miniature golf courses, each with 18 holes. The facility also has an arcade with video games, batting cages, a concession stand, and areas for parties. The facility was developed by and is operated by the City. A concessionaire with a sublease from the City operates the batting cages, video arcade, and food concession.

4.4.1.6 Athletic Amenities at Northwest Side of the Basin

Franklin Fields The Franklin Fields are on approximately 28 acres leased to Encino Franklin Fields, Inc. The fields are located in the northwestern portion of the Basin and are south of the Los Angeles River and east of the Orange Line Bus Way. The fields include 15 lighted little league baseball fields, electronic scoreboards, concession stands, and bleachers. The fields were developed by Encino Franklin Fields, Inc., a non-profit organization.

White Oak Avenue Fields The White Oak Avenue Fields is approximately 13 acres located in the northwest portion of the Basin. The facility is located south of the Los Angeles River and east of White Oak Avenue. The facility includes four baseball fields, a snack bar, equipment storage, an unpaved parking lot, and restrooms. The 1981 Master Plan stated that this facility was to be phased out in 1980 and

the area made available for other recreation. However, this action was never taken and the facility is operated by the Valley Christian Athletic Association with a sublease from the City.

Velodrome The Velodrome is located in the northwestern portion of the Basin and is adjacent to the Franklin Fields. The facility includes a lighted, banked, 250-meter oval bicycle racing track and a concession stand. The facility was developed by private interests in 1961.

ONEgeneration S. Mark Taper Intergenerational Center The Center is located in a building in the northwest portion of the Basin adjacent to Victory Boulevard. The Center and surrounding grounds occupy approximately 7-acres. The ONEgeneration S. Mark Taper Intergenerational Center, formerly known as the Valley Youth Center, provides various services to seniors and infants and children age 6 months to 6 years. Services provided include an intergenerational (adult daycare and children daycare in a shared setting) services and programs that intertwine human needs for both giving and receiving meaningful daily contact. In the summer months, the Center serves as a cooling site for the elderly to come to escape the Valley's often excessive heat. The parking lot of the Center is home to a farmers market held every Sunday. The Center is operated by the non-profit organization ONEgeneration with a sublease from the City.

Sepulveda Basin Off-Leash Dog Park The dog park is a 13.7-acre facility located in the extreme northwestern portion of the Basin, southwest of the intersection of Victory Boulevard and White Oak Avenue. The dog park includes a 0.5-acre off-leash area for small-dogs and a 5-acre off-leash area for large dogs. Both areas are enclosed with a 4-foot high cyclone fence. The facility has a picnic area, a parking lot for 100 cars, and public telephones are available. Sepulveda Basin Off-Leash Dog Park was developed by the City.



Off-Leash Dog Park



Pedlow Field Skate Park

Pedlow Field Skate Park The skate park completed in 2001 is located on approximately 3.4 acres in the northwestern portion of the Basin adjacent to Victory Boulevard. The 8,500 square foot concrete skate bowl includes rails, steps, and walls. All skaters are required to wear helmets and knee and elbow pads. The skate park was developed by the City.

Bike Trails Approximately ten miles of bike trails are located in the Basin. The bike trails run along the perimeter of the Basin, and through the Basin parallel to Balboa Boulevard and Woodley Avenue. The bike trail system shares a parking lot and staging area with the Woodley Lakes Golf Course. The parking lot is paved and has parking for 300 cars. The parking lot was developed jointly by the City and the Corps.

4.4.2 Qualitative Facility Assessment

A qualitative assessment of the condition of existing recreation amenities was completed, in order to identify potential short-term capital repair needs and potential life-safety issues. The facility assessment does not involve detailed evaluation of structures, nor non-recreation amenities not open and available to the public. Potential needs are summarized in Table 4.1.

Table 4.1 Amenities Description and Qualitative Condition Assessment		
Area	Description and Applicable Qualitative Observations	Condition
Lake Balboa/Anthony C. Beilenson Park		
First Aid/Lifeguard Station	Two wooden piers, one is T-shaped and one is a single length. There is a small wood shed that houses the lifeguard. A concrete boat ramp deposits boats next to single length pier. The piers are unsteady. Fishing line has been strung across the piers to discourage bird use and resulting fecal buildup.	Fair
Fly Casting Area	Fly fishing area along Balboa Lake. Grass is brown or absent. Large population of ducks nests in the area. A concrete lining is around the shore at this location. Short term repairs (reseeding/resurfacing) may be warranted.	Poor
Lake Balboa Trail	Benches and covered benches are located along the paved trail that surrounds the lake. Picnic areas have concrete tables, BBQs, hot coal bins, and drinking fountains.	Good
Restrooms	There are a total of 2 restroom amenities within the area. Standard construction of stone walls, with wood and metal roof. Some have individual unisex stalls, some are divided into men's and women's. Washbasins are sometimes outside. Storage or maintenance rooms are also sometimes associated with restrooms. In some instances, graffiti and property destruction have occurred.	Good to Fair
Shelters	Open walled wood and rock structures with picnic tables. There are a total of 3 shelters in the area with a variety of types and numbers of picnic tables and barbeques.	Good
Universal Access Playground and Tot Lot	Sand and rubber ground, metal and plastic jungle gym with overhead sunscreens.	Good
Wheel Fun Rentals	There is a small rental hut, rental storage building, and stone grout building that appears to be a maintenance shed.	Good
Bull Creek	Tributary to Los Angeles River. Site of recent creek restoration; vegetation still becoming established. Bank failures from storm under investigation.	Fair
Valley Region Headquarters		
Administrative Building	Includes administration buildings for golf operations, recreation, storage and maintenance.	Good
Open Inactive Field	Open dirt field between U.S. Army and Valley Region Headquarters. May serve as overflow parking north. Area is devoid of vegetation and may contribute to poor air quality conditions through fugitive dust.	Poor

Table 4.1 Amenities Description and Qualitative Condition Assessment		
Area	Description and Applicable Qualitative Observations	Condition
Woodley Lakes Municipal Golf Course		
Driving Range	Short term repairs (reseeding) may be warranted.	Good
Pro Shop and Clubhouse	Overall in good condition.	Good
Restrooms	This is a restroom and concession stand within the Woodley Lakes Golf Course between holes 7 and 13.	Good
Model Airplane Field		
Infrastructure	There is a small workshop shelter, paved airplane runways, bleachers, and picnic tables. Plane noise can be heard at Balboa Lake.	Good
Restrooms	Cinder block and wood restrooms present with separate men's and women's.	Good
Sepulveda Basin Cricket Fields		
Cricket Fields	A total of 4 fields are present including Severn, Wright, and Leo Magnus fields. Grass fields, limited picnic tables and benches.	Good
Restrooms	Two sets of restrooms, one on south side and one on north side. Each restroom has 2 women's stalls/ 1 men's stall/1 urinal. The north side restrooms also have lockers. Short term repairs (painting, stall door replacement) may be warranted. This area is remote from the main part of the park and may suffer more vandalism as a result.	Fair
Sepulveda Basin Wildlife Area		
Restrooms	Restrooms with 6 individual unisex stalls. A maintenance shed is also present.	Good
Archery Range		
Archery Range	Close range archery is housed in a wooden "stall" and long range hay bale targets across an expanse of grass are both present. Grass bare or brown in spots. Short term repairs (replacement of close range stalls, benches, fencing) may be warranted.	Poor
Restrooms	Archery Range restrooms. Men's and women's are separate. Short term repairs (replacement sinks, faucets, hand dryers) may be warranted.	Poor
Japanese Garden at Donald C. Tillman Water Reclamation Plant		
Park Infrastructure	Administration building with gift shop and 2 sets of restrooms.	Good

Table 4.1 Amenities Description and Qualitative Condition Assessment		
Area	Description and Applicable Qualitative Observations	Condition
Woodley Park Section I		
Picnic Area	Picnic and grass area with shade trees. BBQs, hot coal bins, and trash cans. The area also has a course with exercise stations - including bars, rings, sit ups, beams, etc. Short term repairs (painting, amenity replacement) may be needed within the next few years.	Fair
Restrooms	2 sets of separate men's and women's restrooms. Restrooms in remote areas suffer from vandalism.	Good to Fair
Sepulveda Garden Center		
Garden Infrastructure	Gardens and community center, public restrooms. Excellent condition. There are approximately 800 garden plots measuring 10'x 20' in size.	Good
Hjelte Sports Center		
Sports Fields	4 fields, metal bleachers, and community center. The community center has 7 individual restrooms, concessions area, and garage door. Short term repairs (reseeding, replacement of bleachers and fencing) may be warranted.	Fair
Encino and Balboa Municipal Golf Courses		
Pro-Shop and Clubhouse	Good condition overall.	Good
Maintenance Facility	This is a concrete brick structure with fencing and holds maintenance and operations vehicles. There are also men's and women's restrooms.	Fair
Balboa Sports Complex		
Tennis Center Pro-Shop and Club	Includes pro shop. Part of "Balboa Sports Center" Courts are in good condition.	Good
Baseball fields	4 baseball diamonds, cyclone fencing and wooden bleachers. Short term repairs (reseeding) may be warranted. This area is well used and possibly over used.	Fair
Community Center	Has gymnasium and restrooms	Good
Tot Lot	2 separate structures of metal and plastic with sand and rubber ground, sunscreens.	Good

Table 4.1 Amenities Description and Qualitative Condition Assessment		
Area	Description and Applicable Qualitative Observations	Condition
Encino Franklin Fields		
Baseball Complex	Baseball complex with 15 diamonds, concessions, restrooms, bleachers, bull pens, lighted score boards. Many portable toilets were noted. May indicate a need for more permanent restrooms	Good
Encino Velodrome	Lighted track, bleachers, concession. Short term repairs (reseeding, replacement of bleachers and fencing) may be warranted.	Poor
West Coast Baseball School	Baseball Fields. No access.	Good
Baseball Fields	Fenced off. No access.	Good
ONEgeneration S. Mark Taper Intergenerational Center		
Building and Amenities	No access.	Good
Sepulveda Basin Off-Leash Dog Park		
Park	4' cyclone fencing around grassy area with minimal shade trees. Only portable toilets in area.	Good
Pedlow Field Skate Park		
Park	Concrete skate park, picnic tables, bleachers. No shade present.	Good

The most commonly-identified repair needs include re-vegetation/reseeding of heavily used areas, replacement of restroom fixtures, and replacement of fencing and bleachers. While graffiti and vandalism were observed in some areas, the City maintains a policy of graffiti removing within 72 hours of notification. Offensive graffiti is removed as soon as it is observed.

4.5 Existing Environmental Conditions

An EA has been prepared in conjunction with this Master Plan to comply with the National Environmental Policy Act (NEPA), other Federal laws, Executive Orders, and Corps guidance. It provides a description of the existing environmental conditions within Sepulveda Dam Basin and additional pertinent information regarding the surrounding communities. Specifically, the EA describes the physical land resources, air quality, noise conditions, biological resources including Federally-protected species, cultural resources, hazardous materials and wastes, socioeconomics, environmental justice, traffic and transportation, utilities, esthetics of the area, recreation resources, public health and safety, and sustainability as well as impact analysis of the Recommended Plan, consultation and coordination with interested parties.

4.6 Recreation Needs Analysis and Assessment of Future Demand for Recreation Amenities

4.6.1 Projected Future Population Growth and Demographic Shifts

The population of Los Angeles County as enumerated in the 2000 Census was approximately 9.6 million people, with approximately 20% living within the San Fernando Valley, within a 30-mile service radius of Sepulveda Dam Basin (source: U.S. Census, 2000). A 2007 forecast prepared by the California State Department of Finance suggested that by 2010 the County's population would approach 10.5 million people, and by 2020, approximately 11.2 million people (State of California, Department of Finance, *Population Projections for California and Its Counties 2000-2050, by Age, Gender and Race/Ethnicity*, Sacramento, California, July 2007). The current economic climate may temper this growth rate, which represents 17% from 2000-2020, and 7 percent between 2010-2020, but over the long term it is anticipated that the County's population will increase; placing demands on existing recreation amenities.

Equally important to consider are projected shifts in demographics and their implications for recreation amenities. The California State Department of Finance data suggest that the age cohorts with the largest projected growth rates from 2010 to 2020 are those aged 70-74 which is a 51% increase, ages 65-69 which is a 50% increase, and 60-64 which is a 32% increase. By contrast, the share of the population that is aged 10-19 is anticipated to decline by over 15% during the period.

These figures reflect the aging of the "Baby Boom" generation, whose members have sought to maintain an active lifestyle, including pursuing a range of low-impact recreational activities such as fitness walking and biking, as well as higher intensity sports like tennis and skiing. This demographic shift may suggest a need to provide and maintain venues for these activities, while also providing for athletic fields that can support team and league activities oriented toward younger participants.

Los Angeles County is also ethnically diverse. Hispanic residents are projected to comprise the largest share of the population in 2020, at approximately 52%. This mirrors the statewide trend: by 2020 California's population of European descent will have grown only 4%, while the Hispanic population will have grown 58%, and the Asian/Pacific Islander population will have grown 55%. The African American population will have grown 20%, and American Indian population will have grown 29%. Because recreation preferences are related to ethnicity, providing flexible amenities that can accommodate desired pursuits, from large family picnics to cultural festivals, is also important.

4.6.2 Visitation Trends at Sepulveda Dam Basin and Related Amenities

Figure 4.1 below illustrates trends in visitation at Sepulveda Dam Basin from Fiscal Year 2004 through 2009. These data and represent best estimates made by recreation managers at the Basin, and supplemented by actual counts of enrollments in recreational teams and leagues, attendance at permitted special events, and golf course rounds. In addition to estimated number of visits, managers also estimated visitor hours as a multiplier; because these two graphs are identical in terms of the trends portrayed, only the estimated number of visits has been shown.

The data suggest a 19% increase in number of visits and visitor hours during this timeframe, with most of the increase occurring between 2008 and 2009. In the five years prior, visitation was generally stable at between 2.3 and 2.5 million visits per year. Recreation managers attribute the 2009 increase to two factors:

- The economic downturn, which results in more people staying at home rather than traveling for vacation, and enjoying lower-cost or free recreation amenities. This may be especially true of

- city-operated golf courses, which are substantially less expensive than private amenities; managers have observed that the number of golf rounds played has increased over prior years.
- New amenities at the Basin, including the Universally-Accessible Children’s’ playground, which has proven to be very popular.

Looking into the future, it is reasonable to assume that visitation would remain roughly stable at 2009 levels, at the most conservative projection, or grow at the projected rate of population increase of approximately 7% by 2020. Should the economic outlook remain poor, a more significant increase might be observed.

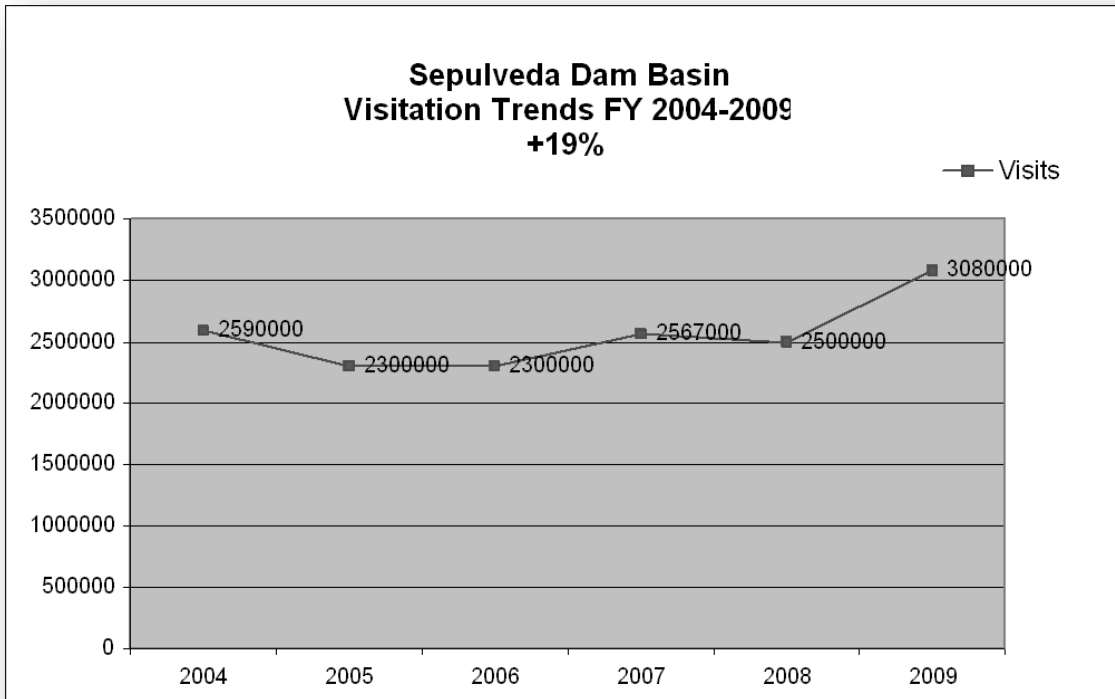


Figure 4.1 Sepulveda Dam Basin Visitation Trends

There are a number of regional-scale recreation amenities within a 30-mile service radius of Sepulveda Dam Basin that are also attractive destinations for area residents. The 30-mile service radius reflects the guidance provided in the Recreation Development Policy for Outgranted Corps Lands as well as related Los Angeles County level of service standards for regional parks that indicate a 25-mile service radius. Appendix E, Map 15 illustrates regional amenities near the Basin. A representative range of these amenities that illustrates the diversity of options available includes:

- Las Virgenes /Malibu Creek State Park features hiking, fishing, bird watching, camping, picnicking and horseback riding opportunities. There are 15 miles of streamside trail through oak and sycamore woodlands and chaparral-covered slopes.
- Topanga State Park, which is located in the cliffs and canyons of the Santa Monica Mountains, features 36 miles of trails through open grassland, live oaks and spectacular views of the Pacific Ocean. Picnic sites and a nature center are among the park amenities.
- Kenneth Hahn State Recreation Area, managed by the Los Angeles County Department of Parks and Recreation, includes large areas of native coastal sage scrub habitat, lawns and landscaped areas, picnic sites, tot lots, fishing lake, lotus pond, community center and five miles of trails.

Active recreation and amenities include the following: playgrounds, one half basketball court, a fishing lake, two lighted baseball diamonds, one lit multi-purpose field, and a sand volleyball court. Passive recreation includes eight picnic rental shelters and 100 picnic tables throughout the park. There are also eight large barbecue pits and 60 small ones dispersed throughout the park.

- Griffith Park, managed by the City of Los Angeles Department of Recreation and Parks, is the largest municipal park with urban wilderness area in the United States, with over 4,210 acres of both natural chaparral-covered terrain and landscaped parkland and picnic areas, and amenities for camping, golf, soccer, swimming, tennis, and horseback riding. The park also includes specialized amenities such as the Zoo, Griffith Park Observatory, and LA Equestrian Center.
- Elysian Park, the oldest City park is also managed by the City, includes over 600 acres of low impact recreation and active athletic opportunities, most with dramatic views of the City. Amenities include baseball fields, Chavez Ridge Disc Golf, Chavez Ravine Arboretum, volleyball courts, tennis courts, picnic areas and hiking trails.
- Hansen Dam Basin, managed by the City of Los Angeles has approximately 1,355 acres of Amenities including equestrian trails, an aquatic center, active sports fields, and open areas for hiking and picnicking.

Appendix E, Map 15 also indicates the northern portion of the 30-mile service area also encompasses the Angeles National Forest, as well as the San Gabriel Wilderness Area.

Considering the County as a whole, there are very significant public lands resources available to potential visitors. Table 4.2 illustrates the total park acreage within Los Angeles County, by agency; these data were gathered in support of the 2009 *Citywide Community Needs Assessment*, described further below. Across all agencies, Los Angeles County provides approximately:

- 87,000 acres of parkland; just under 9 acres per 1,000 people
- 37,000 acres of recreation area; 3.6 acres per 1,000 people
- 13,000 acres of golf courses
- 37,000 acres of wilderness area
- 2,900 acres of beaches
- 645,000 acres of forest.

The range of recreation options within and adjacent to the County is very diverse and responds to a broad spectrum of recreation and leisure preferences.

Assessing future needs for amenities is more challenging, as the County does not have a current needs assessment or strategic Master Plan for recreation amenities. In 2009, however, the City of Los Angeles Department of Recreation and Parks completed a major, two-year *Citywide Community Needs Assessment*, which sought to preliminarily prioritize and address the needs for additional recreation and park land, to identify existing amenities needing improvements to meet current and future community needs, to identify recreation program needs, to perform demographic analysis, to prevent future maintenance problems, and to offer positive alternatives to an increasingly dense and urbanized population. The objective of this needs assessment and the subsequent master/strategic planning process is to develop strategies to help prioritize and address the challenges the Department faces, such as:

- Acquiring additional recreation and park land and finding opportunities for the reuse of land already in the public domain.
- Updating existing recreation amenities requiring improvements.
- Preventing future maintenance problems through effective asset management of public amenities.
- Offering positive recreational alternatives to an increasingly dense and urbanized population.

The needs assessment included a comprehensive community outreach and input process that engaged community leaders, stakeholders, and the public across the City through a series of one-on-one interviews, focus groups, and community forums followed by a statistically valid, mail-phone citywide household survey of almost 3,000 residents. Key findings from this survey, while they cover the City as a whole, can help inform our understanding of recreation needs and trends that may have an impact on amenities at Sepulveda Dam Basin (Figure 4.2).

Key findings are summarized below.

- From a list of thirteen options, respondents were asked to indicate all of the organizations their household has used for indoor and outdoor recreation and sports activities during the past year. The organizations with the highest percentage of respondent households have used for recreation and sports activities are: City of Los Angeles Recreation and Parks (36%), State of California Parks (20%), private clubs (19%) and Los Angeles County Parks (19%).
- Unmet citizen needs exist for a wide range of parks, trails, outdoor and indoor amenities and programs. From a list of 30 various parks and recreation amenities, respondents were asked to indicate for which ones they and members of their household have a need. The parks and recreation amenities with the highest percentage of need from respondent households are: walking and biking trails (63%), small neighborhood parks (60%), large community and regional parks (53%), shelters and picnic areas (50%), and nature trails (46%). Interestingly, these are amenities that benefit a broad constituency, not just one or two user groups. The figure below summarizes the percentage of survey respondents indicating a need for each type of facility queried (*All figures taken directly from the Citywide Community Needs Assessment report*).
- From a list of 23 recreation programs, respondents were asked to select the four that they currently participate in the most often at the City of Los Angeles Department of Recreation and Parks amenities. The programs that respondent households currently participate in most often at City amenities are: special events/festivals (8%) and youth sports programs (7%). It should also be noted that special events/festivals had the highest percentage of respondents select it as their first choice as the program they currently participate in most often at City amenities.

Acres of Recreational Lands in Los Angeles County

Acres (Using 2008 Thomas Brothers Map)	Park	Open Space	Beach	Ecological Preserve / Estuary	Fairground	Historical Park	Historical Point of Interest	Recreation Area	Wilderness Area	Wildlife Refuge	Zoo	Forest	Golf Course	TOTAL ACRES
City of Los Angeles	11,906		166	518			46	1,123		177	103		1,523	15,562
Other Cities in Los Angeles County	15,991	2,822		214		18	1	2,274	1,177	137			5,123	27,757
Los Angeles County	6,233	58	2,000	134		1,361		1,106		2,019			1,093	14,441
State of California	33,833		707	37	470			24,150						58,727
Private	57		0					3,271					5,486	8,984
Santa Monica Mountains Conservancy	17,519	4,993		870	170									23,382
Federal Government	1,516		0					4,366	35,410			645,496		686,788
Unknown	225												116	341
TOTAL ACRES	87,280	7,873	2,873	1,773	640	1,346	47	36,290	36,587	2,333	103	645,496	13,341	
ACRES PER 1000 PEOPLE IN THE CITY (Using 2006 Census Est. 9,948,081)	Park	Open Space	Beach	Ecological Preserve / Estuary	Fairground	Historical Park	Historical Point of Interest	Recreation Area	Wilderness Area	Wildlife Refuge	Zoo	Forest	Golf Course	TOTAL ACRES
City of Los Angeles	1.197	0.000	0.017	0.052	0.000	0.000	0.005	0.113	0.000	0.018	0.010	0.000	0.153	1.564
Other Cities in Los Angeles County	1.607	0.284	0.000	0.022	0.000	0.002	0.000	0.229	0.118	0.014	0.000	0.000	0.515	2.790
Los Angeles County	0.627	0.006	0.201	0.013	0.047	0.133	0.000	0.111	0.000	0.203	0.000	0.000	0.110	1.452
State of California	3.401	0.000	0.071	0.004	0.000	0.000	0.000	2.428	0.000	0.000	0.000	0.000	0.000	5.903
Private	0.006	0.000	0.000	0.000	0.017	0.000	0.000	0.329	0.000	0.000	0.000	0.000	0.551	0.903
Santa Monica Mountains Conservancy	1.761	0.502	0.000	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.350
Federal Government	0.152	0.000	0.000	0.000	0.000	0.000	0.000	0.439	3.559	0.000	0.000	64.886	0.000	69.037
Unknown	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.034
TOTAL ACRES	8.774	0.791	0.289	0.178	0.064	0.135	0.005	3.648	3.678	0.235	0.010	64.886	1.341	84.034

Notes:

Population

2006 US Census estimate: 9,948,081(2000 census: 9,519,338)

Data Source

Thomas Brothers 2008 GIS map Layer TBM_LACO_OWNA

Processing

Data layer contained many types of areas. Areas NOT used: Airport, Museum Park, Cemetery, Civic Center, College/University, Hospital, Military, Miscellaneous, Movie Studio, Oil Refinery, Prison, Racetrack, Shopping Mall, Stadium/Arena. Data layer lacked jurisdiction. Data was compared to TBM's City Boundaries layer, LAEAP's own Parks layer, property names were inspected; web sites were consulted. Best effort was made to classify ownership of properties as shown in tables above.

Processed by Daniel Elroi, NorthSouth GIS, 9/10/08.

LARAP's Data

LARAP's own parks layers was NOT used, to help keep this analysis consistent, i.e. To use a single data source. However, the total acres derive from Thomas Brothers match LARAP's own total acres.

Acres per LARAP Parks layer: 15,565

Table 4.2 Acres of Recreational Lands in Los Angeles County

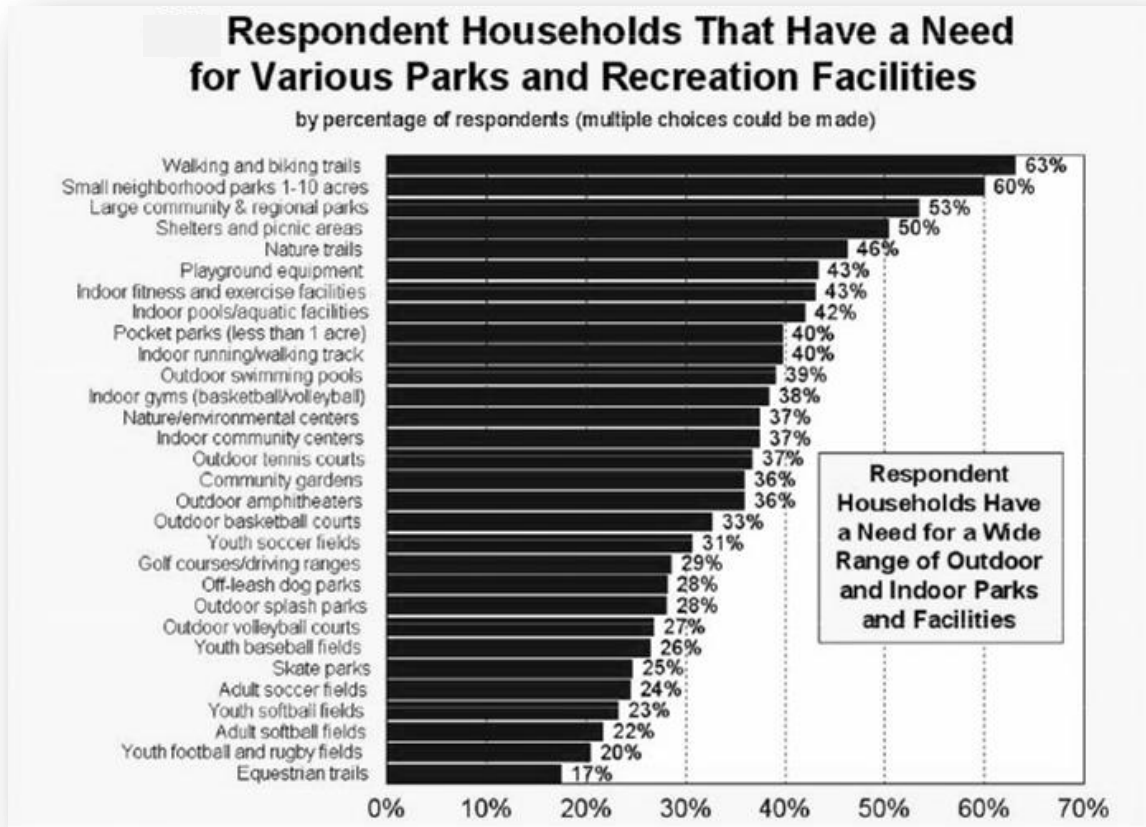


Figure 4.2 Respondent Households that Have a Need for Various Parks and Recreation Amenities

4.6.3 Assessment of State Future Trends

The trends described above, which emphasize low impact, low density recreation, are echoed in the California State Parks' 2008 California Outdoor Recreation Plan (CORP, California State Parks 2009).

Californians tend to participate in activities that are less expensive, require less equipment, and need fewer technical skills. Californians' top 15 activities (by participation) were:

1. Walking for fitness or pleasure
2. Driving for pleasure, sightseeing, driving through natural scenery
3. Beach activities
4. Swimming in a pool
5. Day hiking on trails
6. Wildlife viewing, bird watching, viewing natural scenery
7. Jogging and running for exercise
8. Bicycling on paved surfaces
9. Outdoor photography
10. Using open turf areas

11. Using play equipment, play structures, tot-lots
12. Organized team sports such as soccer, football, baseball, softball, basketball
13. Fishing – freshwater
14. Bicycling on unpaved surfaces and trails
15. Surfing or boogie boarding, windsurfing

The most commonly used facility types included community/facility buildings, open spaces to play, picnic tables/pavilions, unpaved multipurpose trails and paved trails. Less than 20% of respondents reported using amusement (e.g., park train ride) areas, tennis or basketball courts, dog park areas, botanical gardens, or skate parks.

The most common activities adult respondents participated in were walking (49%), playing (30%) such as Frisbee, playing catch with a ball, kite flying, or playing with children, sedentary activities (24%) and eating/picnicking (24%). Respondents participated the least in fishing (5%), active water sports (4%), tennis (2%), martial arts/tai chi/yoga (<1%), and in-line skating (<1%).

When asked which recreation activities they would like to participate in more often, the majority of adult respondents chose: 1) walking for fitness or pleasure (46%), 2) camping in developed sites with amenities such as toilets and tables (45%), 3) bicycling on paved surfaces (45%) and 4) day hiking on trails (44%).

California Outdoor Recreation Plan 2008 Research suggests that this demand is from a variety of age groups including the Baby Boom generation, which continues to hike, mountain bike, kayak, and engage in other physically active, resource-based recreation. By contrast, golf and tennis are decreasing in popularity.

One of the outdoor recreation activities with a high-tech focus is geocaching. This activity is best described as a modern treasure hunt where participants try to find a hidden cache (treasure) using a map and a geographic positioning system (GPS) receiver. Since the first geocache was hidden in 2001 the number of geocaches has reached over 700,000 globally by the end of 2008. To address the high-tech recreation trend, California State Parks has also added Wi-Fi access to several state park units. Many other technical advances are improving the equipment used for alpine and Nordic skiing, snow shoeing, kayaking, skate boarding, and mountain biking.

These statewide surveys results suggest a continuing future need for outdoor recreational walking/jogging/cycling paths, flexible open turf areas that are not necessarily dedicated to a particular type of programming, and opportunities for the occasional but perhaps transient high risk adventure sport.

4.6.4 Lessees' Projections of Future Needs and Demands

The City of Los Angeles Recreation and Parks staff was interviewed to ascertain their views on future needs and Basin utilization as well as issues and concerns related to facility crowding, carrying capacity, and long-term sustainability. They also summarized future planned projects, which are summarized in Section 6 of this Plan. Though no Basin-specific visitor surveys have been carried out, recreation managers' observations are a good predictor of potential future needs and demands.

Recreation managers indicated that the most popular areas at Sepulveda are, in rough order:

- Lake Balboa/Anthony C. Beilenson Park and the associated trails and picnic areas
- The Balboa Sports Complex
- Woodley Park, including the archery range and cricket fields

- The Sepulveda Basin Off-Leash Dog Park
- Hjelte Sports Center fields
- The golf courses

Recreation managers indicate that none of these areas are so heavily utilized as to suggest that future management actions may be required to address potential resource impacts associated with a large number of visitors. Demands for these amenities are highest on the weekends; during the week, demand is reasonable but readily managed.

Demand is high for soccer, baseball, and for open turf fields that can support flexible programming, which are not dedicated to one particular use. City recreation managers report that demands are high for these amenities throughout the City and not just within the immediate service area covered by the Basin. New amenities planned at the Sports Complex (see Section 6) should help to alleviate demands for active athletics.

City managers were queried about visitor use patterns, movement between amenities, and needs for improved connectivity within the Basin, and from the Basin to adjacent neighborhoods. Use patterns tend to vary depending on the type of activity that a visitor engages in: if it is highly specialized, for example, playing in a sports league, visiting the skate park, walking the dog at the dog park, using the model airplane field, visitors tend to go to the activity venue, do the activity, and then leave. Those visiting for more generalized activities, and full day users, may move around to different destinations. Generally, recreation managers felt that connectivity between activity areas within the Basin was very good, and that connections to adjacent neighborhoods were also working well.

Managers also indicated potential needs for additional parking, restrooms, and related support amenities. No chronic parking issues were reported such as visitors parking on grass, or illegally on roadways that were viewed as requiring management actions. Occasionally the lifeguard at Lake Balboa will close the parking lot when it is full; people then park at the Armory or golf course and walk. The overflow parking area near the golf course, approximately 7.5 acres, is also used. Parking is allowed on Balboa Boulevard for visitors to the Sports Complex. At the dog park, which is very popular, a grassy overflow area can be used for parking. Managers felt the available supply of parking spaces could be managed adequately to meet visitor demands. The supply of restrooms is also generally viewed as adequate to meet demands.

4.6.5 Conclusions and Implications for Facility Carrying Capacity, Long Range Sustainability, and Future Recreation Needs

The Sepulveda Dam Basin provides a diverse array of recreational experiences, from “traditional” bat-and-ball active athletics, to sports with specialized audiences such as cricket and archery, to activities that have responded to relatively recent leisure trends for example the skate-park and off-leash dog park, to opportunities to simply “be in nature.” The diversity of possible experiences makes the Basin a very significant resource for residents of its market area and for the region.

Projected visitation at Sepulveda Dam Basin through 2020 is estimated to remain stable at 2009 levels in the most conservative projection, or grow at a rate equal to or exceeding the projected population increase of approximately 7%. This growth in visitation suggests additional demands on resources at Sepulveda Dam Basin, for active athletic playing fields, and lower impact amenities such as trails and picnic areas, in response to desires for more “green breathing space” and opportunities to be “in nature.”

Recreation managers have plans to address demands for additional playing fields, through the expansion of the Balboa Sports Complex, and desired expansion at Hjelte Sports Center, but note that the demand

for such amenities is constant and City-wide and no single facility will be able to fully meet it. Since the last Master Plan update, specialized amenities such as the skate-park and off-leash dog park have been added.

Basin “carrying capacity,” which includes both an environmental dimension, “how much use can the resource support without being compromised?”, and a social dimension “how much use can occur before the quality of visitor experience is diminished?”, presently appears to be in balance. Since it is estimated that visitation will continue to increase, future land use development plans and studies will be required to account for population growth, balance recreational diversity, and accommodate new demands within a developed footprint in a manner that is environmentally and economically sustainable.

4.7 Land and Resource Sustainability and Analysis

This section concludes with an assessment of the physical and adjacent use conditions and factors that will influence any potential future development of recreation amenities.

4.7.1 Constraints, Suitability, and Compatibility

4.7.1.1 Flood Risk

The primary constraint for land uses within the Basin is the periodic inundation of Basin lands as a result of operation of the Dam for downstream flood risk management. Areas within the Basin have been identified according to topographic analysis that reflect the level of flood inundation, and what activities and structures may occur within each area. Table 4.3 provides the acceptable uses of each inundation category, including appropriate structure constraints and appropriate recreational or other uses.

Table 4.3 Minimum Criteria for Basin Land Use		
Evaluation Frequency	Development Constraints	Acceptable Land Uses
Up to 10-yr flood	Subject to prolonged inundation, sedimentation, and wave erosion	Structures are not recommended. Natural trails and open play fields are acceptable.
10-yr flood to the 50-yr flood	Subject to frequent flooding, sedimentation, and wave erosion	Open or floodable structures and field amenities that can sustain inundation with acceptable maintenance cost. Concession stands with portable contents, bridle trails, shade and picnic armadas, backstops, goalposts, etc. are considered appropriate.
50-yr flood to the 100-yr flood	Subject to periodic flooding, sedimentation, and wave erosion	Floodable structures and multipurpose paved surfaces that can sustain inundation with acceptable maintenance cost. Floodable restrooms and picnic areas are considered appropriate.
100-yr flood to the Basin Design Flood	Subject to infrequent flooding, sedimentation, and wave erosion	Flood-proofed, closed structures are permitted. Structures conducive to human habitation are prohibited.

The frequency, extent, and duration of flood inundation must be considered in the management and appropriate use of Basin lands. As part of this updated Master Plan, the filling frequency curves have been recalculated and maps have been developed that illustrate flood stage elevations for the 10-, 50-, and

100-year floods. Appendix E, Map 16 superimposes these flood lines on a map that illustrates locations of existing recreation amenities. Areas of potential concern are the restrooms at Hjelte Sports and the model airplane field since they are within the 10-year flood elevation.

4.7.1.2 Topography

The topography within the Basin is generally relatively flat (Map 17). The highest areas are in the northwest segment, where the existing ballfields, skate-park, velodrome, and dog-park are located. The sports complex expansion has been located in this area to take advantage of the high ground and minimize risks of inundation from flooding. The edge of Sepulveda Dam Basin along Victory Boulevard would be highly suitable for future recreation development as it is on the highest ground.



Views from Top of Dam

4.7.1.3 Connectivity and Accessibility

Sepulveda Dam Basin is easily accessible from local streets, public transportation, and freeways. There are no major constraints to use of the Basin from the perspective of accessibility. Locally, the Basin can be accessed from the north via Victory Boulevard, from the east via Burbank Boulevard, from the south via Hayvenhurst Avenue, and from the west via White Oak Avenue. Balboa Boulevard and Woodley Avenue transect the Basin from north to south. Pedestrian and bicycle access points include each of these roadways, as well as numerous paved and unpaved trails throughout the Basin. Map 22 illustrates the various multi-modal access points throughout the Basin.

Since preparation of the last Master Plan and Supplement, the major change to accessibility of the Basin is the construction of the Orange Line Bus-way. The bus-way is a dedicated lane restricted to other motor vehicle use that runs through the northern edge of the Basin. There are stops at both Balboa Avenue and Woodley Avenue, which provide direct access to the Basin. A bike path is also part of the bus-way and allows for entrance into the Basin and onto the Basin bike paths.

The San Diego (Interstate 405) and Ventura Freeways (U.S. Highway 101) provide regional vehicular access. The Victory Boulevard and Burbank Boulevard exit ramps provide for access to the Basin from the San Diego Freeway and the Hayvenhurst and Balboa exits provide access off the Ventura Freeway,

Accessibility and Connectivity within the Basin A number of roads and trails, both paved and unpaved, transect the Basin and numerous parking lots throughout the Basin provide close access to the major amenities and amenities. Appendix E, Map 22 shows the location of recreation amenities and their associated parking lots and access points.

Once a visitor reaches the Basin, there are a number of parking lots available. Lots are generally located at the outer edges of the Basin, immediately adjacent to roadways. This limits vehicular traffic within the Basin. However, this also means that access to the interior portions of the Basin requires covering a greater distance by foot or bicycle.

Though a system of trails is in place throughout the Basin for pedestrians, joggers, and cyclists, freedom of movement across Sepulveda Basin is limited by several factors. Because the Basin extends across several major roadways, which bisect the Basin, visitors may often be required to cross several lanes of traffic to move from one area to another in the Basin. Cyclists may readily employ existing roadways, but pedestrians must find suitable crossing points. Woodley Avenue bisects the wildlife area, as well as a park area (west and south of Tillman) and the golf course, requiring pedestrians to walk a significant distance to reach a safe crosswalk. Balboa and Burbank Boulevards are also busy, multi-lane roads with few or no designated safe pedestrian crossings. At the east end of the Basin, a pedestrian underpass has been constructed beneath Burbank Boulevard. This allows safe pedestrian passage from one part of the Wildlife Area to another. Additional underpasses or bridges could be constructed to improve pedestrian movement within the Basin.

Basin managers report that amenities within the Basin are fully compliant with the Americans with Disability Act (ADA). Parking lots have an adequate number and configuration of handicapped accessible parking spaces. Restrooms, shelters, and other buildings within the Basin have been designed for universal access.

Trails that are not paved are typically comprised of compacted native soils, though decomposed granite is used as a surface treatment in some cases. Unpaved trails may pose an obstacle to Basin visitors with limited mobility, due to the inherent unevenness and decreased stability of a natural hiking trail. Trails may also have a slope that may limit use by ADA standards.

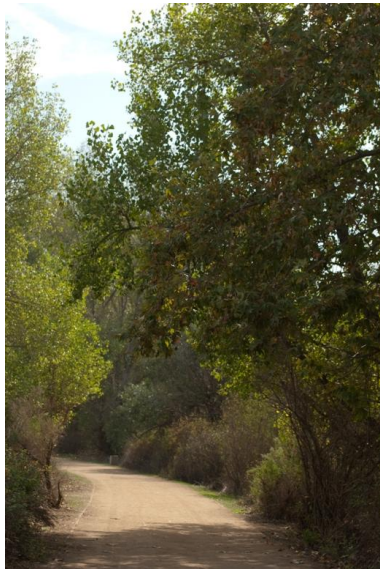
Wildlife Corridors and Connectivity Corridors are important to consider in the overall ecological health of a habitat. In particular, the Sepulveda Dam Basin Wildlife Area and the Los Angeles River reach within the Basin is the last relatively natural habitat available in the area. Steps to improve connectivity of these habitats could improve overall wildlife diversity and abundance in the area.

The nearest area of non-urbanized, relatively natural habitat to Sepulveda Dam Basin is in Topanga State Park, southwest of the Basin, a part of the Santa Monica Mountains. The California State Parks Departments (CSPD 2009) identifies the area as a significant wildland. However, there are no corridors of connectivity available to terrestrial or aquatic species between Topanga State Park and the Basin. It is possible that birds and bats may pass between the two areas, though no specific data are available regarding migration between the two areas.

Movement of wildlife between two areas varies by species and each species may require differing corridor characteristics. Spencer (2005) defines two types of barriers; a barrier that is impassable under any circumstances for a particular species, and a filter barrier, which may be utilized by a species under some circumstances. For example, most small ground-dwelling species such as amphibians, reptiles, and small mammals will not pass or are reluctant to pass over a busy roadway, retaining walls, a large area with no vegetation, fences, or other physical barriers or through filters, and are therefore less mobile than other species (Spencer 2005). Fish barriers include low or no stream-flow, culverts, dams, concrete channels, felled trees and other natural and man-made obstacles. Large mammals and birds are less sensitive to barriers.

Both barriers and filters are present throughout the Basin. Several major roadways pass through the Basin, including Balboa Boulevard, Burbank Boulevard, and Woodley Avenue and discourage unimpeded

movement throughout the Basin for most species, except birds and bats. Areas of development and recreation are also significant barriers to many species.



Trail



Great Blue Heron at Wildlife Lake

The Basin's wildlife area and stretch of the Los Angeles River is a patch of the natural habitat that once occurred throughout the San Fernando Valley and along the Los Angeles River floodplain. Though it is disturbed, the wildlife area is the only area within the urbanized section of the San Fernando Valley that is specifically designated and managed for wildlife habitat. Even throughout this area there are significant barriers to wildlife passage. Woodley Avenue and Burbank Boulevard both bisect the natural areas of the Basin effectively restricting movement of small, ground-dwelling species and endangering the movement of larger mammals in the area. A tunnel has been constructed beneath Burbank Boulevard to extend the trail system throughout the Basin and it is possible that larger mammals utilize this tunnel for passage, though no data is available. In some cases, individual animals develop less sensitivity to development and pass through urbanized areas relatively freely. Raccoons, opossums, and coyotes are several of the species that are often seen crossing roadways and utilizing areas frequented by humans.

The Los Angeles River also offers a relatively large expanse of habitat, though highly disturbed that extends from the Dam embankment, under Balboa Boulevard to the bus-way at the west end of the Basin. The soft bottom throughout this stretch is unique to the river. Five tributaries of the Los Angeles River, Haskell, Hayvenhurst, Woodley, Bull and Encino Creeks flow through the Basin into the Los Angeles River.

4.7.1.4 Maintenance

A major constraint to new or modified amenities within the Basin can be the resources needed for adequate maintenance. During economic downturns when municipal revenues are reduced, recreation department budgets may be reduced; when budgets are adequate, finding and employing trained staff may be the challenge. Compounding this problem for recreation managers is that often bonds are passed and grant funding is made available for capital improvements, but ongoing maintenance funding is not included and additional recreation amenities may stretch existing park maintenance resources.

Due to decreased City budgets some maintenance has been reduced, such as frequency of cleaning and restocking of restrooms. At Lake Balboa, paddleboats, once available for rent are no longer available due to the unsafe condition of the dock to handle large groups of people.

When new amenities are proposed additional maintenance resources should be identified at the outset. If resources cannot be expanded to meet the additional needs, fees or volunteer services may be a way to fill these resource gaps.

5 RESOURCE OBJECTIVES

5.1 Introduction

The resource objectives (Table 5.1) are based on the input from stakeholders, as well as Corps' guidance. For each of the land use classifications, resource objectives have been identified: Project Operations, Recreation, Environmentally Sensitive, Multiple Resource Management - Recreation - Low Density, Multiple Resource Management - Vegetation Management, and Multiple Resource Management – Inactive and/or Future Recreation.

Resource Objective	Project Operations	Recreation	Environmentally Sensitive	MRM Recreation Low Density	MRM Vegetative Management	MRM Inactive and/or Future Recreation
Environmental Quality and Character	X	X	X	X	X	X
Connectivity	X	X	X	X	X	X
Community Involvement		X	X	X	X	X
Global Climate Change	X	X	X	X	X	X
Energy	X	X	X	X	X	X
Economic Development		X	X	X	X	X
Flood Risk Management	X	X	X	X	X	X
Safety and Security	X	X	X	X	X	X
Recreation		X		X	X	
Education		X	X	X	X	
Wildlife Habitat and Native Plant Communities	X		X		X	
Wetlands			X		X	
Water			X		X	
Soil Conservation	X	X	X	X	X	X
Air Quality	X	X	X	X	X	X
Visual and Auditory Quality	X	X	X	X	X	X
Cultural Resources	X	X	X	X	X	X
Sustainable and Local Agricultural Uses	X					X

5.2 Objectives Applicable to All Land Use Classifications

Resource management is moving toward an integrated ecological approach, as demonstrated by the changing guidance of the Federal government and the Corps. In highly urbanized areas such as southern California, ecosystems and their various habitat communities have become severely restricted. With the surrounding environment so drastically altered, biodiversity (species richness) is reduced and landscape linkages are broken. Conservation and restoration require a redefined planning process. A Master Plan and accompanying EA must reflect the most current advances in restoration ecology and wildlife management in the context of the Corps mission, regulations, and guidance.

Restoration to a prior undeveloped state may no longer be practicable or feasible. The hydrology, topography, microclimates, and even soil structure and composition may be significantly altered due to previous construction activities within the Basin. Water tables may have lowered over time from groundwater pumping. Surrounding urban development adds unseasonal water runoff that carries high loads of pollutants, increased water temperatures, exotic invasive plant species, and drives a plethora of animal species that do not and cannot thrive in human-dominated ecosystems into remaining open spaces to seek refuge.

Science now recognizes the need for habitat connectivity so that wildlife not only has the necessary space to roam, but that also has genetic diversity to ensure that an “island effect” on species is not inadvertently created on remnant habitat lands. With species increasingly endangered or of special concern, objectives must consider habitat that is needed for species most at risk given current conditions at Sepulveda Basin. Objectives must also anticipate changes that may alter this scenario in the future. Effective adaptive management techniques need to respond to current conditions as well as an unknown future.

In the spirit of moving toward an integrated ecosystem approach, the Corps has developed a set of guidelines that capture a variety of goals that together will foster a functional ecosystem.

The following Resource Objectives are common to all land use classifications and incorporate the principles of Environmental Stewardship: Flood Risk Management, Safety and Security, Environmental Quality and Character, Connectivity, Community Involvement, Global Climate Change, Energy, and Economic Development.

5.2.1 Flood Risk Management

Goal Through structural and non-structural solutions, minimize flood risk to downstream communities, thereby minimizing danger of loss of life and minimize damages to real and personal property.

Rationale The primary goal of management of the Dam is flood risk management as authorized under the 1936 Flood Control Act. Flood risk management is the process of identifying, evaluating, selecting, implementing and monitoring actions to mitigate levels of risk. Scientifically sound, cost-effective, integrated actions are taken to reduce risks while taking into account the cultural setting in which the Basin resides. (U.S. Army Corps of Engineer’s Institute for Water Resources, 2008, *Value to the Nation: Flood Risk Management*.) Even with heavy visitor use of recreation amenities and the enjoyment of the wildlife areas, the public may not be cognizant of the importance of the role the Basin plays in protecting their communities from floods, nor realize the danger posed by potential flooding.

Resource Objectives

- Promote installation of signage and interpretation to educate the public about the role of the Basin in flood risk management.

- Ensure that future land use proposals and activities are compatible with estimated levels and frequency of inundation, to ensure that the Dam can be operated without constraints that compromise downstream flood risk reduction.

Resources EO 11988, ER 1165-2-26, ER 1110-2-240, ER 1130-2-530, EP 310-1-6a, CESPDR 1110-2-1.

5.2.2 Safety and Security

Goal Ensure that visitors are safe from physical hazards as well as ensuring personal safety while visiting the Basin.

Rationale The Dam was built to help minimize flood risk to lives and property from flooding. Safety also extends to visitors using the facilities within the Basin. A visitor's ability to survey and comprehend the environment of an area, the ability to enter and exit quickly, and feel safe while enjoying the Basin is critical to optimizing the experience. All land uses within the Basin should be reinforced with safety and security measures, including Dam operation and maintenance, facilities, and construction, and recreational activities.

Resource Objectives for safety and security include the following:

- Encourage educating the public and lessees on flood risk awareness and safety issues.
- Ensure that all infrastructure is properly maintained to avoid creating a public hazard.
- Promote a means for visitors and emergency personnel to communicate quickly their specific location in the Basin.
- Encourage safety features be implemented such as fencing, lighting, warning signs, and call boxes are installed where needed and maintained.
- Encourage lessee to maintain adequate patrols for safety.
- Encourage design of amenities so that vandalism and other "illegal activities" are discouraged.
- Encourage safe neighborhood connections.
- Continue to conduct risk assessments to identify opportunities and constraints for improving Basin safety.
- Maintain a Basin safety plan that ensures that restricted areas, danger zones, and hazardous areas are clearly marked and if necessary, barricaded and closed.

Resources EP 1130-2-550, EM 385-1-1.

5.2.3 Environmental Quality and Character

Goal Protect, conserve and improve the overall environmental quality and character of the Basin, including unique and important natural and cultural resources of the Basin.

Rationale Environmental quality and character refers to the integrity and value of resources which comprise an environment, including land and water related resources, esthetic and cultural resources. The Basin contains resources which are considered important and/or significant. These resources individually and cumulatively contribute to the overall environmental quality and character of the Basin.

The conservation, preservation, and restoration of environmental resources are recognized as important to human welfare and quality of life. Through environmental legislation, Congress has indicated that protection and enrichment of environmental quality is in the public interest.

Corps Memorandum on Invasive Species Policy (2 June 2009) and the Executive Order on Invasive Species (EO13112) direct the Corps towards energy efficiency, sustainability, eradication of invasive species, and educating the public on the adverse impacts of invasive species. Carrying out these objectives would lead to improved environmental quality and character within the Basin.

Resource Objectives for environmental quality and character include the following:

- Encourage uses, activities, management practices, and future development that conserve natural and cultural resources.
- Preserve areas containing unique, sensitive and/or significant resources to minimize disturbance so the integrity and values will not be adversely impacted by other uses, management practices or developments within the Basin.
- Design site, operation of facilities, and activities to avoid or minimize adverse environmental impacts per Corps guidelines and design criteria.
- Avoid significant impacts on resources through change in design, location and/or use of future amenity development.
- Conserve and protect those resources which cumulatively contribute to the Basin's overall environmental quality and character.

Resources North American Wetlands Protection Act, Aesthetic and Scenic Quality § 232 of WRDA 1996, Endangered Species Act, National Historic Preservation Act as amended, Clean Air Act, Noise Control Act, Clean Water Act, Environmental and Economic Benefits of Landscape Practices on Federal Landscaped Grounds 60 Fed 408 37, EO 13186 Federal Responsibilities to Protect Migratory Bird Act, and ER1130-2-540.

5.2.4 Connectivity

Goal Connect the Basin to the surrounding landscape to facilitate the efficient movement of people and wildlife in a manner that minimizes environmental degradation and maximizes ecosystem function, respectively.

Rationale The Basin, a remnant of once larger ecosystems, should not function as an independent landscape patch. Attention should be directed towards wildlife corridors and how the Basin is integral to the movement of wildlife through the region. Similarly, there should be seamless systems of linkages and trails that are connections for human access and movement and should not be cut off from the surrounding neighborhoods. The movement of people in, out, and around the Basin must be considered in light of various modes of transportation and individual mobility and the need for safety and to quickly evacuate during a flood event. Movement within the Basin must be accessible, whether singly or in a group, able-bodied or physically challenged, and should include hiking, biking, and equestrian trails throughout and in and out of the Basin.

Resource Objectives for connectivity include the following:

- Encourage identification and connection with regional trail systems and eliminate impediments to trail connections within the Basin.
- Encourage development of a trail system that loops back upon itself.
- Encourage the connection of Basin trails with trail systems outside the Basin.
- Promote safe and efficient circulation and access to the Basin's recreation facilities to control traffic and provide a link between activities within the Basin.

- Encourage and the restoration of creeks and streams to allow for safe corridors for wildlife movement.

Resources National Trail Systems Act (NTSA), Trails for America in the 21st Century Act (16 USC 1245).

5.2.5 Community Involvement

Goal Encourage the local community to become partners with the non-Federal sponsor and the Corps as stewards of the lands.

Rationale The public is the critical partner with the Corps and the non-Federal sponsor in being stewards of the land. If the community has a strong sense of ownership of the land, problems can be addressed and often solved at the local level. Community/grassroots empowerment is often the best means of identifying and protecting resources of the site, and educating the public about those resources.

Resource Objectives for community involvement include the following:

- Promote the spirit of personal stewardship of public lands through volunteer programs for education and interpretation, clean-up and restoration activities, and safe accessibility of the Basin.
- Encourage communication channels among Basin users, lessees, and the Corps for continuous dialog on problems and opportunities for Basin amenities.
- Ensure full disclosure and community awareness and input when new amenities are proposed.

Resources NEPA (42 USC 4321 et seq.), EP 1130-2-550, 3-6.

5.2.6 Global Climate Change

Goal To develop, implement, and assess adjustments or changes in operations and decision environments to enhance resilience or reduce vulnerability of Basin projects, systems, and programs to observed or expected changes in climate.

Rationale Climate change impacts affect water availability, water demand, water quality, storm water and wastewater infrastructure, flood and storm infrastructure, wild land fires, ecosystem functioning, and energy production and demand. All of these factors affect the water resources projects operated by the Corps and its non-Federal sponsors. Many of these were designed and constructed before climate change was recognized as a potential influence.

The Basin's water resources infrastructure and programs, existing and proposed, may be affected by climate change and adaptation to climate change. This affects design and operational assumptions about resource supplies, system demands or performance requirements, and operational constraints. Both droughts and floods can affect the operations of the Basin.

The Corps' Institute for Water Resources (IWR) has taken the lead in defining the Corps' response to Global Climate Change. For further information, see:
<http://www.iwr.usace.army.mil/inside/products/climatechange/index.cfm>.

Resource Objectives for addressing global climate change issues include the following:

- Promote land uses and activities that minimize impacts to global climate change.
- Evaluate global climate change impacts of new amenity development.
- Use adaptive management to respond to changing conditions on site that may result from global climate change.
- Encourage the restoration and implementation of an indigenous plant palette.
- Promote the expansion of a native tree canopy.
- Promote the use of zero-emission transportation such as walking or bicycling within the Basin.
- Minimize impacts on natural resources by locating similar amenities near vehicular access points to minimize overall impact.
- Encourage circulation and traffic plans for optimal use of public transportation to and within the Basin.
- Promote the use or generation of renewable energy within the Basin.
- Encourage new buildings achieve a Leadership in Energy & Environmental Design (LEED®) Silver or higher rating.

Resources EO on Federal Leadership in Environmental, Energy and Economic Performance dated 5 Oct 2009, ER 1130-2-540 15.

5.2.7 Energy

Goal Increase regional energy self-sufficiency and energy efficiency within the Basin.

Rationale Wise use of energy is a key component of sustainability and in reducing the carbon footprint of activities within the Basin. Energy saving measures must be installed and new development constructed in accordance with green building principles.

Resource Objectives to increase energy efficiency include the following:

- Encourage energy conservation and apply/promote renewable energy alternatives.
- Promote the minimization of non-renewable energy use through energy efficient land use planning and construction techniques.
- Encourage new development to be consistent with green building principles.
- Encourage sustainable design.

Resources EO on Federal Leadership in Environmental, Energy and Economic Performance (EO 13514).

5.2.8 Economic Development

Goal Contribute to national economic development consistent with protecting the Nation's environment.

Rationale The primary function of the Dam is to minimize flood risk. The economic value of the Dam is the cost of property damage that has been avoided since its operation. The recreation amenities at the Basin often generate user fees that help pay for and defray recreation operating costs. Recreation activities also contribute to the larger local economy through purchases of food, gas, and lodging, and specialized recreational equipment by users.

Resource Use Objectives that address economic development issues include the following:

- Encourage recreation activities that contribute to the local economy while minimizing impacts to environmental resources.

- Encourage the lessee to pursue activities that help defray recreation amenities operation and maintenance costs.

Resources ER 1130-2-550

5.3 Land Use Classification: Project Operations

Project Operations land is managed by the Corps for operations and maintenance of the Dam structure including the Dam embankment, outlet works, spillway, instrumentation and access roads, and other needs associated with maintaining flood risk requirements. As flood risk management is the authorized purpose of the Dam and Basin, this purpose cannot be compromised and therefore the resource objectives for flood risk management and safety apply to all land use classifications, as shown above.

5.4 Land Use Classification: Recreation

The Resource Objectives under the land use classification of Recreation include that of Recreation (and in this context primarily referring to high-density recreation) and education. Education is included here because often these two activities are combined and may be directed primarily at children using these areas.

5.4.1 Recreation

Goal Provide a quality outdoor recreation experience which includes an accessible, safe and healthful environment for a diverse population while sustaining our natural resources (ER 1130-2-550, Chapter 16).

Rationale There is a critical shortage of open space within the urbanized southern California region, which includes portions of San Bernardino, Riverside, Orange and Los Angeles Counties. The Basin is unique in terms of its open space character in an urban setting. The Basin provides habitat for wildlife and some wetland, riparian, and upland habitat. It is essential that the development of recreation opportunities be in harmony with the natural resources of the Basin.

Further development of recreation in the Basin has to be weighed against the protection of the environment including wildlife habitat. The Basin offers large areas of open space with the potential for additional recreation opportunities. Due to the suitability of level sites for intensive recreation activities, there is a great deal of pressure to provide increased high intensity recreation activities within the Basin.

ER 1130-2-550 states that previously approved development plans for land currently outgranted for recreation are grandfathered under this policy. However, ER 1130-2-550 goes on to state that the primary rationale for any future recreation development must be dependent on the project's natural or other resources. Examples that do not rely on the project's natural or other resources include theme parks or ride-type attractions, sports or concert stadiums, and stand alone facilities such as restaurants, bars, motels, hotels, non-transient trailers, and golf courses.

Resource Objectives that ensure a quality outdoor recreation experience include the following:

- Through the planning process, develop recreation opportunities to minimize impacts to the natural environment and minimize conflicts between activities in the Basin.
- Promote self-supporting amenities and activities to serve the needs of the public which offset operation and maintenance expenses.

- Promote local and regional planning efforts to coordinate the Basin's amenities and resources with other recreation areas and facilities to optimize a diversity of recreational opportunities in the region.

Resources 16USC 460d, ER 1165-2-550, EP 1165-2-550.

5.4.2 Education

Goal Increase awareness and understanding of the Basin's significant resources through educational and interpretive programs.

Rationale With its rich diversity of natural resources and functioning ecosystems, the Basin provides unique opportunities for children and adults to learn about natural systems. With education comes appreciation, and an understanding of the importance of these lands and the need to preserve and protect them for generations to come. The Corps' CECW-ZA Memorandum on Invasive Species Policy dated 2 June 2009 also specifically calls for education, communications and interpretation programs that convey how the public can prevent, identify, detect, and control invasive species.

Resource Objectives for education include the following:

- Encourage development of non-intrusive areas for observation, research, and study of the Basin's significant natural and cultural resources.
- Promote educational and interpretive facilities that encourage an interest in the environment and its preservation. Encourage improvement and development of amenities with educative and interpretive value.
- Promote development and implement a public awareness program on invasive species.

Resources Invasive Species Act of 1996, Aquatic Plant Program § 104 of the Rivers and Harbors Act, as amended, EO 13112 Invasive Species, ER 1130-2-550, EP 1130-2-500.

5.5 Land Classification: Mitigation and/or Environmentally Sensitive

Mitigation and Environmentally Sensitive land use classified areas are awarded the highest protection due to either the nature of the habitat or the cultural resources on the site. For this reason, the Resource Objectives of Wildlife Habitat and Native Plant Communities, Wetlands, Water, Soil Conservation, Air Quality, Visual and Auditory Quality, and Cultural Resources, are all included here, although they apply equally to the Multiple Resources Management land use classifications of Wildlife and Vegetative management.

5.5.1 Wildlife Habitat and Native Plant Communities

Goal Protect, preserve, and restore wildlife habitat and native plant communities within the Basin.

Rationale With increased urbanization throughout areas such as southern California, wildlife habitats have decreased and are increasingly cut off from each other. The Basin provides large open areas for habitat and with their connections to waterways provide important corridors for wildlife movement and subsequent genetic diversity. Many large predator species require wide expanses of connected habitat in order to survive and thrive. At the same time, within the Basin important remnant habitats provide some of the best sites for endangered species and species of special concern. Where practicable, these habitats

should be managed or restored to provide these species with the high quality habitat and connections that are needed for them to thrive.

Genetic diversity and abundance is equally important to vegetation as it is to wildlife. Having the genetic stock that is indigenous to an area is critical for successful restoration as these plants have adapted to the particular nuances of the microclimate in which they have evolved. Because the Basin was created before many of the areas were as developed as they are today, the Basin may contain some of the few remaining examples of native vegetation in situ. For this reason the native vegetation of the Basin must be preserved, expanded, and restored wherever practicable.

Resource Objectives for wetland and native plant communities include the following:

- Protect, preserve, and restore wildlife habitat and native plant communities within the Basin to increase the diversity and abundance of existing taxa within the Basin.
- Protect wildlife habitat for rare, threatened and endangered wildlife and vegetation within the Basin.
- Manage resources within the Basin in a manner that would maintain or preserve the quality of wildlife habitat.
- Promote use of appropriate native plant palettes in new landscaping or when rehabilitating established landscaped areas to maximize biodiversity, reduce soil erosion, and improve air quality.
- Preserve areas of vegetation that have a cultural and/or social significance.

Resources EO 13112 Invasive Species.

5.5.2 Wetlands

Goal Protect, conserve, maintain and restore wetlands whether seasonal (such as vernal pools) or permanent, to achieve the national goal of no net loss of wetlands.

Rationale Lying on the border between water and land, wetlands provide a rich mix of nutrients, insects, and plants that make them ideal nesting, resting, feeding and breeding grounds for many different types of creatures. Over a third of all Federally listed rare and endangered species live in or depend upon wetlands. Wetlands also help control flooding, improve water quality and serve as rest stops for migratory birds. According to EP 1130-3-540 2-4 f.(1) (e), “On hydric soils (indicating previous wetland conditions) consideration and management emphasis should be given to returning operating, and/or maintaining wetlands for wetland plant communities. Consideration should be given to buffering the wetland within an adequate amount of land to prevent abuse or loss from adjacent land uses.”

Resource Objectives for wetlands include the following:

- Restore, protect, and maintain existing wetlands within the Basin.
- Buffer wetlands with appropriate land uses to protect the integrity and function of the wetland.

Resources North American Wetlands Protection Act, Endangered Species Act, EO 11990 Protection of Wetlands, North American Waterfowl Management Plan, EP 1130-3-540 2-4 f.(1) (e).

5.5.3 Water

Goal Prevent further degradation of, and improve water quality within the Basin and identify the Basin's potential role for increasing the efficiency of regional water use.

Rationale Water is increasingly scarce throughout the west, and the Basin provides opportunities for water conservation and/or re-use. There may be opportunities to incorporate Best Management Practices (BMPs) for improved water quality, retention, and treatment of runoff. BMPs can also provide critical habitat such as wetlands.

Resource Objectives for the protection of water quality include the following:

- Discourage activities in the Basin which reduce surface or groundwater quality.
- Encourage use of reclaimed water for irrigation of recreation amenities.
- Promote implementation of water conservation improvement measures through appropriate landscaping techniques and technologies.

Resources U.S. Army Engineer Institute for Water Resources. 2008. *Value to the Nation: Lands and Waters*.

5.5.4 Soil Conservation

Goal Protect and conserve soil resources within the Basin.

Rationale Preventing erosion and the sedimentation that comes with it is important for maintaining the flood risk management capability of the Basin as well as maintaining high quality habitat.

Resource Objectives for protection and conservation of soil include the following:

- Minimize soil erosion within the Basin in both the construction and post construction project phases of new development.
- Promote land use activities to optimize vegetative cover to minimize soil loss in the Basin.
- Promote soil conservation management plans for areas of significant soil erosion and subsidence.
- Institute BMPs for managing soil deposition from the watershed to protect recreation amenities and habitat.

Resources ER 1130-2-540.

5.5.5 Air Quality

Goal Manage the resources, activities and land uses within the Basin in a manner that would not further degrade and may improve the air quality both within the Basin and the surrounding region.

Rationale The Basin can provide the "lungs" of an area by minimizing vehicular traffic and maximizing the cleansing function of vegetation. Trees especially remove particulates as well as cool the air and mitigate the urban heat island effect.

The enjoyment of nature includes stimulation of all the senses, including smell. If one has ever walked through the chaparral after rain or coastal sage scrub in the heat of the day, it is clear that different native plant communities have a signature scent. By avoiding conflicts with human-induced uses, visitors can

experience the differences in scents that nature has to offer and scent becomes part of the overall enjoyment of the visitor experience.

Resource Objectives for managing air quality within the Basin include the following:

- Promote planting of native vegetation to improve air quality in the Basin.
- Discourage new land uses and activities in the Basin that deteriorate air quality unless impacts can be offset through implementation of measures to improve air quality.
- Promote traffic plans that would minimize generating pollution within the Basin.

Resources Clean Air Act, Pollution Prevention Act, EO 12088 Federal Compliance with Pollution Control Standards.

5.5.6 Visual and Auditory Quality

Goal Preserve the open space and natural esthetic quality and character of the Basin and surrounding view-sheds.

Rationale The visual and auditory qualities within the Basin provide a much-needed respite from city life as it is located in the middle of highly urbanized areas. The ability to see, hear, and interact with nature is increasingly recognized as an important contributor to human health. Where roads bisect the Basin, it is important to minimize and or mitigate the adverse impacts from these elements. There may also be important views to consider when looking at new development within the Basin. Views from the Basin of nearby mountains or important landscape features, both within or outside the Basin, lead to an overall high quality visitor experience and should be preserved.

Resource Objectives for esthetic and auditory quality include the following:

- Discourage adverse visual and noise impacts of existing and new amenities within the Basin.
- Maintain esthetic surroundings at historic sites.
- Encourage location and design of new amenities to avoid or minimize adverse environmental effects in areas near vehicular access points to minimize overall impact.

Resources Aesthetic and Scenic Quality § 232 of WRDA 1996, Environmental and Economic Benefits of Landscape Practices on Federal Landscaped Grounds 60 Fed 408 37.

5.5.7 Cultural Resources

Goal Conserve cultural resources within the Basin through preserving appropriate sites, providing interpretive opportunities, and improving knowledge of these resources.

Rationale Cultural resources need to be protected yet balanced against the educational goals of interpretation of sites. Education and interpretation should be implemented to acknowledge and appreciate the resources while minimizing exposure to theft or vandalism. Nature centers and interpretative panels can provide this function by safely displaying important artifacts of the site and interpreting the history of the site. Actual sites are not to be publicly disclosed as this may lead to theft or vandalism.

Resource Objectives for cultural resources include the following:

- Encourage education and interpretation aspects of cultural sites while maintaining the condition of sites.
- Promote preservation and protection of cultural sites within the Basin.

Resources National Historic Preservation Act, Archeological Resources Preservation Act as amended.

5.6 Land Use Classification: Multiple Resource Management

The Resource Objectives under Multiple Resource Management are specific to the kinds of activities listed under the land use classifications of Recreation – Low Density, Vegetative Management, Inactive and/or Future Recreation.

5.6.1 Recreation – Low Density

Goal Provide a variety of quality outdoor low-density recreational experiences designed for dispersed or low-impact use available to a broad cross section of the visiting public.

Rationale Activities such as walking, hiking, bicycling, horse-back riding, picnicking, primitive camping, wildlife observation, and fishing, provide enjoyable activities that are of less impact to the natural resources of the Basin and may create a higher level of interaction with nature than more intensive types of sports and recreation. These activities lend themselves to small groups such as families with children or school groups interacting together where each member of the group has a chance to participate in activities. These activities can also be good buffers between environmentally sensitive areas and active recreation areas because they are often dispersed throughout the Basin by the use of trails. These activities can provide an increased level of awareness and informal patrol of areas within the Basin.

Resource Objectives for low density recreational areas include the following:

- Promote design of low density recreation amenities to minimize conflicts between activities in the Basin, to minimize impacts to natural resources, and to take advantage of unique views or landmarks that lead to a greater appreciation of the Basin's natural resources.

Resources Federal Water Project Recreation Act, ER 1165-2-550, EP 1165-2-550.

5.6.2 Vegetative Management

Goal Manage land in the Basin to optimize wildlife habitat and native vegetation.

Rationale These land use classifications are of a more general nature than mitigated or environmentally sensitive lands where a special species or cultural resource needs protection. Land can be managed to provide wildlife habitat or plant communities that would naturally occur in the Basin without targeting rare, endangered, or species of special concern. The resource objectives of water, soil conservation, air, olfactory, and visual and auditory quality that are listed under the environmentally sensitive classification apply here as well, but will not be repeated. Where non-native trees and shrubs exist, these should be replaced with appropriate native vegetation over time; however, consideration should be given to preserving landscapes except where provided in association with a specific cultural, historical or recreational experience such as the Japanese Garden at the Tillman Water Treatment Plant or the Cherry Tree Grove.

Resource Objectives for vegetative management areas include the following:

- Promote protection, preservation, and restoration of wildlife habitat and native plant communities appropriate to the Basin.
- Manage resources within the Basin that would preserve or improve the quality of wildlife habitat and create coherent plant communities.
- Use appropriate native plant palettes in new landscaping or when rehabilitating older established landscaped areas.
- Replace non-native vegetation with native species when existing non-native vegetation dies.
- Respect landscapes of significant and/or cultural value.

Resources ER 1130-2-540, EO 13112.

5.6.3 Inactive and/or Future Recreation

Goal Before approving new development on land that is classified as inactive and/or future recreation i.e., those areas of the Basin that are neither designated as wildlife habitat nor recreation, carefully analyze the suitability of such lands for the proposed use since once approved, opportunities for more optimal uses may be permanently lost.

Rationale Natural lands and open space are defined here as areas of the Basin that are neither designated as wildlife habitat nor recreation. To the public they may seem abandoned, yet they may be providing other functions such as providing buffers from conflicting uses, upland habitat, protecting cultural resources or maintaining view-sheds. Before approving any new development, the suitability of such development on these lands must be carefully analyzed and weighed against alternative uses of the land.

Resource Objectives for inactive and/or future recreation areas include the following:

- Discourage land uses in natural lands or open spaces that deteriorate environmental quality, and provide environmental compensation for land uses that adversely affect the natural resources in the area that cannot be phased out or prevented.
- Designate natural areas for the protection of rare and endangered species of flora or fauna, scientific, historical, archeological or visual values.
- Minimize conflicts between land uses, activities, and developments through buffering, screening, and other measures.
- Conserve resources that cumulatively contribute to the Basin's environmental health.
- Preserve areas of unique, sensitive, or significant resources from adverse impacts by other uses, activities or developments. Determine suitability of natural areas for either wildlife habitat or recreation before changing land use classifications.

Resources EO 13112, ER 1130-2-540.

5.6.3.1 Sustainable and Local Agricultural Uses

Goal Allow continuing interim use of sustainably practiced agriculture when it is consistent with preserving open space, rural and pastoral character, environmental quality of the Basin, and the needs of the local community.

Rationale Agricultural use is deemed to be an interim use of Corps lands. However, agriculture in the Basin represents an historic use of the land and could provide education in connection with local history.

Agriculture maintains open space, provides a pastoral quality to the landscape, and can be instructive about our food supply. With the increased emphasis on eating healthy and locally-grown food, these agricultural lands can provide a local food supply that minimizes transportation and the associated carbon footprint.

Resource Objectives for sustainable and local agricultural uses include the following:

- Promote sustainable agriculture as an interim use in the Basin.
- Encourage interim organic agricultural practices utilizing native taxa which provide habitat, feed, and/or forage for wildlife in the Basin.
- Promote agricultural crops that optimize water conservation and rejuvenation of soil nutrients.
- When agricultural lands are to be transitioned to other purposes, encourage land uses that would maintain the existing open space character, such as wildlife habitat or low-impact recreation.
- Encourage practices that minimize or do not impact air quality. Options to improve air quality include incorporating crop residue into the soil, using appropriate levels of tillage, and planting wind breaks, cover crops or strips of native perennial grasses to reduce dust.
- Protect and maintain natural habitat and wildlife around the agricultural land uses. The diversity would enhance natural ecosystems and could aid in agricultural pest management.
- Limit water use by developing drought-resistant farming systems, such as improving water conservation and storage measures, providing incentives for selection of drought-tolerant crop species, using reduced-volume irrigation systems, and managing crops to reduce water loss.
- Improve water quality by addressing issues such as salinization and contamination of ground and surface waters by pesticides, nitrates and selenium.

Resources UC Sustainable Agriculture Research and Education Program.

6

LAND USE CLASSIFICATION AND RESOURCE PLAN RECOMMENDATION

The authorized purpose of the Project is flood risk management while offering a variety of quality recreational opportunities for a broad socioeconomic base of visitors, in a context of high ecosystem function throughout the Basin to the extent compatible with flood risk management.

6.1 Recommended Land Use Classifications

The recommended land use classifications that are proposed in this Master Plan include: Project Operations, Recreation, Environmentally Sensitive, and Multiple Resource Management - Recreation - Low Density, Multiple Resource Management - Vegetative Management, and Multiple Resource Management - Inactive and/or Future Recreation.

The recommended land use classifications and resource plan identifies changes that occur in three primary ways:

- The land use classifications from the previous Master Plan have been updated to reflect the current classification system prescribed by Corps guidance and policy;
- The extent and area of lands included within each proposed land use classification are described, including total acreage and lands proposed for new classifications are mapped in Appendix E Map 23; and
- A description of Corps policy and guidance appropriate for each land use classification has been provided to guide appropriate designation and future development and management of the lands.

6.2 Resource Plan Recommendations

Guidance for the development of Basin lands has been established through nationwide, regional and local laws, rules and regulations. Nationwide regulations and policies are outlined in Chapter 16, ER 1130-2-550 and the “Non-Recreation Outgrant Policy.” The South Pacific Division of the Corps issued SPD Regulation 1110-2-1, “Land Development Proposals at Corps Reservoir Projects,” to clarify acceptable guidelines for development proposals. Additional guidance, developed by the Corps, Los Angeles District is provided in Appendix A.

A variety of recreational and non-recreational facilities have been developed at Sepulveda Dam Basin over the last 50 years. The Corps has prepared additional guidance regarding appropriate uses within each land use classification. This guidance is intended to clarify to the lessees and the public what activities/events may be held within certain areas of the Basin and under what constraints. This guidance also identifies what activities and events are compatible with resource goals and objectives described in Section 5 and in accordance with Corps guidance and regulations on outgranted lands.

Maps 24 and 25 illustrate recreational and restoration opportunities and are discussed below in the Environmentally Sensitive and Inactive and/or Future Recreation classifications.

6.2.1 Recommended Actions Applicable to All Land Use Classifications

A number of recommended actions are applicable to all land use classifications and are followed by actions particular to individual land use classifications. These include:

- Improve condition of existing trails and create new trails where appropriate. Improvement of hiking and other designated use trails in conjunction with restoration measures would increase public access and awareness of biological and other natural resources in the Basin.
 - These improvements should incorporate ecosystem restoration efforts and appropriate design and management to enhance visitors' experiences while not compromising the greater ecosystem.
 - Extending the trail system throughout the Basin with connections to existing trails leading to the Wildlife Area to expand visitors' experience and knowledge of the Basin resources.



Sepulveda Basin Trail through Wildlife Area

- Implement policy of landscaping with indigenous native plants. Identify a plant palette of indigenous native plants to use in landscaping new recreation areas, and replace non-native plant material with native plants over time, except where provided in association with a specific cultural, historical or recreational experience.
- Eradicate invasive exotic species, including but not limited to giant reed (*Arundo donax*), consistent with nationwide policy (EO 13112). Educate the public on the significance of the need for eradication and how action would substantially enhance the natural environment throughout the Basin. Through an Adaptive Habitat Management Plan (AHMP) an invasive species eradication program should be implemented to restore native plant communities.
 - Through the AHMP process with interested stakeholders, create a short term and long – range plan for plant replacement that seamlessly integrates native plants over time in the existing landscape.
 - Recognize that the existing landscape requires more water than the native plants that may replace them and adjust irrigation practices as needed.
 - If and when it becomes necessary to replace whole sections of the landscape with native plants, ensure the successful establishment of the native plants.



Bridges Provide Opportunities for Signage

- Institute a system of way-finding using Corps signage guidelines (EP 310-1-6a, 01Jun 06) to ensure the public and emergency personnel are able to easily navigate the Basin. Combine a system of GPS with trail markers to positively identify locations in the Basin.
- Create signs to be placed throughout the Basin that identifies current locations of visitors as well as other amenities in the Basin.
 - Indicate on signs where park personnel can be reached in case of emergencies.
 - Install signs that indicate length and physical difficulty of trails and estimated walking/hiking times.
 - Institute sustainable resource management practices consistent with those already instated by the City.
- Continue green waste management policies for recycling of lawn clippings, shrub and tree trimmings and green debris, either on site or for composting off site.
- Implement additional “smart irrigation” systems throughout the Basin with satellite-operated controllers that monitor weather conditions and adjust irrigation schedules accordingly. Create an education program to demonstrate how this can be adapted for residential landscapes.
- When replacing irrigation systems, identify zones with similar watering regimes and retrofit to meet these needs; avoid planting schemes where water requirements may be incompatible.
- Regularly evaluate the salinity of soils irrigated with recycled water and balance soil amendment practices to sustain habitat or landscape value.
- Develop a program to manage and recycle construction waste and provide incentives and recognition for lessees and contractors who adopt it per EO 13514.
- Identify a “green list” of contractors who have implemented strong recycling programs and encourage their participation in future projects.
- Retrofit pavement projects with the use of porous pavement alternatives where appropriate to allow for the infiltration of storm-water.

- Implement landscape-based storm-water management systems, such as bio-swales, rain gardens and infiltration areas in retrofits and new construction projects.
- Naturalize edges of stream channels wherever feasible to provide a buffer and cover for wildlife, prevent erosion, and intercept sediment and nutrients that run off from turf surfaces.
- Develop an Integrated Pest Management program that uses alternatives to chemical fertilizers and pesticides.
- Use low voltage solar lighting where feasible.
- Identify potential heat islands and provide landscape-based mitigation to furnish shade and evapotranspiration.

6.2.2 Project Operations

Land classified as Project Operations covers 313.0 acres, including 157.8 acres of roadways within the Basin.

Project Operations land is the most restrictive land use classification. This area is managed by the Corps for operations and maintenance of the Project. While vegetation or trails may be permitted within Project Operations areas, vegetation may need to be cleared out periodically to maintain flood storage capacity; trails may need to be closed off quickly in the event of eminent flooding; and trails may be closed following a storm event due to damage caused by inundation.



Cleared Field for Project Operations

In both the 1981 Master Plan and Supplement 1 to the 1981 Sepulveda Basin Plan dated July 1995, the land to the west of the Los Angeles River and south of Burbank Boulevard had a multiple land use classification of Project Operations and Natural Area (1981) or Wildlife Area (1995). This Master Plan recognizes only Project Operations as a classification and classifies all of this area as Project Operations.

The resource objectives discuss opportunities for education about flood risk management and the operations of the Dam in particular. There are panoramic views from the top of Sepulveda Dam at Burbank Boulevard (where the Corps monument sign is located) and it is recommended that additional

interpretive signage be designed and installed that informs the public about the Los Angeles River Watershed, the history of the Basin, and operation of the Project.

6.2.3 Recreation

A total of 234.6 acres is recommended for classification into the Recreation category.

The land use classification of Recreation is the most flexible or developable classification. This classification allows for amenities such as sports fields and associated support amenities including parking lots, restrooms, concessionaires and other amenities. Recreation areas are generally located in the higher elevations of the Basin as Corps policy restricts certain kinds of structures within given flood-line elevations or they must be mitigated for by being floodable. Requests for development for non-recreational purposes must be evaluated on a site specific basis for compatibility.

At Sepulveda Dam Basin several areas fall under this classification and reflect the current recreation amenities and use of the site. These amenities are very popular and well-maintained by the City. Existing recreation areas, including City and Encino Franklin Fields, presently classified as recreation, are not recommended for reclassification.

Existing recreation areas included for recommendation into this classification include:

- Balboa Sports Complex
- Hjelte Sports Center
- The Encino Franklin Fields and Velodrome
- Pedlow Field Skate Park

The City has requested and received approval for plans to develop additional recreation amenities, specifically a Sepulveda Basin Sports Complex, which was described in detail in the 1953 and 1981 Master Plans. It includes:

- Phase I located west of Balboa Boulevard and south of the Armed Forces Center.
- Phase II located on the “east bowtie” area bounded by the Orange Line Bus-way to the north and Los Angeles River to the south.

According to the *Environmental Assessment/Mitigated Negative Declaration and Initial Study for the Sepulveda Basin Sports Complex*, issued by the City of Los Angeles in June 2006, when all phases are completed, the amenities provided shall include:

- Four youth/teen softball fields
- One synthetic soccer field
- Open multi-purpose fields, picnic areas
- A planted riparian buffer along the Los Angeles River and walking trails. The buffer and trail area are classified as MRM - Vegetative Management.
- A building of approximately 2,000 square feet to accommodate park staff during business hours as well as provide public restrooms.
- A parking lot accommodating approximately 400 parking spaces.

Depending upon how long it takes for the City of Los Angeles to be able to proceed to this phase of development, an updated assessment of recreational needs may be in order.

In addition, the City is currently planning:

- The start of construction of a Universally Accessible Baseball Field, to be located in the southeastern corner of Anthony C. Beilenson Park at the intersection of the Los Angeles River and Hayvenhurst Channel.
- Expansion of Hjelte Sports Center is being considered by the City. Hjelte Sports Center would be expanded to the west into what are now agricultural fields. Softball fields are planned. However, since construction is not imminent, this land remains on a year to year agricultural lease and is classified as Inactive and/or Future Recreation.

6.2.4 Environmentally Sensitive

A total of 119.3 acres is recommended for classification into the Environmentally Sensitive classification. This is the most restrictive land use classification in terms of development and use opportunities. This classification places a strong emphasis on the protection and/or preservation of vegetation, wildlife, and cultural resources. It is recommended that the Sepulveda Basin Wildlife Area be classified as Environmentally Sensitive. Since the construction of the Sepulveda Basin Wildlife Area included the lake and restoration of the surrounding land with a native plant palette, this area has become home to a number of species including ducks, coots, great blue herons, egrets and cormorants. The endangered least Bells' vireo has been documented at the edge of this area (see Map 21). This classification would severely restrict activities and use of the area. It would provide a high level of protection of the area to preserve the habitat value for resident species, and is compatible with Corps environmental stewardship policies, and reflects community desires for protection of wildlife habitat. Activities such as hiking, bird watching, and photography are permitted under Corps guidance. The trails that skirt the edges of this area provide access to the Wildlife Area.



Sepulveda Basin Wildlife Area

Concerns expressed by the public through the community workshop process about the Wildlife Area include:

- People allowing their dogs off-leash/training their dogs to hunt wildlife.
- Unofficial trails have been made cutting through vegetation from the main path to the lake.
- Large encampments of homeless people have been observed in areas of dense vegetation.

Recommendations for the Wildlife Area include:

- Additional restoration of native habitat. Restoration of both upland and riparian community areas would increase the overall quality of the Wildlife Area for wildlife and habitat.
 - Planting native vegetation within the creeks or riparian areas could provide connectivity within the creek corridors and between the creeks and upland habitats.

- Expanding the preservation and restoration of upland habitat in the Wildlife Area and appropriate areas throughout the Basin would increase the quantity and quality of upland habitat. However further study is required.
- Conduct periodic comprehensive biological site surveys to monitor the presence of any rare or endangered species such as the least Bell's vireo.
- Enforcement of a strict leash policy for dogs.
- Further restoration of the area should be identified through a management plan for long-term invasive plant eradication and restore the areas of unofficial trails that have become compacted and devoid of vegetation.
- Several people commented at the community workshops that they were concerned for their safety when walking through the area. Since the wildlife area has become established with dense vegetation, it provides cover for homeless encampments. One way to deal with this is to clear the understory and prune the lower branches of trees so that sight lines are established. However, this runs counter to the establishment of high quality habitat. There are a number of ways to deal with both issues and based upon the resource objectives, this Master Plan proposes:
 - Docent led tours and patrols to keep a constant presence in the area.
 - Signs posted describing the inherent dangers of potential flooding in these areas.
 - Planting "unfriendly" but appropriate native riverine plants such as native roses (*Rosa californica*) at entry points into the areas with appropriate warning signs and plant identification.
 - Periodic but irregular "sweeps" by enforcement personnel to remove encampments and direct people out of the area. Such sweeps cannot be reliably predicted, but if occur frequently enough, the likelihood of people immediately returning is diminished.



Creek and Golf Course

6.2.5 Multiple Resource Management (MRM) - Recreation - Low Density

A total of 801.4 acres is recommended for the MRM - Recreation - Low Density land use classification. MRM - Recreation - Low Density recognizes areas that have less intensive recreational uses such as picnic areas, open play areas, and golf courses. Areas designated as MRM – Recreation- Low Density are better suited to hosting special events because development is limited and open space in these areas can suit multiple use and function. Special events at Sepulveda Basin are preferred to occur in Woodley Park and the north side of Lake Balboa. Other areas classified as MRM - Recreation -Low Density may be considered on a case-by-case basis and must be compatible with the surrounding area to limit impacts to adjacent areas. Special events must comply with guidelines established by the Corps included in Appendix A5.

The following areas are recommended for this classification because of their current low intensity recreational use:

- Woodley Lakes Municipal Golf Course
- Balboa Municipal Golf Course
- Encino Municipal Golf Course

- Anthony C. Beilenson Park with the exception of the Bull Creek Restoration Area and the approved universal access baseball field
- Woodley Park
- Cricket Fields
- Sepulveda Garden Center and community garden plots
- Off-leash Dog Park
- Archery Range
- Model Airplane Field
- ONEgeneration S. Mark Taper Intergenerational Center

Because this classification covers such a large area, recommendations are specific to each of the different parcels and will be addressed individually.

Woodley Lakes, Encino, and Balboa Municipal Golf Courses Corps policy now expressly prohibits golf courses when developing new recreation amenities on Federal lands controlled by the Corps. Existing golf amenities are permitted to remain. Existing golf courses are subject to environmental stewardship policies. The City has taken several steps to institute sustainable practices into the management of its courses. These practices include:

- Use of reclaimed water
- Smart irrigation
- Mulching lawnmowers that keep grass clippings in place
- Composting
- Decreased use of fertilizer
- Keeping herbicides and pesticides to a minimum and using the least toxic material (such as *Bacillus thuriengensis* or Bt).



Golfing in the Basin

In addition, it is recommended that storm-water BMPs should be instituted throughout the golf courses to address runoff which may contain chemical fertilizers, pesticide and herbicides.

Anthony C. Beilenson Park This park includes Lake Balboa, restroom amenities, shade structures, the Bull Creek Restoration Area, and a very popular universal access playground. A universal access baseball field is under development. Special events are frequently held in this area. A site visit revealed a number of issues. These included:

- Conflicts between people and wildlife, in particular that people did not understand that feeding the wildlife is not healthy for the wildlife.
- Areas can get heavily impacted on weekends especially in summer.
- Special events sometimes encroach upon and close down access to restrooms and the universal playground.
- The Bull Creek restoration area needs to be “off limits” to heavy use such as 5K and 10K runs.
- The path around Bull Creek should continue its loop.
- Fishing lines can get tangled in waterfowl.

Actions have already been taken to address some of these issues. Special events are permitted within Anthony Beilenson Park in accordance with the conditions and restrictions provided in Appendix A5.

Specifically, intensive athletic events and heavily attended runs have been re-routed away from the Bull Creek Restoration Area. In addition, the following recommendations are made for this area:

- As part of the rehabilitation of Bull Creek, routing pathways such that they form a continuous loop
- Instituting an educational program that informs the public about the disadvantages to wildlife when fed by people. Increasing interpretive signage around the lake, brochures at the restroom amenities, and enhancing educational opportunities through community outreach, park entrances, and lectures.
- Placing signs in multiple languages informing the public that fishing line disposal containers are on site for public use.
- Monitoring parking capacity and if necessary, posting signs when parking lots are full.



Bird Feeding at Lake Balboa



Bull Creek Path Dead End

Woodley Park The soil in this area appears to be heavily compacted. It is recommended that this area be targeted for replacement of non-native trees and shrubs with native trees and shrubs over time.

Cricket Fields These are long-established uses at the Basin and attract a very diverse user group. It is recommended that these continue to operate and maintained.

The Japanese Garden at the Donald C. Tillman Water Reclamation Plant This garden has a high esthetic value. A strong docent and support group coupled with a nominal user fee allows the garden maintained at its current level. It is recommended that the cultural landscape be maintained.



Japanese Garden



Sepulveda Garden Center Plots

Sepulveda Garden Center The City has indicated a desire to add an additional restroom facility in the area south of Magnolia Boulevard. It is recommended that the area northwest of the current community garden center be considered for expansion of the garden center.

Sepulveda Basin Off-leash Dog Park As one of the more popular sites at the Basin, it is recommended that improvements include: providing for chairs and/or picnic tables for users of the park. With its location adjacent to the Los Angeles River (River) which does not currently meet bacteria water quality standards, it is recommended that Best Management Practices (BMPs) such as vegetated swales be installed to ensure that no animal waste is entering the River and degrading the water quality.

Archery Range This area is recommended for additional maintenance, specifically to restroom facilities. It is recommended that improvements be made to the amenities.

Model Airplane Field There is a very strong, active and vocal user group that self-polices its activities and helps maintain the site.

There is a potential fire risk to surrounding areas, especially the wildlife area which is being recommended for an Environmentally Sensitive land use classification.



Model Airplane Field

ONEgeneration S. Mark Taper Intergenerational Center This facility has evolved from its original use as a teen center into one that accommodates many generations and is a “cooling center” for those in the San Fernando Valley without air conditioning. While an unusual use at a Corps facility, it serves a diverse population. It is recommended that the use and maintenance of the facility be reviewed periodically to ensure that it is still meeting the needs of the community.

6.2.6 Multiple Resource Management - Vegetative Management

A total of 338.7 acres is recommended for classification as Vegetative Management. The vegetative management classification is less restrictive than the Environmentally Sensitive land use classification, but recognized as having environmental value for the vegetation provided. These areas may include non-native plants and/or be subject to disturbance from time to time. Because of the proximity to the model airplane field, the area between Woodley Creek and Woodley Avenue is subject to trampling when fliers

retrieve downed planes and may burn if a plane crashes and catches on fire. The area directly upstream of the Dam may need to have vegetation or debris removed in order to maintain flood risk management capacity when flood waters bring debris or vegetation down to the front of the trash racks. The areas recommended for this land use classification and shown on Map 23 are:

- The area adjacent to the model airplane field roughly bounded by Woodley Creek to the north and west, Woodley Avenue to the east, and the Los Angeles River and Burbank Boulevard to the south.
- The area upstream of the Dam and bounded to the north by Burbank Boulevard, and to the east by the Los Angeles River.
- The area surrounding the Bull Creek Restoration.
- A buffer zone around the Los Angeles River and its tributaries in the Basin: Bull Creek, Hayvenhurst Channel, Woodley Creek, Haskell Creek, and Encino Creek.



Bull Creek Looking Downstream

Lands adjacent to the Los Angeles River and its tributaries are recognized as areas for potential restoration activities by stakeholders and the Corps. Riparian buffers, defined here as the entirety of aquatic, wetland, and riparian forest woodland habitat within the river can reduce runoff rates by increasing flow complexity and travel.

In addition, the area surrounding the Bull Creek Restoration Area is also given this designation recognizing that while the creek and banks were restored, this area is still subject to high levels of activity since it is in the Anthony C. Beilenson Park, one of the most heavily used areas of the Basin.

The major recommendation for this classification is to follow the recommendations for all land use classifications, which is to implement a native planting program where feasible.

6.2.7 MRM - Inactive and/or Future Recreation

A total of 325.0 acres are recommended for the classification Inactive and/or Future Recreation Use. Inactive and/or Future Recreation areas include those areas that are used for non-recreational purposes; are not presently developed (including dirt lots for overflow parking) or that are being utilized on an interim basis for a limited purpose such as for agriculture. The areas recommended for this classification and shown on Map 24 include:

- An area colloquially referred to as the “west bowtie,” which consists of a roughly triangular parcel created west of the intersection of the Orange Line Bus-way and Los Angeles River currently used for agriculture.
- A small area behind the intergenerational center.
- A vacant lot north of Woodley Lakes Municipal Golf Course that extends to the area between the Recreation and Parks Administration Building and the 6th Army site.
- The areas east and west of Hjelte Sports Center currently used for agriculture.
- A small parcel west and north of the community gardens.

A number of non-Corps amenities operate in the Basin including the Donald C. Tillman Water Reclamation Plant, Army National Guard Armory, Armed Forces Center, 6th Army, Air National Guard, and the City of Los Angeles Fire Station. Although the 1981 Master Plan classified these areas as Project Operations (non-Corps managed), the appropriate classification for these facilities is MRM- Inactive and/or Future Use. If in the future, the Corps expands the categories of land use classifications, these areas may fall under a more appropriate classification.



Armed Forces Center

Careful consideration should be given to how lands classified as MRM - Inactive and/or Future Recreation are developed. Once a capital investment has been made and a user group for that recreational activity has been established, a change to the use of the land to another land use classification or type of recreation can be difficult.

Since it is unclear when these lands could be developed, these areas are broken into “opportunity areas” and a series of general recommendations are made based upon input from the community, agencies, the recreational needs assessment, and plans by the lessees.

“West Bowtie” area This area is bounded by the Los Angeles River to the north, and Orange Line Bus-way to the south and east and is currently being used for agricultural purposes. Accessibility to this parcel is limited. While adjacent to ball fields, it is bounded by residential properties whose backyards directly abut the property. It is recommended that if agriculture is no longer desired as an interim use, that this area could be developed to minimize disturbance by noise and lighting:

- As a passive nature park for use the local residents with access by bicycling or walking, planted with native trees with open spaces for informal activities and picnicking.
- As upland habitat similar to the wildlife area with hiking trails.

- A site for ecosystem restoration.

Area behind the ONEgeneration S. Mark Taper Intergenerational Center (Center) With the program of utilizing this area for interaction between generations, this theme could be extended and landscaped in such a way that would complement the activities of the Center. Highly active recreation with its accompanying noise and traffic would not be suitable for this area since it might disturb the people utilizing the Center. This area is recommended for Low Density Recreation and could be developed as:

- A community garden for the people utilizing the Center and providing the Center with fresh fruits and vegetables.
- A picnic area and garden for quiet leisurely activities such as reading or chess.
- An outdoor classroom.

Areas east and west of Hjelte Sports Center currently used for agriculture. The City has indicated a desire to expand the Hjelte Sports Center to the west and utilize this area currently in agriculture for development of softball fields. In keeping with the recommendations of the 1981 Master Plan and recreational needs of the community, it is recommended that future development plans undergo site specific evaluation and review.

The area east of the existing Hjelte Sports Center was originally recommended in the 1981 Master Plan to also be part of the center complex, but in the 1995 Supplement, it is indicated that subsequent studies indicated that this area was subject to frequent flood inundation and not suitable for recreation. It is recommended that this area remain as agriculture for an indefinite period of time.

The parcel west and north of the community gardens appears to be abandoned or used for chipping vegetation. If this function can be performed elsewhere, the community gardens could be expanded into this area and served by the amenities at the Sepulveda Garden Center on Magnolia Boulevard.

6.3 Timeline of Resource Plan Recommendations

The tables below summarize the recommendations discussed above in Section 6.3 according to their timeline for implementation. Table 6.1 identifies the plans that are currently approved for implementation at Sepulveda Basin.

Project	Location	Description
Phase I of the Sepulveda Basin Sports Complex.	West of Balboa Boulevard and south of the Armed Forces Center	Three baseball fields, 1 synthetic turf soccer field, concessions, and grading of entire site.
Phase II of the Sepulveda Basin Sports Complex.	The “east bowtie” area bounded by the Orange Line Busway to the north and Los Angeles River to the south.	Inclusion of area into Sepulveda Basin Sports Complex Phase I, including construction of sports fields, picnic areas, riparian buffer along river, walking trails, administrative building, and parking lot.
Universally Accessible Baseball Field	In Anthony C. Beilenson Park at intersection of the Los Angeles River and Hayvenhurst Channel	Source of funding has delayed implementation.

Table 6.2 Recommended Actions for Improvement and Management Throughout Basin	
Recommended Immediate Measures	
Trail Improvements	<ul style="list-style-type: none"> • Improve hiking trails and other low-density recreational features in conjunction with restoration management measures to increase accessibility to the public and facilitate more awareness of the biological resources found in the Basin. • Connect trails to create loops and facilitate movement throughout Basin. • Decommission disturbed trails and unofficial trails created by Basin visitors. • Structure trails to discourage homeless encampments.
Native Plant Landscaping	<ul style="list-style-type: none"> • Institute invasive plant eradication program for species such as giant reed, tree tobacco, castor bean, salt cedar in conjunction with the AHMP. • Develop a plant palette for replacing non-natives with native species.
Install Way-finding	<ul style="list-style-type: none"> • Create a system of signage throughout the Basin that enables visitors to identify their location as well as other amenities in the Basin. Indicate on signs location of park personnel in case of emergencies, as well as emergency phone numbers. • Where practicable, install signs that indicate length and physical difficulty of trails and estimated walking/hiking times. • Combine a system of GPS with trail markers to identify locations.
Restore Creek Drainages	<ul style="list-style-type: none"> • Eradicate non-native species from riparian habitats and implement restoration program. • Re-design eroded slope banks to allow establishment of native species and curtail erosion. • Introduce meanders, boulders, or other stream features as appropriate to increase habitat value. • Remove trash and debris.
Implement Sustainable Resources Management	<ul style="list-style-type: none"> • Continue green waste management. • Implement “smart irrigation” systems throughout the Basin. Implement landscape-based storm-water management systems. • Naturalize creek edges. • Develop an Integrated Pest Management program. • Use low voltage solar lighting and other energy saving utilities and measures. • Manage special events to ensure no inappropriate use of Environmentally Sensitive and MRM - Vegetative Management Areas.
Implement Safety Measures	<ul style="list-style-type: none"> • Ensure pets are leashed at all times within Basin and install signage to remind pet owners. • Install lighting and emergency call boxes in dark or isolated areas. • Implement parking lot closure procedure for busy summer or holiday periods. • Investigate options for increasing safety within the model airplane field.
Recommended Future Actions for Each Land Classification	
Project Operations	<ul style="list-style-type: none"> • Include education about flood risk management and the operations of the Dam in interpretive signage throughout Basin. • Manage trails and vegetation for elimination of homeless camps.

Table 6.2 Recommended Actions for Improvement and Management Throughout Basin	
Environmentally Sensitive	<ul style="list-style-type: none"> • Include education about flood risk management and the operations of the Dam in interpretive signage throughout Basin. • Restore native habitat, including upland, riparian, and wetland. • Conduct periodic biological surveys, particularly to determine of ESA protected species. • Manage trails and vegetation to limit homeless camps. • Install signage with educational information regarding the hazards of feeding wildlife.
MRM - Recreation - Low Density	<ul style="list-style-type: none"> • Implement stormwater BMPs throughout golf courses and within the off-leash dog park. • Install signage with educational information regarding the hazards of feeding wildlife and encouraging proper disposal of fishing line around Balboa Lake. • Address heavily compacted soils within Woodley Park. • Investigate condition of archery range and potential improvements needed or alternative uses. • Periodically review ONEgeneration, and other amenities, to determine visitation, condition, and adequacy of meeting the community's needs.
MRM - Vegetative Management	<ul style="list-style-type: none"> • Eradicate non-native and invasive species. • Develop native plant palette for restoration plan implementation • Create appropriate riparian vegetation communities along Los Angeles River and associated drainages within Basin.
MRM – Inactive and/or Future Recreation	<ul style="list-style-type: none"> • Investigate potential use opportunities in areas of inactive or agricultural land.
Potential Opportunities for Inactive or Future Recreation Areas	
West Bowtie	<ul style="list-style-type: none"> • Create passive nature park, accessed via foot or bicycle. • Restore native river adjacent upland habitat. • Create wetlands/riparian habitat.
Behind ONEgeneration Center	<ul style="list-style-type: none"> • Establish community garden. • Create picnic area and garden. • Designate for use as outdoor classroom.
Vacant Lot north of Woodley Lakes Municipal Golf Course	<ul style="list-style-type: none"> • Install universal access playgrounds, parks, and picnic areas. • Add formalized overflow parking amenities.
West of Hjelte Sports Center	<ul style="list-style-type: none"> • A conceptual plan for several softball fields has been approved for expansion of Hjelte Sports Center to the west.
Parcel northwest of Community Gardens	<ul style="list-style-type: none"> • Expand community gardens into this open parcel.

6.4 Economic Feasibility

Economic feasibility involves demonstrating the economic value from implementing projects that are sustainable over time in terms of public needs and desires, use and perception, and sponsor operation and maintenance. It is recognized that well maintained recreation amenities are well used, and those that are not have little interest from the public and are often considered unclean and/or unsafe and decline further. When this happens, it often costs more to refurbish and rehabilitate amenities or implement new ones than providing a carefully constructed operations and maintenance program.

While no specific plans are considered under this updated Master Plan, future plans proposed for recreation development by the lessees are guided by Corps policies and guidelines for demonstrating the need and economic feasibility of such proposals. This includes documenting financial capability on the part of the project sponsor, sufficient funding to complete the proposed project, as well as long term operation, maintenance, and repair. The proponent must also show the economic need for the project by providing market survey information to indicate community desire and the need for the project to indicate its future community use and intrinsic value.

Corps policy requires sponsor documentation of new project economic feasibility which includes:

- A project proponent's financial capability to maintain the whole, including existing projects before new projects may be developed;
- Demonstrating that existing amenities are well maintained, are in good working order, and will continue after implementation of a new project;
- Has the resources to maintain new amenities and will be operate and maintain these in the same manner and condition as existing amenities.

If a sponsor is not able to provide funding through normal budgetary means to maintain quality and use to a safe and clean standard, funds for operation and maintenance may need to be found elsewhere. This may involve the charging of use fees for certain activities such as ball fields, group reservations and special events (fees are subject to District Commander approval). Other sources include state and local funding sources, trusts, and private organizations to help defray costs. Public volunteer programs to staff amenities such as nature areas and visitor center could be pursued.

7

CONCLUSION

The Federal government owns and the Corps manages eleven Basins in southern California with the primary purpose of flood risk management for people and property downstream. Since the Basins are “dry” most of the year, holding water only after storm events occur, usually December through March, Basin lands may also be used for other purposes, primarily recreation that may not impede flood risk management operations. Over sixty (60) years of Federal laws and regulations have empowered the Corps to work with local interests to develop, construct, operate, and maintain recreation amenities within the Basins serving community needs.

The Corps has a formal arrangement with the City of Los Angeles through its Department of Recreation and Parks to lease a majority of the Basin land to the City for recreation purposes. Over the last fifty (50) years the Corps and the City have developed a variety of recreation amenities with Federal and City funds through cost sharing agreements. Amenities include ball fields, picnic areas, trails, and lakes.

The Master Plan itself is a tool for Corps, lessees, and public interests to guide future development in the Basin. Corps regulations and policies guide the development of amenities through the Master Plan. This Master Plan is an update of the last Master Plan for Sepulveda Dam Basin completed in 1981. Although Corps regulations recommend the update of a Master Plan every five (5) years, Federal funding is not always available to initiate and complete this process. As a result, this Master Plan incorporates a longer time frame into it, identifying short and long term recommendations for recreation development, amenity maintenance, restoration of native habitats, and other actions.

This has been accomplished through a process which has:

- Identified existing recreation amenities and other facilities within the Basin,
- Incorporated the local community’s needs and desires for recreation development,
- Developed resource goals and objectives, and
- Developed additional policies to facilitate these goals and objectives.

As a result, this Master Plan identifies land use classifications for the Basin based on this process within the definitions of Corps regulations. This will guide interested parties for future development through years to come to preserve and protect the Nation’s lands and resources.

8 **APPROVAL**

I have reviewed this Updated Master Plan and Environmental Assessment for the Sepulveda Dam Basin prepared by my staff for the guidance of future development for recreation and environmental stewardship efforts within the Sepulveda Dam Basin located in the City of Los Angeles, Los Angeles County, California in keeping with the Corps mission, values and vision.

This Master Plan is technically sound, environmentally acceptable, and meets the appropriate requirements of Corps regulations guiding the development of Master Plans for Corps water and land resource projects.

Therefore, I approve this Master Plan for Sepulveda Dam Basin as presented, subject to updates as needed for the benefit of flood risk management, public use, and environmental stewardship.

Date

R. Mark Toy
Colonel, U.S. Army
District Commander

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ACRONYMS AND GLOSSARY

ac	Acre
ac-ft	Acre-feet
ADA	Americans with Disabilities Act
AGR	Agricultural
AHMP	Adaptive Habitat Management Plan
AQMD	Air Quality Management District
ARRA	American Recovery and Reinvestment Act
AT&T	American Telephone & Telegraph
BMP	Best management practices
CAAQS	California Ambient Air Quality Standards
CADC	California Department of Conservation
CAP	Continuing Authorities Program
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CDWR	California Department of Water Resources
CECW-ZA	Headquarters, Corps of Engineers Civil Works
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CESA	California Endangered Species Act
CESPD	Corps of Engineers South Pacific Division
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGAP	California Gap Analysis Project
CH ₄	Methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalents
Corps	U.S. Army Corps of Engineers
CRWQCB	California Region Water Quality Control Board
CWA	Clean Water Act
dB	Decibels
DPS	Distinct Population Segment
DSAC	Dam Safety Action Classes
DTSC	Department of Toxic Substance Control
DWR	Department of Water Resources
EA	Environmental Assessment
EC	Engineering Circular
EDR	Environmental Data Resources, Inc.
EHP	Earthquake Hazard Program
EIS	Environmental Impact Statement
EM	Engineer Manuals
EMT	Emergency Medical Treatment
ENSO	El Niño- Southern Oscillation

EO	Executive Order
EOP	Environmental Operating Procedures
EP	Engineer Pamphlets
EPA	Environmental Protection Agency
ER	Engineer Regulations
FCA	Flood Control Acts
FONSI	Finding of No Significant Impact
GHG	Greenhouse gas
GIS	Geographic information system
GPS	Global Positioning System
GWR	Ground Water Recharge
HEP	Habitat Evaluation Procedure
HFCs	Hydrofluorocarbons
HIS	Habitat Suitability Indices
HTRW	Hazardous, Toxic, and Radioactive Waste
HTWM	Hazardous and Toxic Waste and Materials
IND	Industrial Service Supply
IPCC	Intergovernmental Panel on Climate Change
IWMB	Integrated Waste Management Board
IWR	Institute for Water Resources
LA	Los Angeles
LACDA	Los Angeles County Drainage Area
LAD	Los Angeles District
LARAP	City of Los Angeles Department of Recreation and Parks
LARWQCB	Los Angeles Regional Water Quality Control Board
LAX	Los Angeles International Airport
LEED	Leadership in Energy and Environmental Design
LTG	Lieutenant general
LUST	Leaking Underground Storage Tanks
LWCF	Land and Water Conservation Fund
LWRM	Limited Warm Freshwater Habitat
MCL	Maximum Contaminant Level
mg/L	Milligrams per liter
MOU	Memorandum of Understanding
MP	Master Plan
Mph	Miles per hour
MRM	Multiple Resource Management
MSC	Major Subordinate Command
MUN	Municipal Water
N ₂ O	Nitrous oxide
NAAQS	National ambient air quality standards
NCRS	Natural Resources Conservation Service
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO ₂	Nitrogen dioxide
NPDES	National pollutant discharge elimination system
NPL	National Priorities List
NRHP	National Register of Historic Places
NWI	National Wetland Inventory

O&M	Operation and maintenance
O ₃	Ozone
OHW	Ordinary High Water
OSHA	Occupational Safety and Health Act
OWUS	Other waters of the United States
P.L.	Public Law
PCE	Tetrachloroethylene
Ppm	Parts per million
PROC	Industrial Process Supply
RARE	Rare, Threatened or Endangered Species
RCRIS	Resource Conservation and Recovery Information System
REC1	Recreational Contact 1
REC2	Recreational Contact 2
RHA	Rivers and Harbors Act of 1899
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCEDC	Southern California Earthquake Data Center
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SF ₆	Sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
SPD	South Pacific Division
SSURGO	Soil Survey Geographic Database
SWF/LF	Solid waste amenities and landfills
SWIS	Solid Waste Information System
TCE	Trichloroethylene
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TWRP	Tillman Water Reclamation Plant
UAP	Universally Accessible Playground
ug/m ³	Micrograms per Cubic Meter of Air
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USNWS	U.S. National Weather Service
VCP	Voluntary Cleanup Program
WARM	Warmwater Habitat
WET	Wetlands
WILD	Wildlife Habitat
WRCB	Water Resources Control Board
WRDA	Water Resources Development Act

Note: Cited definitions are direct quotes from Corps regulations.

Abutment A geological feature that each end of a Dam is tied into for support.

Archaeological resources Surface or buried material remains, buried structures, or other items used or modified by people.

Attainment area A geographic area that is in compliance with the National and/or California Ambient Air Quality Standards (NAAQS or CAAQS).

Baseflow The sustained or fair weather flow in a channel due to subsurface runoff. In most streams, baseflow is composed largely of groundwater effluent. Also known as base runoff.

Basin Land area comprised of all Federal lands managed by the Corps that were acquired for the construction, operation and maintenance of the Sepulveda Dam Basin.

Carbon dioxide equivalent Metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). Carbon dioxide equivalents are commonly expressed as “million metric tons of carbon dioxide equivalents (MMTCO₂Eq).” The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP.

Carbon dioxide A naturally occurring gas, and a by-product of burning fossil fuels and biomass, and land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the earth’s radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1.

Channel Portion of the project carrying flow may be described as: natural, constructed, rip-rapped, concrete, trapezoidal, leveed, overbank, low flow, bypass etc.

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from: natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun; natural processes within the climate system (e.g. changes in ocean circulation); human activities that change the atmosphere's composition (e.g. through burning fossil fuels) and the land surface (e.g. deforestation, reforestation, urbanization, desertification, etc.).

Criteria air pollutant Air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM-10 (see individual pollutant definitions).

Dam Barrier built to hold back flowing water.

Discharge Volume of water that passes through a given cross-section per unit time; commonly measured in cubic feet per second (cfs) or cubic meters per second (m³/s) and also referred to as flow. In its simplest concept discharge means outflow; therefore, the use of this term is not restricted as to course or location, and it can be applied to describe the flow of water from a pipe or from a drainage basin.

Diversions The taking of water from a stream or other body of water into a canal, pipe, or other conduit.

Drainage area Area of a stream at a specified location is that area, measured in a horizontal plane, which is enclosed by a drainage divide.

Easement lands Land over which the Federal government acquired an interest in real estate to support construction, operation and/or maintenance of the project. Not equivalent to fee title.

Ecosystem management An ecosystem is a dynamic community of biological organisms, including humans, and the physical environment in which they interact. Ecosystem management by the Corps is a proactive, goal-driven approach to sustaining ecosystems and their values. The Corps will manage communities to promote regional environmental values occurring on project lands toward sustaining ecosystems in which the project lands and waters occur. Such ecosystems and communities will be identified in resources objectives and/or land use classifications contained in the Master Plan and the OMP. Preferential treatment will be given to the management of ecosystems, communities, and habitats identified as having special status species.

Ecosystem A biological community together with the physical and chemical environment in which it interacts.

El Niño A warm water current that periodically flows along the coast of Ecuador and Peru and northward, disrupting the local fishery. This oceanic event is associated with a fluctuation of the inter-tropical surface pressure pattern and circulation in the Indian and Pacific Oceans, called the Southern Oscillation.

Embankment Bank of earth, concrete, or other material constructed to hold back water.

Emissions Release of a substance (usually a gas when referring to the subject of climate change) into the atmosphere.

Endangered species Any species which is in danger of extinction throughout all or a significant portion of its range, and has been so listed by the FWS/NMFS at 50 CFR 17.11 and 17.12.

Enhancement Enhancement measures/activities are those measures/activities taken above a stewardship level (i.e., level of required to sustain fish and wildlife resources for the life of the project), and those measures/activities which produce an increase or concentration of animal numbers for the purpose of recreation benefits. Historically the term “enhancement” has been used an indication of a net habitat improvement over the without-project condition. However, this term now implies making the habitat better for some species than it would have been naturally in the absence of human intervention. Since this goes beyond the goal of ecosystem restoration, the use of the term, enhancement is rarely appropriate in Corps documents.

Ethnohistoric archaeological resources Native American archaeological sites that also show evidence of early European contact such as the presence of trade beads.

Ethnohistory Description of the native cultures that were encountered by the Europeans using contemporary documents and oral histories.

Evaporation The process by which water is changed from the liquid or the solid state into the vapor state. In hydrology, evaporation is vaporization and sublimation that takes place at a temperature below the boiling point. In a general sense, evaporation is often used interchangeably with evapotranspiration or ET.

Flood peak The highest value of the stage or discharge attained by a flood; thus, peak stage or peak discharge.

Flood risk management Flood risk management is the process of identifying, evaluating, selecting, implementing, and monitoring actions taken to mitigate levels of risk. Scientifically sound, cost-effective, integrated actions are taken to reduce risks. Social, cultural, ethical, environmental, political, and legal considerations are accounted for in the process.

Flood-frequency curve Graph showing the number of times per year on the average, plotted as abscissa, that floods of magnitude, indicated by the ordinate, are equaled or exceeded.

Floodplain The lowland that borders a river, usually dry but subject to flooding.

Gaging station A particular site on a stream, canal, lake, or Basin where systematic observations of gage height or discharge are obtained.

Global climate change The term climate change is often used interchangeably with the term global warming, but according to the National Academy of Sciences, "the phrase 'climate change' is growing in preferred use to 'global warming' because it helps convey that there are [other] changes in addition to rising temperatures."

Global warming An average increase in the temperature of the atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns. Global warming can occur from a variety of causes, both natural and human induced. In common usage, "global warming" often refers to the warming that can occur as a result of increased emissions of greenhouse gases from human activities.

Greenhouse gas (GHG) Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), ozone (O₃), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Groundwater Water in the ground that is in the zone of saturation, from which wells, springs, and groundwater runoff are supplied.

Historic archaeological resources Archaeological sites whose deposits that post-date European contact.

Hydraulics The branch of physics having to do with the mechanical properties of water and other liquids in motion and with the application of these properties in engineering.

Hydric Pertaining to a wet or moist environment.

Hydrograph A graph showing stage, flow, velocity, or other property of water with respect to time.

Hydrology The study of water; generally focuses on the distribution of water and interaction with the land surface and underlying soils and rocks.

Hydrophytic A plant that grows only in water or very moist soil.

Infiltration The movement of water from the land surface into the soil.

Interpretive services Communication and education processes provided to internal and external audiences which support accomplishment of Corps missions, tell the Corps story, and reveal the meanings of, and relationships between natural, cultural, and created environments and their features.

Invasive species An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. A species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Invert As used in hydraulic engineering, the bottom or lowest point or elevation of a structure such as a pipe, conduit or channel.

Lacustrine Wetlands and deep water habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents or lichens with greater than 30% areal coverage and (3) total area exceeds 20 acres (Cowardin et al. 1979).

Land allocation The identification and documentation of lands at Civil Works projects in accordance with the authorized purposes for which they were or are to be acquired. There are four primary land allocation categories applicable to Corps projects: (1) operations (i.e., flood control, hydropower, etc.), (2) recreation, (3) fish and wildlife, and (4) mitigation. (EP 1130-2-550 15 Nov 96 1-4.c.)

Land use classifications All lands are acquired for authorized project purposes and allocated for these uses. The classification process is a further distribution of project lands by management categories, which based upon resources available and public needs, will provide for full utilization while protecting project resources. (EP 1130-2-550 15 Nov 96 1-4.d.)

Ldn It is a descriptor of noise level based on energy equivalent noise level (L_{eq}) over the whole day with a penalty of 10 dB(A) for night time noise.

Limnetic All deep water habitats within the Lacustrine System (Cowardin et al. 1979).

Market area The geographic range that people are expected to reasonably travel from to visit the Basin area.

Master Plan A conceptual document guiding the Corps responsibilities pursuant to Federal laws and regulations to preserve, conserve, restore, maintain, and manage the project lands, waters, and associated resources. The plan addresses all resources including but not limited to fish and wildlife, vegetation, cultural, esthetic, interpretive, recreational, mineral, commercial, and outgranted lands, easements and water. The Master Plan is the document that organizes authorized activities, i.e., established by project specific authorities as well as general authorities for stewardship responsibilities which guide the project's role within the region, watershed, and ecosystem.

Mitigation Mitigation measures authorized by Congress or approved by Headquarters compensate for ecological resources unavoidably and adversely affected by a Corps project. Mitigation includes stand-alone projects; work undertaken concurrently with project construction; and operation, maintenance and management measures.

Model A physical or mathematical representation of a process that can be used to predict some aspect of the process.

Multiple Resource Management Lands managed for one or more of, but not limited to, these activities to the extent that they are compatible with the primary allocation(s). The activities should be fully explained in the narrative portion of the Master Plan.

Native species With respect to a particular ecosystem, a species that other than as a result of an introduction, historically occurred or currently occurs in that ecosystem.

Nitrogen oxides (oxides of nitrogen, NO_x) General term pertaining to compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO is a criteria air pollutant, and may result in numerous adverse health effects.

Non-attainment area Geographic area identified by the U.S. Environmental Protection Agency and/or California Air Resources Board as not meeting either National Ambient Air Quality Standards or California Ambient Air Quality Standards for a given pollutant.

Non-native species With respect to an ecosystem, any species including its seeds, eggs, spores, or other biological material capable of propagating that species that is not native to that ecosystem.

Non-statutory mitigation The definition of mitigation is broadened to include “all measures necessary to make the Corps project whole.” No specific statute may address these actions, yet damages are incurred and appropriate mitigation should be provided. Non-statutory mitigation actions may take the form of actions to restore project value, such as replacing trees, soil stabilization, and providing new, relocated, or replacement amenities.

Operational Management Plan A separate document from the Project Master Plan that outlines in detail the specific operation and administration requirements for natural resources and park management consistent with the approved Project Master Plan. Management strategies consistent with authorized project purposes, approved resource use objectives, and land designations will be established in the document. The document will be used as a working tool for the overall management of the project on a day to day basis.

Outgrant Authorizes a non-Federal entity the right to use Army-controlled real property. It is a written legal document that established the timeframe, consideration, conditions, and restrictions on the use of Army property.

Outlet works The hydraulic structure that controls the flow of water through a dam, usually consisting gates upstream of a lined conduit or pipe.

Outreach activities Communication efforts involving programs that reach diverse populations such as students, teachers, organized groups such as Boy Scouts, Girl Scouts, 4-H, and the general public, beyond the physical boundaries of Corps projects and amenities.

Palustrine wetlands that are either dominated by hydric vegetation, or if not dominated, then are less than 20 acres in size and 6 feet in depth.

Partial-duration flood series A list of all flood peaks that exceed a chosen base stage or discharge, regardless of the number of peaks occurring in a year.

Planning area The planning area is a geographic space with an identified boundary that includes the area identified in the study authorizing document and the location of alternative plans which are often called project areas. The locations of resources that would be directly, indirectly, or cumulatively affected by alternative plans are also called the affected area.

PM10 An air pollutant consisting of small particles with an aerodynamic diameter less than or equal to a nominal 10 micrometer (about 1/7 the diameter of a single human hair). Their small size allows them to make their way to the air passages deep within the lungs where they may be deposited and result in adverse health effects. PM10 also causes visibility reduction.

PM2.5 An air pollutant consisting of small particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.

Precipitation As used in hydrology, precipitation is the discharge of water, in liquid or solid state, out of the atmosphere, generally upon a land or water surface. It is the common process by which atmospheric water becomes surface or subsurface water. The term precipitation is also commonly used to designate the quantity of water that is precipitated. Precipitation includes rainfall, snow, hail, and sleet, and is therefore a more general term than rainfall.

Prehistoric archaeological resources Archaeological sites whose deposits date to the time before the European presence in the area.

Prehistory The time period and cultures that inhabited the area before the arrival of Europeans.

Recreation – Low Density Recreation activities such as hiking, primitive camping, wildlife observation, hunting, or similar low density recreational activities.

Recreation Land developed for intensive recreational activities by the visiting public, including developed recreation areas and areas for concession, resort, and quasi-public development. At a new project, recreation areas planned for initial development will be included in this classification. Future areas will be classified as multiple resource management until initiation of the development.

Recurrence interval (return period) The average interval of time within which the given flood will be equaled or exceeded once. When the recurrence interval is expressed in years, it is the reciprocal of the annual exceedance probability (AEP).

Reservoir A pond, lake, or pool, either natural or artificial, for the storage, regulation, and control of water, also called a Basin.

Resource objectives Clearly written statements that are specific to a project or group of projects. They specify the attainable options for resource development and/or management. They must be consistent with authorized project purposes, Federal laws and directives, regional needs, resource capabilities, and expressed public desires.

Risk The chance or probability of damage, loss, or injury.

Runoff That part of the precipitation that appears in surface streams. It is the same as streamflow unaffected by artificial diversions, storage, or other works of man in or on the stream channels.

Southern oscillation This coupled atmosphere-ocean phenomenon is collectively known as El Niño-Southern Oscillation. During an El Niño event, the prevailing trade winds weaken and the equatorial counter current strengthens, causing warm surface waters in the Indonesian area to flow eastward to overlie the cold waters of the Peru current. This event has great impact on the wind, sea surface temperature, and precipitation patterns in the tropical Pacific. It has climatic effects throughout the Pacific region and in many other parts of the world. The opposite of an El Niño event is called La Niña.

Special event Special events at Corps lakes such as water carnivals, fishing tournaments, boat regattas, music festivals, dramatic presentations, and other special recreational program of interest to the general public.

Species A group of organisms all of which have a high degree of physical and genetic similarity, generally interbreed only among themselves, and show persistent differences from members of allied groups of organisms.

Spillway Hydraulic structure whose purpose is to bypass flow that exceeds the storage and/or release capacity of a dam.

Stage The height of a water surface in relation to a datum.

Stewardship Natural resources management through a stewardship concept ensures the conservation, preservation, or protection of those resources for present and future generations. Stewardship focuses on sustaining ecosystems. Stewardship shall be applied in a biological community context, thereby providing protection for the existing species populations, communities, habitat types and ecosystems.

Storage Water artificially or naturally impounded in surface or underground reservoirs. The term regulation refers to the action of this storage in modifying downstream streamflow. Also, water naturally detained in a drainage basin, such as ground water, channel storage, and depression storage. The term drainage basin storage or simply basin storage is sometimes used to refer collectively to the amount of water in natural storage in a drainage basin.

Stream A general term for a body of flowing water. In hydrology the term is generally applied to the water flowing in a natural channel as distinct from a canal. More generally as in the term stream gaging, it is applied to the water flowing in any channel, natural or artificial.

Streamflow The discharge that occurs in a natural channel. Although the term discharge can be applied to the flow of a canal, the word streamflow uniquely describes the discharge in a surface stream course. The term streamflow is more general than runoff, as streamflow may be applied to discharge whether or not it is affected by diversion or regulation

Streamgaging The process and art of measuring the depth, area, velocity, and rate of flow in natural or artificial channels.

Traditional cultural properties Places associated with the cultural practices or beliefs of a living community. The significance of these places sites is derived from the role the property plays in a community's cultural identity as defined by its beliefs, practices, history and social institutions.

Water year In US Geological Survey reports dealing with surface water supply, the 12-month period, 1 October through 30 September. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ended 30 September 1959, is called the 1959 water year.

Watershed An area characterized by all direct runoff being conveyed to the same outlet. Similar terms include basin, drainage basin, catchment, and catch basin. A part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

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