Appendix H

Draft Community Impact Assessment for the Carryover Storage and San Vicente Dam Raise EIR/EIS

Prepared by CIC Research Inc.

Draft

DRAFT SOCIOECONOMIC IMPACT ASSESSMENT FOR THE CARRYOVER STORAGE PROJECT SAN VICENTE PROPOSED ACTION AND ALTERNATIVES

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July 20, 2007

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1.0 INTRODUCTION

The overall purpose of the Carryover Storage and San Vicente Dam Raise Project (CSP) is to substantially increase the reliability and flexibility of the regional water supply by providing the San Diego County Water Authority (Water Authority) with facilities to accumulate and store approximately 100,000 acre feet (AF) of water. Through the use of carryover storage, water can be accumulated during wetter years/seasons, when supplies are available, and used in drier years/seasons or during droughts, when supplies are in higher demand. Carryover storage would provide approximately 100,000 AF of local storage and facilitate the reliable and efficient delivery of water to residents of the Water Authority service area through the year 2030.

This technical report provides a detailed assessment of issues related to social and economic impacts that would result from implementation of the CSP ("Proposed Action) and alternatives. The locations of the Proposed Action and alternatives are illustrated on Figure 1. The purpose of this report is to assist the Water Authority in the environmental analysis efforts for the Proposed Action and alternatives as they relate to socioeconomic issues.

The community impact assessment addresses existing conditions of the local community's social and economic base, and identifies impacts to this local socioeconomic base resulting from the Proposed Action and alternatives. Impacts to the local economy (including businesses and the local tax base), community residents, the community character, and the overall health, safety, and welfare of the community are evaluated in this study. Impacts to local land use plans and policies are addressed in this report as well, including impacts on growth for the local community and the greater San Diego region. Appropriate mitigation measures are provided as recommended actions for all substantial socioeconomic impacts identified. Finally, a Community Impact Assessment Checklist is included in Appendix A.

1.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1.1 Purpose and Need Overview

Basic Project Purpose -	Water Storage Reliability
Project Need -	The CSP is needed to increase water storage reliability for the region by the year 2011. The project would provide approximately 100,000 acre-feet of local storage and facilitate the reliable and efficient delivery of water to residents of the Water Authority service area through the year 2030.
Overall Project Purpose -	The overall purpose of the CSP is to substantially increase the reliability and flexibility of the regional water supply by providing the Water Authority with facilities to accumulate and store approximately 100,000 acre-feet of water.

1.1.2 Project Need

The CSP is needed to increase water storage reliability for the region by the year 2011. The project would provide approximately 100,000 acre-feet of local storage and facilitate the reliable and efficient delivery of water to residents of the Water Authority service area through the year 2030.

During dry weather periods, increased regional demand for water may exceed local supplies resulting in potential water shortages. The immediate need for carryover storage was documented in the Water Authority's Regional Water Facilities Master Plan (December 2002). The purpose of the Master Plan was to evaluate the Water Authority's ability to meet its mission of providing a safe and reliable supply of water to its member agencies through the year 2030. Within the Master Plan, three water supply alternatives to meet the Water Authority's mission were presented and analyzed. The reliability of each supply alternative was modeled, with and

without 100,000 acre-feet of carryover storage. In 2003, the Water Authority approved a supply alternative that featured developing future water supplies from the west – seawater desalination. The Master Plan included 100,000 acre-feet of carryover storage as a component of each supply alternative and a means to ensure the reliable delivery of water to Water Authority member agencies. In 2005, the Water Authority further refined its water supply and demand mix in the Urban Water Management Plan (UWMP) update. The UWMP identified the need for carryover storage above and beyond the 100,000 acre-feet identified in the Master Plan. A carryover storage volume of approximately 100,000 acre-feet would provide a substantial increase in reliability for the regional water supply.

The Water Authority has identified three main needs for carryover storage:

1. **Enhance reliability of the water supply:** Carryover storage provides a reliable and readily available source of water during periods of shortage, such as during dry years.
2. **Increase system efficiency:** Carryover storage provides operational flexibility to serve above normal demands, such as those occurring during peak summer months or extended droughts, from locally stored water rather than by the over-sizing of the Water Authority's imported water transmission facilities.
3. **Better management of water supplies:** Carryover storage allows the Water Authority to accept additional deliveries from its existing State Water Project- and Colorado River-derived sources during periods of greater availability, such as during wet years, to increase water availability locally during periods of shortage, such as during dry years.

1.1.3 Project Purpose and Objectives

The overall purpose of the CSP is to substantially increase the reliability and flexibility of the regional water supply by providing the Water Authority with facilities to accumulate and store approximately 100,000 acre-feet of water.

Water would be accumulated, when it is available, from a variety of sources and, once stored, would provide a reliable local reserve against shortages when supply sources are limited. This type of operation is well suited for improving supply reliability during droughts. Through the use of carryover storage, water can be accumulated during wetter years/seasons, when supplies are greater, and used in drier years/seasons or during droughts, when supplies are in higher demand. As documented in the Master Plan, a carryover storage volume of approximately 100,000 acre-feet at the San Vicente Dam/Reservoir provides a substantial increase in reliability for the regional water supply.

Objectives of the CSP include:

- Providing approximately 100,000 acre-feet of readily available, locally stored water for distribution to member agencies during supply shortages by the year 2011;
- Increasing system reliability and operation flexibility;
- Locating new facilities in a manner that reduces the need for additional improvements to the Water Authority's infrastructure network;
- Minimizing environmental and social impacts, and:
- Minimizing costs.

Figure 1
Regional Location Map
San Vicente and Moosa CSP Reservoir Sites

SOURCE: San Diego County Water Authority, 2006

1.2 REGULATORY SETTING

This community impact analysis is prepared in compliance with the National Environmental Policy Act (NEPA) and CEQA. Additional environmental statutes that are generally applicable to the community impact analysis for the Proposed Action and alternatives are listed below.

- Farmland Protection Policy Act of 1981 as amended. This act is intended to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses. The act also requires these programs to be compatible with state, local, and private efforts to protect farmland.
- Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994. This order requires federal agencies to develop strategies to ensure that the adverse impacts of their programs to not disproportionately affect minority and low-income populations.
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. The acquisition and relocation activities conducted by the Water Authority must follow all guidelines and regulations in accordance with the Uniform Acquisition and Relocation Act.
- Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. Federal agencies are directed, as appropriate and consistent with the agency's mission, to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. Agencies are encouraged to participate in the implementation of this order by ensuring that their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

1.3 METHODOLOGY

This socioeconomic impact assessment relied heavily on published data and field surveys to gain insight as to the potential impacts to residents and recreational lake users. Socioeconomic and demographic characteristics for the local area and the region were pulled from published data sources such as the 2000 U.S. Census, the San Diego Association of Government's (SANDAG's) 2005 population profile, and from SANDAG's 2030 forecast estimates. A field survey of recreational lake users was combined with the field investigations,

published data, and judgement to estimate the socioeconomic characteristics for residents and lake users.

1.3.1 LITERATURE REVIEW

This study was based upon an extensive review and analysis of on-line property records, San Diego County Assessors maps, demographic forecasts, U.S. Census data, SANDAG's 2030 demographic projections, local economic publications, and numerous other sources of published information. This study was also prepared using guidance from NEPA, the Council on Environmental Quality, and the Army Corps of Engineers (Corps). A list of study references is included in Chapter 5.0.

1.3.2 FIELD INVESTIGATION EFFORT

A field investigation for the proposed San Vicente 100K footprint was conducted on October 14, 2005. CIC interviewed visitors at the San Vicente Reservoir as well as City personnel working in the concession area during the first field investigation, prior to the permanent closing of the concessions by the City of San Diego. Additional interviews were conducted with San Vicente visitors at the lake to determine the characteristics and opinions of lake users. A field investigation for the Moosa 100K footprint (i.e., reservoir inundation limits of 1,258 feet AMSL, marina, downstream dam construction zone, outlying features surrounding the reservoir, and Moosa pipeline corridor) was conducted on September 8, 2006. Further field investigations for San Vicente were conducted on September 14, 2006 and October 21, 2006.

San Diego County Assessor's data were combined with the field reviews to identify the parcels and land uses that would be impacted by the dam construction and the reservoir inundation area. Each parcel was identified by assessor's parcel number, the property owner, parcel size, and land use.

1.3.3 SURVEY OF RECREATION USERS

Face-to-face interviews were conducted with recreation users at the San Vicente Lake. The survey data collected from residents reinforced the available socioeconomic data available from the 2000 U.S. Census and from other published sources. These various data sources combined with the field investigations were used to assess the potential for community and environmental justice impacts, as well as supporting the identification of specific impact issues.

2.0 Alternative 1: San Vicente 100,000 AF RESERVOIR (Proposed Action)

2.1 ENVIRONMENTAL SETTING

2.1.1 San Diego Region's Reservoirs and Lakes

There are 20 lakes/reservoirs in San Diego County. Nine of the reservoirs in the County are owned by the City of San Diego; Sutherland, San Vicente, and El Capitan reservoirs are located in the northeastern portion of the County, Upper and Lower Otay lakes are located in the southern portion of the County, and Barrett Reservoir is located in the southeastern portion of the County. Lake Hodges and Miramar are located in the northern portion of the City, and Lake Murray is located in the eastern portion of the City. All lakes and reservoirs in San Diego County are man-made (Figure 2).

Figure 2
Lakes and Reservoirs in San Diego County

The lakes provide water storage and enable water treatment, as well as providing a reserve water supply in drought situations or other water shortages. To protect the safety of the water supply, body contact is very limited. Swimming, bathing, wading and diving are not permitted at any of the City's lakes.

2.1.2 SV 100K Footprint

The San Vicente Reservoir is located in south central San Diego County, approximately 20 miles northeast of downtown San Diego. The dam and reservoir are owned and operated by the City of San Diego for water supply purposes, mainly to supply the Alvarado Water Treatment Plant. The reservoir is bordered on the south by the community of Lakeside, on the east by the Barona Tribal lands, and on the north and west by mostly undeveloped land that is within the jurisdiction of the County of San Diego.

Figure 3
San Vicente Reservoir Area Vicinity

Scattered residences occur both to the north and south of the reservoir, and extensive mining operations occur to the southwest. Access to the dam site is via Vigilante Road and Moreno Avenue. Figures 4 and 5 illustrate the adjacent land uses for the project area.

Major facilities that currently exist at the SV 100K footprint include the San Vicente Dam and Reservoir, a marina, water conveyance facilities, access roads, and City of San Diego facilities (maintenance yard, trailers, and a reservoir keeper house).

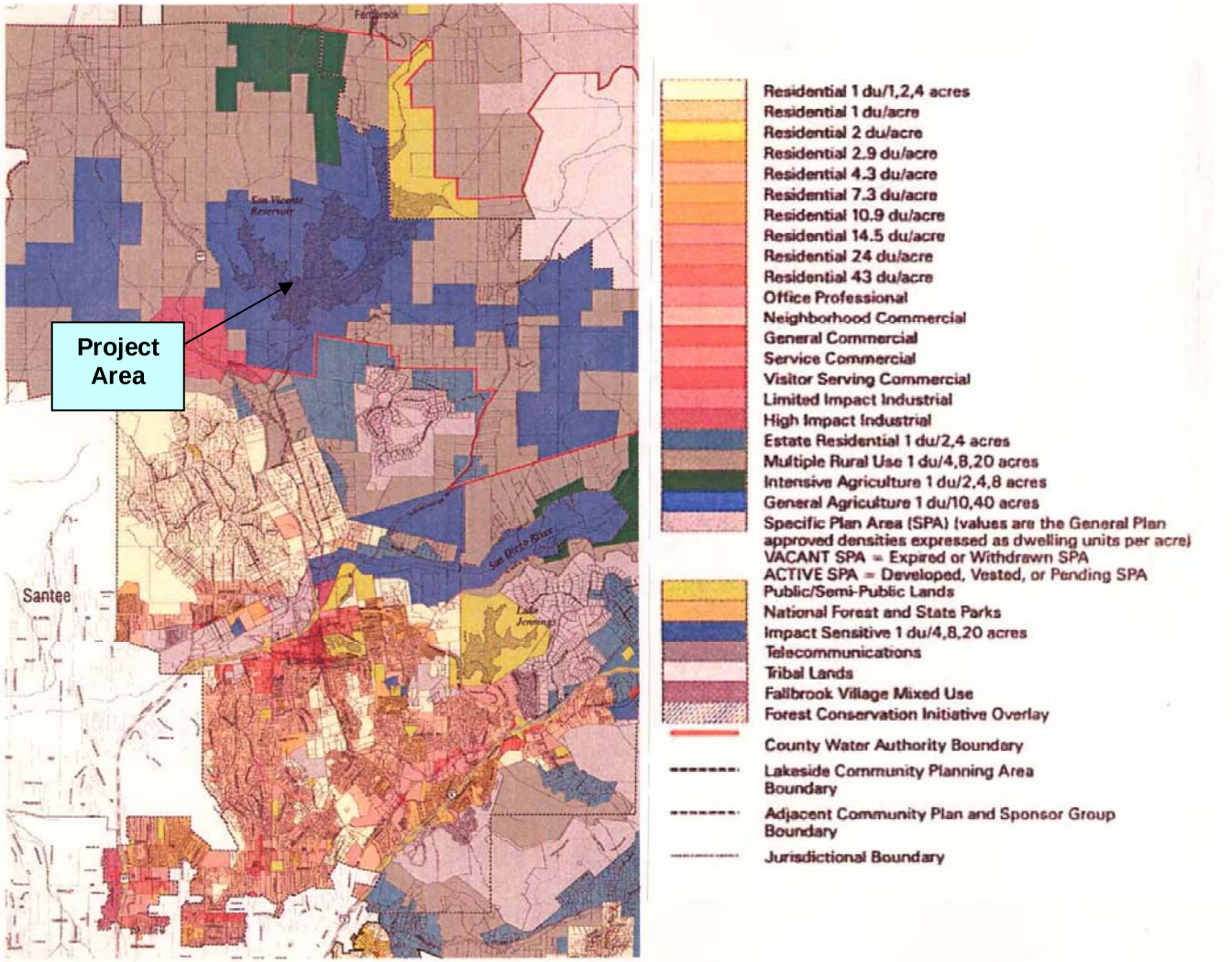
San Vicente Dam was constructed in 1941-43 on San Vicente Creek. The existing dam is 220 feet high with a crest length of 963 feet. The spillway is a 275-foot-long section near the center of the dam. The spillway crest elevation is 650 feet above mean sea level (AMSL).

San Vicente Reservoir is the southern terminus for the Water Authority's First Aqueduct, a pipeline corridor that contains San Diego Pipelines 1 and 2. The current storage capacity of the reservoir is approximately 90,000 AF. At this water elevation, the reservoir surface area is approximately 1,100 acres.

The 1,100-acre reservoir and its 14 miles of shoreline is one of the only two freshwater sites in San Diego County that offer limited body contact activities such as water skiing and wake boarding. Rowboats and motorboats are available for rent, and the lake also allows canoes, inner tubes and kayaks. San Vicente offers a small picnic area with barbecue pits, benches, and restrooms.

The food, bait and tackle concessions were closed at all City lakes in July 2006. No decision has been made by the City as to when the concessions will be reopened and run by a private operator. The lake opens from sunrise to sunset, personal watercraft (jet skis) and camping are not allowed. The boat launch ramp at San Vicente Reservoir was closed on September 13, 2006 due to low water level. The City will re-open the reservoir once the water level rises and the boat launch ramp can be safely operated.

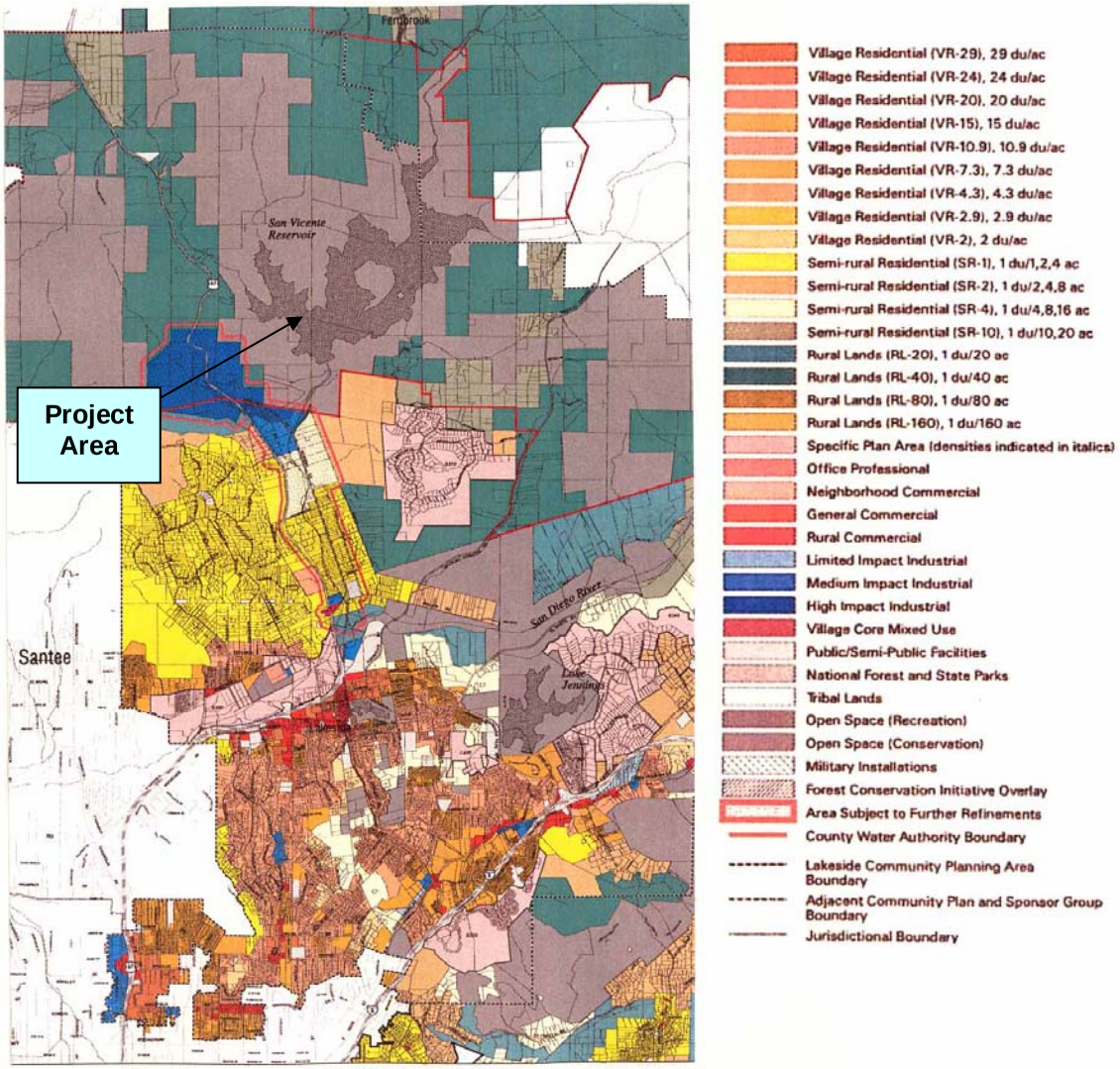
Figure 4
San Vicente Dam Raise Project Area and Adjacent Land Uses (Existing)



Source: San Diego County, Department of Land Use, General Plan 2020, Lakeside Community Plan, Existing General Plan.

Figure 5

San Vicente Dam Raise Project Area and Adjacent Land Uses (Proposed)



Source: San Diego County, Department of Land Use, General Plan 2020, Lakeside Community Plan, Draft Land Use Plan, August 2006.

During fishing season, (November through April) fishing at San Vicente is allowed Saturday through Wednesday. Waterskiing, wakeboarding and other water contact activities are limited to Thursdays and Fridays. From May through October waterskiiing and wakeboarding are allowed Thursday through Sunday, while fishing and kayaking are limited to Wednesday and Thursday.

In November 2001, the City of San Diego was granted $596,000 by the Department of Boating and Waterways to improve the boat launching facilities. Two aluminum boarding floats were constructed for the boat launch ramp. One aluminum boarding float was installed at Lowell Island and the boat staging and parking areas were repaved. A prefabricated restroom, an access walkway, a shaded structure, and ancillary features were also added.

2.1.3 Background

In August 1996, the Water Authority's Board of Directors approved the Emergency Storage Project (ESP) to provide local water storage to meet emergency needs within the Water Authority's service area, an initiative central to the agency's overall mission to deliver a reliable supply of water to the region. The regional water supply system is vulnerable to hazards, such as strong seismic activities in southern California, severe floods, or prolonged droughts.

The Water Authority's ESP was designed to improve the reliability of the region's existing water supply system by the addition of approximately 90,000 AF of reservoir storage in San Diego County. The approved ESP includes the following major components: a new dam, pipeline, and pump station at Olivenhain (complete); the Lake Hodges Pump Station and pipeline (under construction); the San Vicente Pipeline (under construction); and the San Vicente Pump Station/Surge Control Facility (under construction). The ESP also includes raising the existing San Vicente Dam by 54 feet in order to provide approximately 52,100 AF of emergency storage capacity.

2.2 PROJECT DESCRIPTION

The Proposed Action would be to raise the San Vicente Dam an additional 63 feet beyond the approved Emergency Storage Project (ESP) dam raise, increasing the capacity of the San Vicente Reservoir by an additional 100,000 AF. The combined ESP/CSP would increase the existing reservoir capacity by approximately 152,100 AF, and increase the overall dam height by up to 117 feet. With implementation of both the ESP and CSP, the total dam height would be 337 feet with a spillway crest of 766 feet AMSL.

No additional conveyance facilities beyond those being constructed for the ESP would be needed for the additional carryover expansion of the San Vicente Reservoir. The dam raise would be accomplished using roller compacted concrete (RCC). The RCC would be placed against the downstream side of the existing dam. It is not technically advisable, nor economically feasible, to raise the dam for ESP purposes, and then raise it again at a later time for carryover storage purposes.

The Proposed Action would require the construction of two saddle dams to the west of the main dam, and relocation of the San Vicente Marina and marina access road. New marina facilities would replace the existing marina that would be inundated by the dam raise and subsequent reservoir filling. The marina facilities would be shifted west of the existing location as part of the Proposed Action. The Proposed Action would also include construction of a new inlet/outlet facility and installation of a bypass pipeline extending from the easterly saddle dam to the First Aqueduct Diversion Structure north of the proposed marina. During construction, temporary staging areas would be established to accommodate construction equipment, supplies, and materials. The staging areas would be located on City-owned property south or southwest of the existing dam and/or within the marina expansion area.

Four options are being evaluated for the source of aggregate material for RCC production. There are three on-site quarry options and one offsite option. Only one of the on-

site quarry alternatives will be selected for aggregate production. The offsite quarry option involves the hauling of aggregate from an existing offsite commercial quarry. The location of the offsite quarry is still to be determined. However, several onsite alternative quarry locations will be identified for analysis.

Construction of the San Vicente Dam raise would require lowering water levels in the reservoir prior to construction. The construction drawdown is expected to take up to one year, depending on local watershed inflows. The construction timeframe for the dam raise is approximately three years. Once construction is complete, refilling of the reservoir is expected to take three to five years, depending on the availability of imported water and local watershed inflows. The total time required to lower the reservoir, construct the dam raise, and refill the reservoir to the new water level would be approximately eight years.

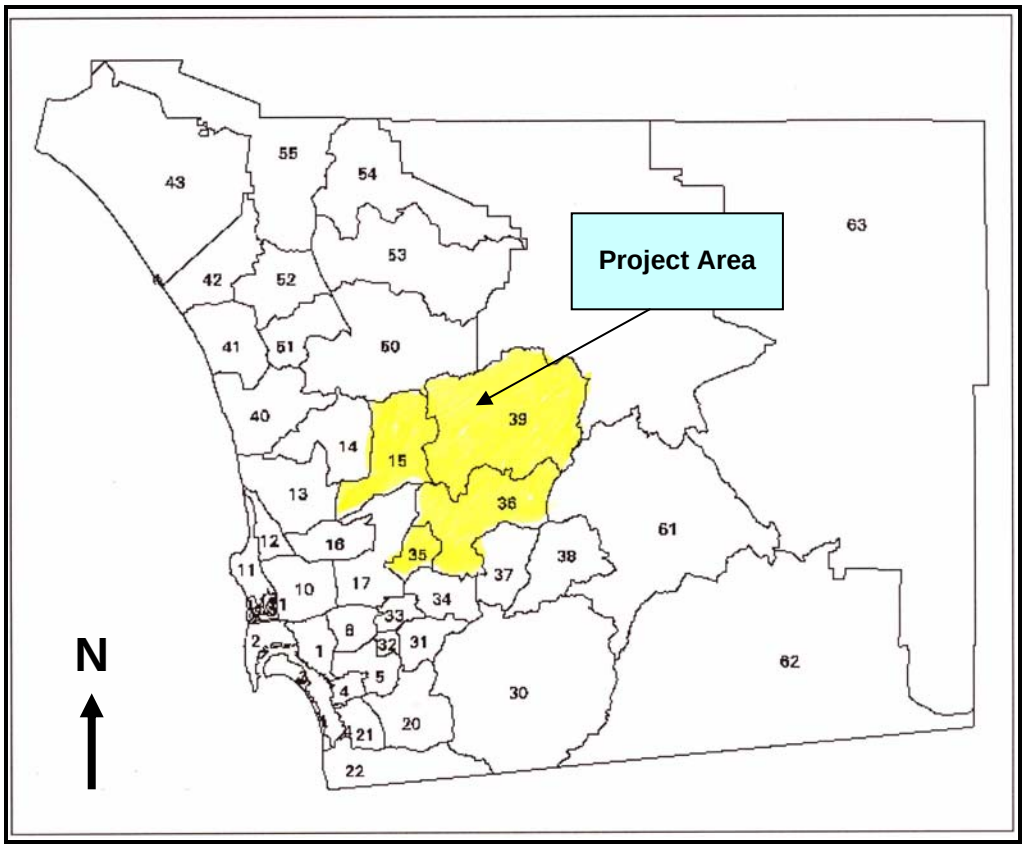
For the Proposed Action, the Corps has determined that the jurisdictional ordinary high water mark (OHWM) for the reservoir is the existing San Vicente Dam spillway at 650 feet AMSL. This is also the baseline for the evaluation of existing environmental resources, and impacts to those resources, minus the impacts attributable to the ESP.

2.3 AFFECTED ENVIRONMENT

2.3.1 Demographic Characteristics

Some of the demographic data presented in this report was derived from the 2000 U.S. Census. Current 2005 estimates and projections for 2030 were also reported for selected characteristics (i.e., population, housing units, and employment) based on data provided by SANDAG and other sources. For purposes of this socioeconomic analysis, it is necessary to identify the local community area surrounding the SV 100K footprint ("SV 100K local community impact area") which is defined by the SANDAG sub-regional areas (SRAs) of Lakeside (SRA 36), Poway (SRA 15), Santee (SRA 35) and Ramona (SRA 39) (see figure 6).

Figure 6
San Diego Sub-Regional Areas



Sub Regional Areas:

15:	Poway	35:	Santee
39:	Ramona	36:	Lakeside

Table 1 lists selected 2000 demographic data and some forecasts for the SV 100K local community impact area. For comparative purposes, data are also listed for the City of San Diego and the San Diego County region. Overall, the data indicate that SV 100K local community impact area residents are predominantly white (76%), with a smaller Hispanic population (13%) than the City (27%) or County (29%). Nearly 9 out of 10 residents (86%) indicated that they only speak English at home and only 9% speak Spanish at home. Most of the homes (53%) were built between 1960 and 1979, and only 11% were built prior to 1960.

The City and County of San Diego have a significantly higher proportion of older homes that were built prior to 1960 with 29% and 23%, respectively.

Table 1

Selected Population and Housing Characteristics for the SV 100K Local Community Impact Area, the City of San Diego, and San Diego County

Characteristic	Local Community Area*	City of San Diego	San Diego County
Population			
2000 Population (2000 U.S. Census)	219,562	1,223,400	2,813,833
2005 Population (SANDAG)	232,758	1,305,736	3,211,721
2030 Population Forecast (SANDAG)	287,995	1,656,820	3,855,085
Percent change (2005-2030)	23.7%	26.9%	20.0%
Gender 2005 (SANDAG)			
Male	48.7%	50.0%	49.8%
Female	51.3%	50.0%	50.2%
Age Distribution 2005 (SANDAG)	100.0%	100.0%	100.0%
Under 5 years	6.2%	7.1%	7.3%
5 to 19	23.1%	20.1%	21.1%
20 to 34	17.4%	24.9%	23.1%
35 to 54	32.2%	29.1%	28.7%
55 to 64	10.5%	8.5%	8.8%
65+	10.5%	10.3%	11.0%
Median Age 2005 (SANDAG)	37.4	33.8	34.0
Income and Poverty Levels			
Median Household Income 2005 (SANDAG)	$60,941	$50,415	$52,192
Families Below Poverty 2000 (U.S. Census)	4.6%	10.6%	8.9%
Population Below Poverty 2000 (U.S. Census)	6.3%	14.6%	12.4%
Education 2000			
Population 25+ yrs. College Grad. (U.S. Census)	24.1%	35.0%	29.6%
Population 18-24 Enrolled in Coll. (U.S. Census)	36.6%	45.4%	35.9%
Race 2005 (SANDAG)	**100.0%**	**100.0%**	**100.0%**
Non-Hispanic	**87.2%**	**73.2%**	**71.2%**
American Indian and Alaska Native	0.7%	0.3%	0.5%
Asian & Pacific Islander	5.7%	15.5%	10.3%
Black or African American	1.6%	7.1%	5.3%
White	76.2%	46.6%	51.6%
Other or Multiple Race	3.1%	3.7%	3.4%
Hispanic	**12.8%**	**26.8%**	**28.8%**
Lanuguage Spoken At Home (2000 U.S. Census)	**100.0%**	**100.0%**	**100.0%**
English Only	85.8%	64.1%	67.0%
Spanish	8.5%	18.9%	20.1%
Asian Pacifc Language	2.8%	10.4%	7.3%
Other Language	2.8%	6.7%	5.6%

* Poway, Ramona, Lakeside, and Santee SRAs as defined by SANDAG.

Source: 2000 U.S. Census unless otherwise indicated

(Continued)

Table 1
Selected Population and Housing Characteristics for the SV 100K Local Community Impact Area, the City of San Diego, and San Diego County (Cont.)

Characteristic	Local Community Area*	City of San Diego	San Diego County
Housing Units			
2000 Housing Units (2000 U.S. Census)	77,752	469,689	1,040,149
2005 Housing Units (SANDAG 2005)	81,426	495,378	1,108,500
2030 Housing Forecast (SANDAG 2005)	97,515	604,399	1,354,088
Percent change (2000-2005)	4.7%	5.5%	6.6%
Percent change (2000-2030)	25.4%	28.7%	30.2%
Total Occupied Units	79,656	475,552	1,061,027
% Owner-Occupied Housing (2000 Census)	70.0%	49.5%	55.4%
% Renter-Occupied (2000 Census)	30.0%	50.5%	44.6%
Housing Unit Type (2005 SANDAG)	100.0%	100.0%	100.0%
Single Family Residence (detached)	75.5%	58.3%	61.2%
Attached Units	16.5%	40.6%	34.7%
Mobile Homes and Other	8.0%	1.1%	4.2%
Persons/Dwelling Unit (SANDAG 2005)	2.9	2.7	2.8
Average Rent (Fall 2005 S.D. Apt. Assn).	$979	$1,158	$1,107
Median Housing Value 2005 (Dataquick, Inc.)	$482,000	$480,000	$500,000
Housing Vacancy Rates 2005 (SANDAG)	2.5%	4.0%	4.3%
Year Built (2000 U.S. Census)	100.0%	100.0%	100.0%
2000 to 2006	N/A	N/A	N/A
1990 to 2000	12.0%	12.3%	13.9%
1980 to 1989	24.1%	19.6%	21.9%
1960 to 1979	53.3%	39.4%	41.3%
1940 to 1959	9.3%	21.0%	17.8%
1939 or earlier	1.3%	7.7%	5.1%
Unemployment Rate (Calif. EDD)			
(Persons 16 years or over)	3.2%	4.4%	4.3%
Total Employment 2005 (Calif. EDD)	75,500	777,600	1,471,000
2030 Employment Forecast (SANDAG 2005)	112,238	975,990	1,824,030
Employment percent change (2005-2030)	48.7%	25.5%	24.0%
Occupation (2000 U.S. Census)	100.0%	100.0%	100.0%
Management, professional, and related occupations	35.3%	41.8%	37.7%
Service occupations	14.8%	15.9%	16.1%
Sales and office occupations	29.1%	26.4%	27.2%
Farming, forestry and fishing occupations	0.3%	0.2%	0.5%
Construction, extraction, and maint. occupations	11.4%	6.7%	8.7%
Production, transporation, and material occupations	9.1%	9.0%	9.9%

* Poway, Ramona, Lakeside, and Santee SRAs as defined by SANDAG.
Source: 2000 U.S. Census unless otherwise indicated

Residents of the SV 100K local community impact area reported a median household size of 2.9 people. In comparison, the City recorded 2.7 people per household and the County recorded 2.8 people per household. Within the SV 100K local community impact area, the percentage of the population over 25 years old with a college degree is 24%, compared to 35% for the City and 30% for the region. The percentage of the labor force that was unemployed was a little lower in the SV 100K local community impact area than the City or the County (3.2%, 4.4%, and 4.3%, respectively).

The housing inventory for the SV 100K local community impact area consists of 81,426 total units, which are predominantly owner-occupied (70%), compared to 50% in the City and 55% reported for the County. The median value of owner-occupied housing in the SV 100K local community impact area was $482,000 in 2005, compared to $480,000 for the City and $500,000 for the County (see Tables 1 and 2). The average monthly residential rent for the SV 100K local community impact area was $979 in 2005, compared to $1,158 for the City and $1,107 for the County. The percentage of mobile homes is much higher in the SV 100K local community impact area (8%) than the City (1%) and the County (4%). Whereas the number of attached units (17%) is significantly lower in the SV 100K local community impact area than the City (41%) or the County (35%).

Table 2
Median Home Sales Price
SV 100K Local Community Impact Area, City of San Diego and San Diego County
2004-2005

County/City/ Area	2005		2004		% Change in Units Sold	% Change in Median Price
	# Sold	Median Price	# Sold	Median Price		
Lakeside (92040)	539	$434,000	617	$349,000	-13%	24%
Poway (92064)	707	$555,000	830	$469,000	-15%	18%
Ramona (92065)	680	$523,000	741	$480,000	-8%	9%
Santee (92071)	988	$429,000	1,013	$392,000	-2%	9%
City of San Diego	19,970	$480,000	20,608	$450,000	-3%	7%
San Diego County	49,998	$500,000	53,455	$460,000	-6%	9%

Source Dataquick Inc., Dqnews.com, CA Home Sale Activities by City, YTD 2004-2005.

The estimated median household income in 2005 was $60,941 for the SV 100K local community impact area, which is substantially higher than the median income for the City ($50,415) or the County ($52,190). The median U.S. household income was $44,700 in 2005.[1] The U.S. Department of Health and Human Services poverty guideline for 2005 was $19,350 for a family of four people. For a three-person family the 2005 poverty guideline was $16,090 and for a two-person family the poverty guideline was $12,830. Only 5% of the SV 100K local community impact area residents were below the poverty level in 2000, as compared to 11% in the City and 9% in the County.

2.3.2 SV 100K Local Area Residential Community

As previously indicated, SANDAG reported 70% owner-occupied housing within the SV 100K local community impact area for 2005. This is a substantially higher rate of owner-occupied housing than the City (50%) or the County (55%). The average value reported in 2005 for housing in the SV 100K local community impact area was $482,000, about the same as the City ($480,000) and lower than the County ($500,000). The reported monthly rent for housing in the SV 100K local community impact area ($979) was a little lower than the City ($1,158) or the entire San Diego region ($1,107).

Housing vacancy information from SANDAG's 2005 estimates indicated that 2.5% of the units vacant in the SV 100K local community impact area. Current vacancy rates for rental housing throughout the region are extremely low (see Table 1). The vacancy rate reported for the City of San Diego was 4.0% versus 4.3% for San Diego County. A rental vacancy rate below five% indicates a tight housing market.

[1] U.S. Bureau of the Census, *Current Population Survey*.

2.3.2.1 Other Land Uses

On Slaughterhouse Canyon Road, there are some lands designated for agricultural preserves and the surrounding area is generally rural in nature. However, the entrance to the San Vicente Reservoir from SR-67 passes through an area of industrial storage yards for equipment and material, as well as sand and gravel excavation. Some vacant residential lots are also in the surrounding area.

2.3.3 Economic Character and Fiscal Setting

This section describes the San Diego regional economy in general as well as the San Diego business community and tax base. It is helpful to establish an overall perspective of regional trends in the economy when evaluating the impacts of major public infrastructure projects and local-area development.

2.3.3.1 Regional Economy

Within the last decade the San Diego regional economy emerged from a serious recession that lasted from 1992 through 1994. This recession resulted in severe losses in some of the traditionally highest paying industries in the region, including aerospace and other high value-added, defense-related manufacturing. The recession of the early 1990s had followed a high-growth period in the San Diego region that had lasted from 1982 through 1991.

While the region had historically out-performed the nation and the State of California in terms of economic growth as defined by the Gross Regional Product (GRP) and employment growth, this was not the case during the recession of the early 1990s. An economic recovery began in the San Diego economy in late 1994 and the region emerged as less dependent on defense-related manufacturing, diversifying into high-technology industries (primarily bio-tech and telecommunications), trade and tourism, and becoming stronger economically as a result. Ironically, the global consolidation of the U.S. military, which was initiated during the national

recession, is expected to result in an even greater military presence in the San Diego region by the time all consolidation and restructuring is complete in 2007.

The San Diego economy felt the slow down in the national economy that began in 2000 and this was reinforced by several major economic shocks, including the September 11 terrorist attacks, war in Afghanistan, war in Iraq and Severe Acute Respiratory Syndrome (SARS). During the period of 2000 – 2005, the San Diego economy has experienced substantially slower growth in GRP than the outstanding performance recorded in the late 1990s. But even with this slower rate of growth, the local economy has performed better than the national economy. According to the Economic Research Bureau of the San Diego Chamber of Commerce, the County has experienced positive inflation-adjusted economic growth in each year since 1994. After expanding 7%-8% per year in real terms from 1997 to 2000, gross regional product growth slowed to 2.1% in 2001. The economy recovered in 2002 and has since recorded steady, real growth of 4.4%-4.9% each year including the preliminary forecast for 2006 (see Table 3).

Table 3
San Diego County Regional Economy

Year	Unemployment Rate	Gross Regional Product		
		Amount	Nominal Change	Real Change*
2000	3.9%	$111.6 Bil.		
2001	4.2%	$116.3 Bil.	4.2%	2.1%
2002	5.1%	$124.9 Bil.	7.4%	4.9%
2003	5.2%	$133.1 Bil.	6.5%	4.5%
2004	4.7%	$141.7 Bil.	6.5%	4.4%
2005f	4.4%	$151.1 Bil.	6.6%	4.5%
2006f	4.1%	$161.0 Bil.	6.6%	4.9%

* Inflation adjusted real growth rate. "f" = forecast.
Source: California Economic Dev. Dept., Labor Market Reports for San Diego County.
San Diego Chamber of Commerce, Economic Bulletin, Vol. 53, #1, Forecast 2005 & 2006.

For the year 2006, the San Diego GRP was forecasted to reach $161 billion, an increase of about 6.6% from $151.1 billion in 2005. Over the last five years, the San Diego GRP increased 38% and growth of the regional economy has maintained at a very solid pace.

However, the threat of rising interest rates and a weakening housing market may significantly slow the local economy in 2007 and 2008.

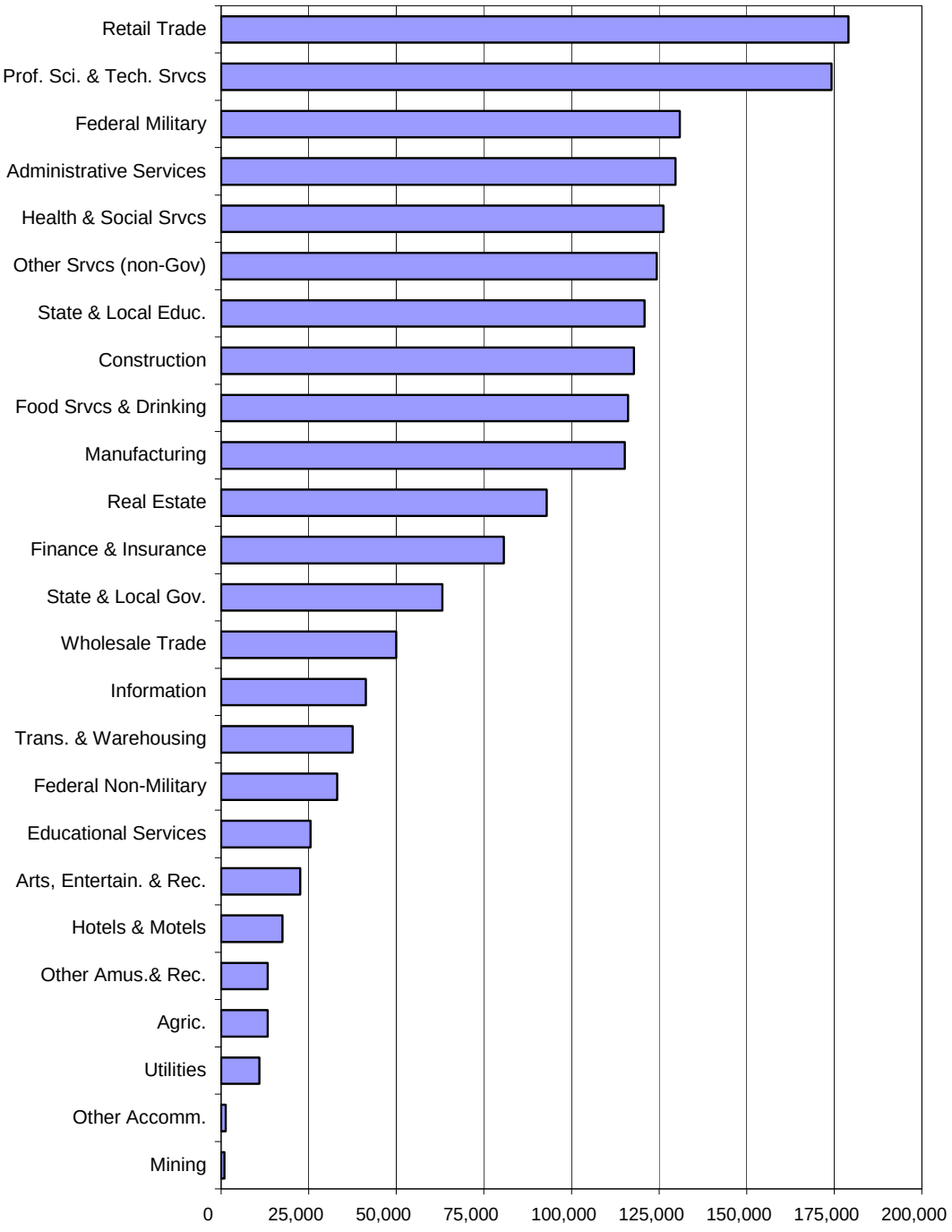
The San Diego County economy is very diverse with many sectors providing output to the overall economy. The importance of each of these sectors can be measured in terms of output (sales), income (wages and proprietors' earnings), and employment. Table 4 lists the relative value of each of these major sectors to the overall regional economy. As can be seen in the table and Figure 7, the largest sectors of the San Diego economy include retail trade (179,000 employees), engineering, scientific and technical services (174,000), and military (131,000).

Table 4
San Diego Regional Economy
Sales, Income, and Employment by Industry
(2003)

Industry Sector	Sales ($Millions)	Income ($Millions)	Employment
Agric, Anim. Prod., For., Fishing, & Hunting	$1,090.80	$907.62	13,304
Mining	$242.79	$134.03	891
Utilities	$8,189.79	$2,990.53	10,946
Construction	$14,930.94	$7,484.78	117,800
Manufacturing	$33,487.71	$11,608.37	115,201
Wholesale Trade	$7,061.27	$5,370.71	50,015
Transportation & Warehousing	$3,392.27	$2,227.37	37,520
Retail Trade	$11,702.98	$8,819.91	179,014
Information	$15,955.78	$8,285.75	41,284
Finance & Insurance	$13,191.69	$8,302.23	80,680
Real Estate & Rental	$17,838.86	$12,138.28	92,936
Professional Scientific & Technical Services	$19,333.07	$12,247.72	174,264
Administrative & Waste Services	$9,032.68	$5,630.42	129,635
Educational Services (private)	$1,248.75	$696.39	25,511
Health & Social Services	$9,750.41	$6,370.02	126,237
Arts, Entertainment & Recreation	$1,088.27	$673.09	22,630
Other Amus., Gambling, and Rec. Ind.	$979.57	$619.72	13,332
Hotels & Motels (including casino hotels)	$1,268.32	$899.48	17,464
Other Accommodations	$112.78	$51.40	1,295
Food Services & Drinking Places	$5,678.25	$2,821.82	116,125
Other Services (non-government)	$7,177.94	$3,991.61	124,346
State & Local Education	$5,588.53	$5,588.53	120,880
State & Local Government	$14,622.32	$11,521.79	63,112
Federal Military	$7,479.08	$7,479.08	130,909
Federal Non-Military	$2,891.35	$2,891.35	33,091
Total San Diego County	**$213,336.19**	**$129,752.00**	**1,838,424**

Source: IMPLAN/Pro, "Input-Output Model of the San Diego County Economy: 2003 Structural Matrices," June 2006.

Figure 7
San Diego Regional Economy
Employment by Industry
(2003)



Source: IMPLAN/Pro, "Input-Output Model of the San Diego County Economy: 2003 Structural Matrices," June 2006.

Per capita income has recorded solid growth over the last decade (Table 5). In 1994, per capita income was approximately $22,000 and it had increased to almost $41,000 (86%) by 2006. The compound per capita income growth since 1994 has averaged about 5.3% per year. This increase in per capita income was important, not just as an indicator of changes in relation to population growth, but because past concerns regarding declining per capita income in the region have been removed.

Table 5
San Diego County Regional Population And Per Capita Income

Year	Population		Per Capita Income	
	Count	Percent Change	Income	Percent Change
2000	2,813,883	0.3%	$32,803	8.2%
2001	2,891,115	2.7%	$33,933	3.4%
2002	2,948,968	2.0%	$34,915	2.9%
2003	2,994,454	1.5%	$35,841	2.7%
2004	3,036,373	1.4%	$36,916	3.0%
2005*	3,051,280	0.5%	$38,614	4.6%
2006f	3,122,384	2.3%	$40,661	5.3%
Compound Annual Growth Rate		1.6%		3.6%

"f" = forecast.
Sources: 2000 U.S. Census Data (Population and per capita income in 2000).
California Dept. of Finance, Demographic Research Unit, Tables E5 & E6 (Population 2001-2004).
*SANDAG's Current Estimates, Fall 2005.
**San Diego Chamber of Commerce, Economic Bulletin, Vol 53, #1, Forecast 2005 & 2006.

The compound annual population growth rate for the region was 1.6% for the period of 2000 to 2006. Between the period of 2004-2006, the population growth rate was slower than the period of 2001-2003.

2.3.3.2 Community Tax Structure

The SV 100K local community impact area includes property tax rate areas (TRAs 65051, 65052, 65061, 82004, 82019, 82055, 82082, 82180 and 82181). The average tax rate for these nine TRAs is 1.042608% of assessed value. Other taxing agencies in addition to the County that receive a notable share of the property taxes include: the Grossmont-Cuyamaca Community College District, the Grossmont Healthcare District, the Grossmont Union High School District, and the Water Authority.

The retail sales tax rate for taxable sales originating within the SV 100K local community impact area (Poway, Ramona, Lakeside and Santee) is 7.75%. Retail sales in San Diego County have grown from $36.2 billion in 2000 to $46.7 billion in 2005 representing an increase of 29% (Table 6). The City of Poway and the City of Santee both recorded larger increases in retail sales over the last 5 years (77% and 43%). Total sales were $1.2 billion in Poway and $709 million in Santee in 2005. Ramona and Lakeside are unincorporated; therefore, retail sales for their respective areas are aggregated with the balance of the unincorporated County.

Table 6
Taxable Retail Sales

	All Taxable Retail Sales							
	San Diego County		City of San Diego		City of Poway		City of Santee	
Year	Sales ($000s)	Percent Change	Sales ($000s)	Percent Change	Sales ($000s)	Percent Change	Sales ($000s)	Percent Change
2000	$36,245,418	10.7%	$16,099,193	11.1%	$664,118	N/A	$495,083	N/A
2001	$37,699,333	4.0%	$16,371,512	1.7%	$712,327	7.3%	$501,151	1.2%
2002	$38,595,547	2.4%	$16,625,855	1.6%	$767,375	7.7%	$523,519	4.5%
2003	$40,863,978	5.9%	$17,465,362	5.0%	$889,578	15.9%	$592,000	13.1%
2004	$44,470,338	8.8%	$18,538,443	6.1%	$1,075,622	20.9%	$658,775	11.3%
2005	$46,679,471	5.0%	$19,491,746	5.1%	$1,174,167	9.2%	$708,885	7.6%
Percent Change (2000-2005)		**28.8%**		**21.1%**		**76.8%**		**43.2%**

N/A Not Applicable
Retail sales data is not available for the City of Lakeside and Ramona is not available.
Source: California State Board of Equalization, 12/7/06.

2.3.3.3 Local Business Community

As previously stated, the City of San Diego has closed the snack and bait concession stand at the San Vicente Reservoir. No timeline has been set by the City for reopening the concession operations under a private operator. Retail business activity in the SV 100K local community impact area does not exist. The nearest retail businesses are located a few miles south of the lake at Los Coches Road and Woodside Avenue in Santee. In general, the reservoir is isolated from commercial land uses.

2.4. Growth Dynamics

The Poway and Santee sub-region is developing a substantial economic base. Much of this economic growth is occurring in the southern Poway industrial area and the Santee Trolley Square/Santee Town Center areas. The San Diego Association of Governments (SANDAG) forecasts that total employment for the SV 100K local community impact area will increase 50% during the 30-year period of 2000 to 2030 (Table 7).

Table 7
Growth Forecasts for the SV 100K Local Community Impact Area and San Diego County

	2000	2010	2020	2030	2000-2030	
					Number	% Change
San Vicente Project Area*						
Total Population	219,562	239,069	259,895	287,995	68,433	31%
Total Housing Units	77,752	83,111	88,866	97,515	19,763	25%
Total Employment	74,926	86,977	100,089	112,238	37,312	50%
San Diego County						
Total Population	2,813,833	3,211,721	3,528,605	3,855,085	1,041,252	37%
Total Housing Units	1,040,149	1,166,094	1,254,647	1,354,088	313,939	30%
Total Employment	1,384,676	1,528,522	1,672,883	1,824,030	439,354	32%

*Lakeside, Poway, Ramona, and Santee SRAs (as defined by SANDAG - see Figure 6)
Source: U.S. Census, SANDAG Final 2030 Cities/County Forecast (Feb 2004)

Employment in the County will increase 32% during the 30-year forecast period. However, housing and population growth for the SV 100K local community impact area will be substantially less than the countywide housing and population growth. Housing units in the local area will increase 25% compared to 30% for San Diego County. The population for the SV 100K local community impact area will increase 31% compared to 37% for the County.

2.5 THRESHOLD OF SIGNIFICANCE

Thresholds used to evaluate potential land use impacts are based on applicable criteria in the state CEQA Guidelines (CCR §§15000-15387), Appendix G; and the ESP EIR/EIS. A significant land use impact would occur if the Proposed Action would:

1. Physically divide an established community.
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, unless exempted by state law.
3. Result in the displacement, relocation or permanent loss of any residence, business (commercial, industrial, extractive) or governmental or institutional uses (educational, religious, scientific).

Significance thresholds or standards for socioeconomic impacts are not generally provided under federal (NEPA) and state (CEQA) guidelines, with the exception of farmland impact guidelines under the Farmland Protection Policy Act. Indeed, CEQA does not address socioeconomic impacts unless it can be demonstrated that a significant environmental impact would result. Nevertheless, socioeconomic effects would generally be considered significant if the Proposed Action would result in:

- Direct loss of property tax revenues
- Property value changes
- Retail sales impacts
- Construction labor and materials impacts
- Farmland impacts
- Recreation impacts
- Growth Impacts

2.6 ENVIRONMENTAL CONSEQUENCES

2.6.1 Social (Land Use) Impacts

2.6.1.1 Division of an Established Community

The analysis is meant to assess the impact of the Proposed Action on local residents' sense of belonging in relation to their neighborhood or the community at large (i.e., cohesiveness), as well as anticipated changes in the physical character of the community. Such impacts would occur if the Proposed Action would physically divide an established community or if it would disrupt access to a community either temporarily or permanently.

Methods for identifying and measuring the cohesiveness of a community may include looking at the location of major activity centers used by residents (i.e., clustered nearby or located out of the area), length of home ownership, percentage of residents who are elderly, and percentage of single-family ownership. A large elderly population, a high percentage of single-family ownership, long residential tenure, and the availability and centrality of nearby activity centers are all generally indicative of a high degree of community cohesion.

During the multiple field investigations within the SV 100K local community impact area, observations were made for location and usage of major activity centers such as public services, postal/mail services, daily shopping, hospital and recreational services. In general these services are not located within the SV 100K local community impact area. The Proposed Action would not separate residents from existing neighborhoods in the community and it would not reduce residents' access to public services and facilities, most of which are located out of the area. Therefore, the Proposed Action would not result in a significant impact in terms of division of an established community.

2.6.1.2 Conflicts with Applicable Plans, Policies or Regulations

Under Section 53091 of the California Government Code, zoning ordinances do not apply to the location or construction of facilities used for the production, generation, storage, or transmission of water. Specific objectives, policies and standards that support the implementation of water storage and transmission facilities and recreational opportunities in the vicinity of the Proposed Action are listed below, and are derived from the County of San Diego General Plan Public Facility Element, Lakeside Community Plan, and Ramona Community Plan. Other objectives, policies and standards from these plans do not apply to the Proposed Action since it would involve construction of a water storage reservoir and appurtenances which are allowed under Section 53091 of the California Government Code. Therefore, there would be no impacts of the Proposed Action with respect to potential conflicts with land use plans, policies or regulations.

County of San Diego General Plan

The County of San Diego General Plan identifies long-range goals and policies for the comprehensive development of land within its jurisdiction. The County General Plan includes the following 12 specific planning elements: Open Space, Regional Land Use, Noise, Seismic Safety, Public Facility, Scenic Highway, Energy, Conservation, Public Safety, Recreation, Circulation, and Housing. The Public Facility Element of the General Plan recognizes the need for the timely provision of water facilities concurrent with approved development and growth in the county. Section 13 (Water Provision Systems), Objective 2, Policy 2.1 of the Public Facility Element states that the “County will encourage the regional coordination of water resource management.” Implementation measure 2.1.2 of this policy states that the “County will support the Water Authority to obtain sufficient local, regional, and statewide water development facilities to meet the planned need.”

Community plans are used to focus the General Plan goals and policies to the specific or unique circumstances existing in individual communities throughout the County. Each community plan incorporates the goals and policies developed by the community to ensure that they will be compatible with those found in the General Plan. Community plans in the vicinity of the SV 100K study area are discussed below.

Lakeside Community Plan. The majority of the SV 100K study area is located within the Lakeside Community Planning area of the County of San Diego. The Lakeside community is located in the western foothills of the Cuyamaca Mountains on the San Diego River about 21 miles east of downtown San Diego. The Lakeside Community Plan was adopted by the County Board of Supervisors on December 19, 1975, and amended on August 9, 2000. The Lakeside Community Plan contains the following elements: Community Character, Land Use, Housing, Circulation, Public Facilities and Services, Conservation, Recreation, and Scenic Highways. A relevant policy of the Public Facilities and Services Element is to "Promote water reclamation as part of the long range solution to sanitation problems and also as a source of water for irrigation and recreational purposes."

According to the Lakeside Community Plan, the Ramona, Padre Dam and Helix Districts are member agencies of the San Diego County Water Authority (SDCWA). The SDCWA receives its water, via the Metropolitan Water District (MWD), from the Colorado River Aqueduct and the State Water Project, however, availability of water through the MWD may become a problem due to future diversions of water to Arizona. Additional agreements and contracts are currently being sought to make-up the anticipated shortfall. The remaining districts, (Lakeside and Riverview), receive water from the Padre Dam district and, consequently, will also be affected by reductions in Colorado River water.

Ramona Community Plan. The northeastern portion of the SV 100K study area is located in the Ramona Community Planning area of the County of San Diego. The Ramona community encompasses approximately 84,000 acres and is located east of the City of Poway and north of Lakeside. The Ramona Community Plan was adopted by the County Board of Supervisors on October 5, 1978, and last amended on May 10, 2006. The Ramona Community Plan contains the following elements: Community Character, Land Use, Housing, Circulation, Public Facilities, Safety and Education, Conservation, Recreation, Open Space, Noise, and Scenic Highways.

NCCP/City of San Diego MSCP Consistency

Land Use Adjacency Guidelines. The Water Authority is not a signatory to the MSCP Implementing Agreement, nor is it subject to local land use plans, policies, and ordinances per California Government Code Section 53091(d) and (e). However, the Proposed Action would be consistent with MSCP Land Use Adjacency Guidelines by implementing General Conditions and Standard Specifications and project design features to minimize edge effects and adjacency impacts to the surrounding natural habitat in the San Vicente Reservoir Cornerstone Lands MHPA Preserve. Applicable project components and/or project design features are listed below each of the MSCP Land Use Adjacency Guidelines.

- *Drainage:*
  - Where construction corridors cross drainage features, appropriate drainage facilities will be installed to avoid interruption of downstream flows in areas that drain into the San Vicente Reservoir Cornerstone Lands MHPA Preserve.
  - During operations, the proposed parking lot and developed areas associated with the relocated/expanded marina would not drain directly into the San Vicente Reservoir Cornerstone Lands MHPA Preserve; therefore, there would be no release of toxins, chemicals, petroleum products, exotic plant materials, or other elements from the

marina that would degrade or harm the natural environment or ecosystem processes within the MHPA.

- *Toxics:*
  - Vegetation outside the approved construction limits and within the San Vicente Reservoir Cornerstone Lands MHPA Preserve will not be cut or sprayed with herbicide.
  - During construction, fueling of equipment will occur in designated fueling zones within the approved construction limits and located at least 100 feet from drainages and wetlands that are within the San Vicente Reservoir Cornerstone Lands MHPA Preserve. All equipment used within the approved construction limits will be free of fluid and grease leaks. Emergency provisions to contain and clean up unintentional fuel or oil spills will be in place prior to construction.
  - Construction personnel will park private vehicles in designated areas within the approved construction limits.
  - During clearing, grading, excavation, construction, or hauling of excavated materials, water trucks or sprinkler systems will be used as necessary to reduce airborne dust into the San Vicente Reservoir Cornerstone Lands MHPA Preserve.
  - During construction, the contractor(s) will implement a Storm Water Pollution Prevention Plan (SWPPP) to minimize erosion of, and siltation into, sensitive habitats and natural drainages within the San Vicente Reservoir Cornerstone Lands MHPA Preserve. The SWPPP will identify erosion- and sediment-control Best Management Practices (BMPs) tailored to specific site conditions including, but not limited to, silt fences, gravel bags, sandbag dikes, diversion ditches, stream bank stabilization, detention basins, and any other appropriate and effective measures.

These measures will be in place prior to initiation of clearing/grubbing, vegetation removal and construction activities within the approved construction limits.

- The use of fertilizers and pesticides for revegetation efforts in and adjacent to the San Vicente Reservoir Cornerstone Lands MHPA Preserve will be limited to the maximum extent practicable.
- During operations, a limited amount of hazardous materials (paints, solvents, petroleum products, etc.) would be used or stored on site that could generate byproducts in the event of a spill which are potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality within the San Vicente Reservoir Cornerstone Lands MHPA Preserve. Such impacts would be avoided through implementation of the business plan for the San Vicente Reservoir.

- *Lighting:* Construction night lighting will be directed away from adjacent native habitats within the San Vicente Reservoir Cornerstone Lands MHPA Preserve and will consist of low-sodium or similar lighting equipped with shields to focus light downward.
- *Noise:* Indirect construction-related noise impacts to the California gnatcatcher will be mitigated by the following program:
    - *Focused surveys*. Once the site is cleared of vegetation and as long as construction activities begin prior to the breeding season, work that has commenced prior to the breeding season will be allowed to continue without interruption. If gnatcatchers move into an area within 500 feet of ongoing construction noise levels and attempt to nest, then it can be deduced that the noise is not great enough to discourage gnatcatcher nesting activities. If work begins prior to the breeding season, the contractor(s) should maintain continuous construction activities next to the adjacent coastal sage scrub that falls within 500 feet, until the work is completed. However, if

clearing/grubbing, vegetation removal or construction activities are scheduled to begin *during* the gnatcatcher breeding season, then updated pre-construction surveys are necessary. In addition, if these activities are initiated prior to, and extend into, the breeding season, but they cease for a period longer than three weeks and the contractor wishes to restart work within the breeding season window, then updated pre-construction gnatcatcher surveys are also necessary. If these surveys indicate no nesting birds occur within the coastal sage scrub that falls within 500 feet of the proposed work, then the adjacent construction activities will be allowed to commence. However, if the birds are observed nesting within these areas, then the adjacent construction activities will be postponed until all nesting has ceased or until after August 31.

- *Continuous construction*. All work within the approved construction limits and within 500 feet of coastal sage scrub will proceed in a continuous manner to minimize the duration of indirect impacts. Construction traffic will be allowed to traverse occupied breeding habitat areas only if access routes have been established prior to the breeding season.
- *Monitoring.* During construction, a biologist certified by USFWS with a 10(a) permit for the federally threatened California gnatcatcher will conduct weekly monitoring for the presence of the gnatcatcher and gnatcatcher nests in areas adjacent to the approved construction limits.

- *Barriers:*
  - Prior to construction, a qualified biologist will oversee installation of appropriate fencing and/or flagging to delineate the approved construction limits for protection of

- If the removal of native vegetation and/or mature trees within the approved construction limits is proposed during the breeding season for sensitive nesting migratory birds (February 15 through August 30) or during the raptor breeding season (generally between January 1 and July 30), a survey for active nests will be conducted prior to vegetation/tree removal; active nests will be avoided; and a temporary construction fence will be installed to maintain the following buffer distances around the nests, until the young birds have fledged: up to 500 feet for raptors, 300 feet for California gnatcatcher, and 100 feet for all other sensitive breeding bird species.

- *Invasives:*
  - During construction, the contractor(s) will implement invasive exotic plant control programs at the boundaries of approved construction limits adjacent to sensitive habitats within the San Vicente Reservoir Cornerstone Lands MHPA Preserve. Invasive plant removal methods will be developed in consultation between the Water Authority, City of San Diego, and regulatory agencies.
  - The use of non-native, invasive plant species in revegetation efforts will be prohibited.
  - The exotic plant control programs initiated during construction will be continued in revegetated areas until it can be demonstrated that native vegetation can sustain itself without active weed eradication.
- *Grading/Land Development:*

- The width of construction corridors extending through sensitive habitats (e.g., oak woodlands, coastal sage scrub, and wetlands) within the San Vicente Reservoir Cornerstone Lands MHPA Preserve will be minimized to the extent practicable.
- Wherever practicable, access/construction roads and staging areas will be located a minimum of 100 feet from areas supporting sensitive habitats or species to minimize the potential for unauthorized impacts within the San Vicente Reservoir Cornerstone Lands MHPA Preserve.
- Where practicable, disturbed areas will be recontoured to be compatible with the surrounding topography within the San Vicente Reservoir Cornerstone Lands MHPA Preserve, and these areas will be restored and revegetated at the completion of construction.
- With the exception of a small encroachment of the Marina Quarry Option into the San Vicente Reservoir Cornerstone Lands MHPA Preserve (see discussion below), all grading and manufactured slopes associated with the Proposed Action would be contained within the SV 100K footprint.

These project components, design features and mitigation measures would minimize edge effects and adjacency impacts within the San Vicente Reservoir Cornerstone Lands MHPA Preserve. Therefore, impacts to biological resources associated with the above-listed MSCP Land Use Adjacency Guidelines would be less than significant.

Conservation Goals. In terms of assembling large amounts of conserved habitats to build the MHPA preserve system, temporary and permanent impacts to approximately 194 acres of chaparral due to the Proposed Action may affect the ability of the City of San Diego to implement the MSCP. However, the city is currently at 91.9 percent of its conservation goal (52,727 acres), with the remaining 8.1 percent comprised of privately owned lands (City of San

Diego MSCP Annual Report, 2006). Impacts to chaparral within the SV 100K footprint would occur on publicly owned land and these impacts would be less than significant because this vegetation community is considered locally and regionally well distributed by the Water Authority. The loss of this vegetation community would not affect MSCP conservation goals on a regional basis. Therefore, impacts to biological resources associated with MSCP conservation goals would be less than significant.

MHPA Preserve Design. The MSCP Subarea Plan recognizes current and future needs of the Water Authority to provide water for San Diego County and identifies San Vicente Reservoir as a possible location for increased storage of water supplies. The MSCP excludes areas of the ESP and future expansion of San Vicente Reservoir from the Cornerstone Lands MHPA Preserve, and provides exemptions for filling the reservoir to 800 feet AMSL, a new marina, quarry operations, access roads, staging areas, a horizontal buffer of 300 feet around the expanded reservoir (as measured from 800 feet AMSL), and other supporting uses.

All of the components of the Proposed Action would be within the exemption limit for the San Vicente Reservoir Cornerstone Lands MHPA Preserve (800-foot ASML contour plus 300-foot horizontal buffer), except for a small portion of the Marina Quarry Option and the septic system setback. Potential impacts to the San Vicente Reservoir Cornerstone Lands MHPA Preserve from the Marina Quarry Option and septic system setback are discussed in more detail below.

Marina Quarry Option. Section 1.2.5 of the MSCP Subarea Plan identifies approximately 33 acres (5,000 feet wide by 2,800 feet long) ”below the dam for a sand and rock mining operation to produce aggregate materials for the dam expansion.” The Marina Quarry Option would be located northwest of the existing dam in the vicinity of the marina and would extend approximately 10 acres into a portion of the San Vicente Reservoir Cornerstone Lands MHPA Preserve (non-exempt area).

With the Marina Quarry Option, there would be no need for the Southwest and Southeast on-site quarry options below the dam, and the sensitive coastal sage scrub vegetation in these two areas would continue to contribute biological value to the regional MSCP preserve system. In addition, the Southwest Quarry Option contains pre-fire (2003 Cedar Fire) gnatcatcher-occupied coastal sage scrub habitat. The Marina Quarry Option would substantially reduce the acreage anticipated to be used for aggregate production for the dam expansion (by approximately 15 acres). If this quarry option were selected by the Water Authority, it would not impact the long-term function or design of the MHPA preserve or conflict with the identified MHPA exemptions anticipated for this area in the MSCP Subarea Plan (Section 1.2.5). Overall, the Marina Quarry Option would result in less acreage being impacted for aggregate production and allow for areas south of the existing dam, with sensitive coastal sage scrub and pre-fire gnatcatcher-occupied habitat, to being retained in their natural state. Therefore, impacts due to encroachment of the Marina Quarry Option into approximately 10 acres of the San Vicente Reservoir Cornerstone Lands MHPA Preserve (non-exempt area) would be less than significant.

Septic System Setback. The Lakeside Community Plan encourages the use of individual septic systems, as opposed to municipal sewerage, under its Public Facilities and Services element. A septic system setback would be established around San Vicente Reservoir to provide a buffer between the maximum inundation limit of the expanded reservoir and the septic systems (i.e., leach fields) associated with adjacent residential lots. It is not known at this time what the final reservoir septic system setback requirements would be for the Proposed Action. The setback areas are intended as an open space buffer to be left in a natural state to ensure reservoir water quality protection, while still allowing for normal reservoir watershed management activities as set forth in Section 1.5.10 of the MSCP Subarea Plan. The extension of the setback area into San Vicente Reservoir Cornerstone Lands MHPA Preserve would

further the preserve design and habitat conservation goals of the MSCP. Therefore, impacts due to encroachment of the reservoir septic system setback into the San Vicente Reservoir Cornerstone Lands MHPA Preserve (non-exempt area) would be less than significant.

2.6.1.3 Loss of Existing Uses

Residences

For purposes of this analysis, an approximate 1,000-foot septic system setback was assumed surrounding the new maximum normal pool (MNP) elevation of 764 feet ASML. The actual buffer width of the septic system setback would vary depending on topography. Under this "worst-case" scenario and based on preliminary engineering estimates, up to 53 parcels could be potentially impacted by the Proposed Action, including the inundation area, construction areas, and septic system setback areas. These 53 potentially affected parcels would encompass approximately 4,940 acres. A total of 12 out of the 53 impacted parcels may require full acquisition. A total of 32 parcels may require part-takes, 4 parcels may require purchase of easements, and 5 parcels may require a septic offset but no taking. It is not known what portion, if any, of the parcels would be affected. The 12 parcels that may need to be acquired are zoned residential. Five of these 12 residentially zoned parcels are developed with single-family residences, and seven are currently vacant. As stated above, it is not known at this time what the final septic system setback requirements would be for the Proposed Action. This would be determined once individual septic field percolation tests are conducted on each parcel. However, the Water Authority considers the displacement of even one residence a significant impact. Therefore, impacts of the Proposed Action due to displacement, relocation, or permanent loss of residential property as a result of the septic system setback would be significant.

Under the above scenario, in addition to the 12 parcels that may be fully acquired, there is also a potential for the Water Authority to acquire part-takes or easements on 32 parcels, two

of which are developed with single-family residences; the remaining 20 parcels are vacant. It is possible that easements may be purchased on properties that restrict the installation of septic systems to limited portions of the parcel. If acquiring the easement to restrict installation of septic systems would result in residential displacement, this impact would be significant.

Businesses

On-Site Businesses. There are no active business activities on the land within the SV 100K study area. The City had previously contracted out the marina snack and bait concession stand that sold soft drinks, snacks, and fishing equipment to the recreational users at the lake; however, the City closed this operation in 2006. There currently is no timeline set by the City for reopening the concession operation under a private operator. The nearest retail businesses are located a few miles south of the reservoir at Los Coches Road and Woodside Avenue in Santee. There are a few industrial/manufacturing buildings located on Vigilante Road east of SR-67 and on Slaughterhouse Canyon Road west of SR-67. No on-site business relocations would occur as a result of the Proposed Action. Therefore, impacts to the displacement of on-site businesses from the Proposed Action would be less than significant.

Aquatic Businesses. Several local freshwater aquatic recreation businesses that are located outside of the San Vicente Reservoir study area, but who use the reservoir for demonstration of boating equipment, may be adversely affected by the reservoir closure during the dam raise construction. However, alternative year-round freshwater sites are available at other locations to accommodate boating demonstrations, such as Lake Elsinore and El Capitan Reservoir. Upon completion of the dam raise and reservoir filling, the relocated marina and larger reservoir surface would enhance aquatic recreation businesses opportunities. Therefore, impacts to the displacement of aquatic businesses from the Proposed Action would be less than significant.

2.6.1.4 Parcels Within The San Vicente 100K Inundation Area

Of the 37 private parcels impacted, a total of 13 properties would be affected by the SV 100K inundation area. None of the inundation area parcels would result in full-takes (Table 8). Twelve of the part-take parcels impacted by inundation are City-owned, and one is privately-owned (included in the take-area totals listed in the previous paragraphs). The total inundation area for the Proposed Action would be 240 hectares (592 acres).

Table 8
Public Transfers and Parcel Part-Take Areas
Resulting from Inundation from the Proposed Action*

Ownership	Parcels	Total Parcel Area		Inundation Area	
		Hectares	Acres	Hectares	Acres
Public (City)	12	1,289.43	3,186.15	238.83	590.13
Private	1	16.33	40.35	0.91	2.24
Total	13	1,305.76	3,226.50	239.73	592.37

* One public parcel and one private parcel are included in the septic offset table.
No Parcel full-takes would result from inundation.
Source: San Diego County Water Authority, October 26, 2006.

Of the total 53 private and publicly-owned properties impacted by the Proposed Action, 42 would be affected by the septic system offset restrictions. These septic system offsets are necessary to protect the reservoir from potential underground effluent drainage into the reservoir. Thirty-seven of these 42 parcels are privately owned and five parcels are public properties (City, County, or State owned). The potential 12 parcel full-takes identified above would all be from septic system offsets. In addition, some of the part-takes may result in uneconomic parcels. Therefore, the full or partial take of private properties resulting from septic system setbacks for the Proposed Action would be a significant impact.

It is not known at this time what the exact setback requirements would be for each individual parcel potentially affected by the maximum inundation limits for the Proposed Action. Setbacks would be determined once the final water elevation is calculated and septic field percolation tests are conducted on each parcel. The Proposed Action may require the removal of a maximum of seven dwelling units and displacement of the residents. The estimated

number of displaced residents would be 2.9 people per household, or approximately 20 people based on the demographics report from SANDAG and the preliminary engineering impact estimates. The displacement of even one residence is considered a significant impact.

Business Relocations and Access Impacts

No business relocations or loss of employment for the community are expected as a result of the Proposed Action. Indeed, employment and sales within the SV 100K local community impact area and the region would be increased (although not significantly) due to the construction activity (refer to Section 2.6.2 below).

Access would be maintained during construction for all businesses located within the SV 100K local community impact area. No significant impacts to business access or sales within this area are expected during the construction period for the Proposed Action.

2.6.2 Economic Impacts

2.6.2.1 Direct Loss of Property Tax Revenues

Fiscal impacts include both direct and indirect effects on local jurisdictions and taxing agencies. Direct impacts are related to property acquisitions, which convert private property to a publicly-owned, non-taxable land use. Indirect impacts refer to project-induced economic impacts from development or project-related changes in market value, as well as properties which lose access or are converted into small economically non-viable remnants, as a result of a partial taking of property.

The acquisition of private property for the Proposed Action would directly affect the property tax revenues of the County. The County Tax Assessor's total property tax assessment for Fiscal Year 2005-06 was $3.594 billion. There is a maximum potential for 18 privately-owned parcels with part-takes yielding a combined total of 112.4 hectares (278.1 acres) removed from the property tax roll. These potential part-takes would result in a total estimated direct loss of $9,306 in annual property tax (Table 9). In addition there is the potential for up to

12 privately-owned parcels with full-takes, resulting in 44.4 hectares (109.9 acres) removed from the property tax roll and an estimated direct loss of $32,840 in annual property tax. The combined potential total annual decrease in property tax would be an insignificant $42,000, about 0.001% of the countywide tax assessment.

Table 9
Estimated Direct Property Tax Impacts
From the Proposed Action

Private Parcel Acquisitions	Parcels	Area of Take		Estimated Annual Property Tax Loss	Percent of S.D. County Property Taxes*
		Hectares	Acres		
Part-Takes	18	112.36	278.13	$ 9,306	0.000%
Full-Takes	12	44.42	109.94	$ 32,840	0.001%
Total Property Takes	30	156.78	388.07	$ 42,146	0.001%

* San Diego County Tax Assessor, Fiscal Year 2006 Property Tax Assessment ($3.594 billion).

Sources: San Diego County Tax Assessor
CIC Research, Inc.

2.6.2.2 Property Value Changes

Potential positive and negative property value changes may be associated with the Proposed Action. Property value impacts are not easily quantified without a thorough real estate appraisal and are therefore discussed in a general manner. Negative impacts such as dust, noise or visual effects are expected to occur during the construction period, but would cease after construction.

The regional economy would benefit from the incomes generated by construction of the Proposed Action and this will indirectly benefit regional assessed values through the increase of countywide sales (see next section). Although these fiscal benefits would not be significant, they will be substantially larger than the $42,000 annual direct property tax loss generated by the Proposed Action.

2.6.2.3 Retail Sales Impacts

San Vicente Reservoir experiences an estimated 25,000-30,000 recreational user days per year. The average trip related expenditure by lake users is about $28 per user-day.[2] This results in an estimated maximum of $840,000 in annual trip spending. If all $840,000 in trip spending were taxable, the maximum estimated tax revenue for local governments would be $8,400. The $350 million in construction expenditures over five years for the Proposed Action would generate an estimated $190,000 in retail sales tax revenue per year (direct, indirect, and induced). Total taxable retail sales in San Diego County were estimated at $46.7 billion for 2005. Total tax revenue for local governments was about $500 million for 2005. No net loss of retail sales tax revenue is expected as a result of the Proposed Action and no significant impact would result.

2.6.2.4 Construction Labor and Materials Impacts

This section presents the direct and indirect non-recurring economic impacts resulting from the construction of the Proposed Action. The direct economic impact of the $350 million construction project includes the expenditure of funds on labor and materials. It is expected that San Diego County would provide the majority of the labor pool for the construction activity.

A San Diego regional input-output model was developed by CIC Research to provide estimates of the total economic impacts of the proposed $350 million construction project. The input-output modeling provides measurements of the total economic impacts (direct, indirect, and induced) in terms of output (regional sales), income (wage, salaries, and proprietors' income), and employment.

The direct impact would be the $350 million in estimated construction cost and 3,199 years of labor (job-years). The indirect and induced impacts would total $276 million, yielding a total economic output of $626.1 million and an economic multiplier of 1.79 times the direct economic impact. The total economic output of $626.1 million would require 5,464 years of

[2] CIC Research, Inc., "2005 Annual San Diego County Visitor Profile," August 2006.

labor effort and would generate $301.2 million in income. As the Proposed Action would require five years for construction, the labor activity would be distributed over the five-year period and would result in approximately 640 jobs per year direct impact and 1,093 jobs per year total impact (direct, indirect, and induced). Table 10 identifies the direct, indirect, and induced economic impacts associated with the Proposed Action.

Table 10
Estimated Total Economic Impacts
From Construction of the Proposed Action

Impact Category	Direct Effects	Indirect Effects	Induced Effects	Total	Economic Multiplier*
Output	$ 350,000,000	$ 77,000,000	$ 199,100,000	$ 626,100,000	1.79
Income	$ 197,500,000	$ 33,700,000	$ 70,000,000	$ 301,200,000	0.86
Employment (job years)	3,199	588	1,677	5,464	17.95
Employment (per year)	640	118	335	1,093	17.95

* Economic multiplier per million dollars of direct effect.
Source: CIC Research, "IMPLAN/Pro-San Diego County Regional Input-Output Model," 2006.

The $125 million per year in total economic output generated by the five-year construction project would represent an insignificant portion of the $161 billion countywide economy. Furthermore, the direct construction sales impact of $70 million per year (i.e., $350 million divided by 5 years) and the 640 annual direct construction jobs would represent an insignificant portion of the $15 billion in annual sales for the San Diego construction sector and its 118,000 employees (Table 4). This is especially true if the nationwide decrease in construction activity extends for a period of several years. No significant impacts are anticipated in terms of direct or indirect negative impacts to regional businesses as a result of construction labor displacement or inter-industry sales during the construction period for the Proposed Action.

2.6.2.5 Farmland Impacts

The Proposed Action does not include any active farms within the area of potential effect and the soils are largely unsuitable for farming. The total SV 100K footprint encompasses

approximately 1,861 hectares (4,598 acres), excluding the septic system offset area. Within this footprint, a total of 0.36 hectare (0.9 acre) of Prime and Unique Farmland soils and a total of 18.2 hectares (44.9 acres) of Statewide and Local Important Farmland soils would be converted. The resulting total farmland soils converted would be 18.5 hectares (45.8 acres) or approximately 0.04% of the county total of 45,720 farmable hectares (112,974 acres).

The potentially converted Prime and Unique Farmland soils consist of Visalia sandy loam (VaA), 0% to 2% slopes. The potentially converted Statewide and Local Important Farmland soils consist of Tujunga sand, 0% to 5% slopes. Based on the site assessment criteria for the 12 impact categories, the overall farmland conversion impact rating for the Proposed Action was 86, which is below the significance rating threshold of 160 (see Appendix Form AD-1006).

The potentially converted farmland acreage would represent a very small percentage of farmable land in the county (0.04%), and based on consultation with the NRCS and completion of Form AD-1006, the farmland within the SV 100K footprint rates a “minimal level of consideration for protection.” The California Department of Conservation (1994) definition of farmlands excludes “publicly owned lands for which there is an adopted policy preventing agricultural use.” The Farmland Protection Policy Act (Sec. 658.1) specifically states that "Farmland does not include land already in or committed to urban development or water storage." The farmland soils within the SV 100K footprint are on publicly owned land and the adopted land use plan is for continued use of the site as a dam and water reservoir. Therefore, there would be no significant impacts to agricultural resources from the Proposed Action and no mitigation or minimization measures are required.

2.6.2.6 Recreation Impacts

CIC Research conducted interviews with recreational users at San Diego City Lakes. CIC also conducted a telephone survey of San Diego residents to determine the frequency and

types of activities at San Diego City Lakes.[3] The survey determined that 42% of lake users are San Diego City residents, 52% of users are residents of other areas of the County, and 6% were from outside the County.

Residents of San Diego rated Lake Murray, El Capitan Reservoir, Lake Miramar, and Otay Lakes a better recreational experience than San Vicente Reservoir. About 23% of lake users reported fishing as the main purpose of their trip. Only 4% of recreational users reported water skiing as their primary purpose of visiting these lakes.

As previously stated, San Vicente Reservoir is one of two freshwater lakes in the County of San Diego that offer water skiing (El Capitan Reservoir is the other). San Vicente is the only lake that allows year-round water skiing. However, the San Vicente launch ramp was closed September 11, 2006 due to an abnormally low reservoir water level and it is now closed to water skiing until additional water delivery occurs. The number of ski boats on San Vicente Reservoir is limited to 100 boats at one time. This maximum is often reached by early in the morning on summer weekends (July and August) with as many as 50 ski boats queued in the parking area for time on the water. Recreational demand at San Vicente Reservoir exceeds the supply of weekend water skiing opportunities during the summer and is a strong indicator of additional latent demand.

Loss of recreational use of San Vicente Reservoir due to the Proposed Action would extend 5 to 7 years, significantly impacting freshwater fishing and water sports activities within the County. The Water Authority does not own or operate reservoirs in the County for such purposes. The Water Authority has asked the City of San Diego about the possibility of expanding recreational use at any of their reservoirs to offset the extended loss of San Vicente Marina and Reservoir due to the Proposed Action. However, the City is currently undergoing a Business Process Reengineering study and it is unknown whether the City could commit to

[3] CIC Research, Inc., "A study of the City of San Diego Lake Recreation Resources," July 1992.

constructing or expanding other reservoir recreational facilities now or in the future. Furthermore, the Water Authority does not have the ability to mandate the construction of new reservoir recreational facilities, or the expansion of existing or planned facilities, to meet the possible temporary demand for expanded facilities as a result of the Proposed Action. Although the loss of recreational opportunities at San Vicente Reservoir during construction of the Proposed Action would be a significant impact, the relocated and expanded San Vicente Marina will ultimately provide greater recreational opportunities for County residents, than the current facilities[4].

Several local freshwater aquatic recreation businesses have limited locations besides San Vicente Reservoir for demonstration of boating equipment. These businesses may be adversely affected by the reservoir closure during the temporary construction and drawdown period at San Vicente Reservoir. However, alternative year-round freshwater sites are available at other locations to accommodate boating demonstrations, such as Lake Elsinore and El Capitan Reservoir. Upon completion of the Proposed Action, the relocated marina and larger reservoir surface would enhance aquatic recreation businesses opportunities. Therefore, impacts to the displacement of aquatic businesses from the Proposed Action would be less than significant.

2.6.2.7 Growth Impacts

[4] El Capitan and Lower Otay lakes have been discussed as possible year-round recreation alternatives. The feasibility of implementing other lake alternatives within the County has not been fully evaluated.

The Proposed Action would address the existing and projected demand for water that may result from extended periods of drought or catastrophic events. Overall, there would be no net impact on potential housing construction for the surrounding SV 100K local community impact area or the region. Therefore, the Proposed Action would not significantly impact growth within the local community or the region.

2.6.3 Environmental Justice Impacts

All Federal agencies and departments are directed to comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Population, signed on February 11, 1994. This Order and accompanying memorandum focuses federal attention on the environmental and human health conditions in minority and low-income communities, enhances the provision of nondiscrimination in federal programs affecting human health and the environment, and promotes meaningful opportunities to access of public information and participation in matters relating to minority and low-income communities and their environment.

Each federal agency is required to, among other things, provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures of projects, programs, or activities undertaken by them. This socioeconomic impact assessment for the Proposed Action provides demographic information for the SV 100K local community impact area and the region. The data supports the conclusion that no Environmental Justice Impacts would occur as a result of the Proposed Action.

The potential number of displaced homes as a result of the Proposed Action is small and the affected community does not disproportionately represent a low-income or minority population. The Proposed Action would not result in environmental impacts due to cultural interpretations or affiliations for residents of the SV 100K local community impact area. In general, the Proposed Action would be beneficial to the residents of the SV 100K local

community impact area and the countywide region. These benefits include regional economic protection of increased water storage and enhanced recreational opportunities of an improved reservoir and facilities.

2.7 MITIGATION MEASURES

2.7.1 Socioeconomic (Land Use) Impact Mitigation Measures

2.7.1.1 Property Loss and Residential Relocations

In areas requiring easements or property acquisition as a result of part-takes and full-takes resulting from construction, reservoir inundation and septic system setbacks, the Water Authority shall use certified independent fee appraisers to determine fair market value for all easements and parcels required for the Proposed Action. Landowners will be offered fair market value, based on the approved appraisal.

In areas requiring relocation assistance, each qualified resident shall be relocated by the Water Authority in compliance with the terms of the federal Uniform Relocation Assistance Act (as amended). Displaced residents will receive either actual reasonable moving costs or fixed moving costs. In addition to the fair market value for their property, residents who qualify as a 180-day owner-occupant, may be eligible for a replacement housing payment. Replacement housing payments consist of a price differential, mortgage differential and/or incidental expenses. If residents qualify as a tenant occupant of at least 90 days, they may be entitled to receive a rent differential or down payment option.

Displaced residents will be offered relocation assistance for the purpose of locating a replacement property. A relocation agent will explain the requirements for relocation eligibility, provide the amount of the replacement housing payment in writing, assure the availability of a comparable property before the residents move, and inspect possible replacement residential units for decent, safe, and sanitary (DS&S) compliance. In addition, a relocation agent will

provide information on counseling to help minimize hardships in adjusting to new locations and will assist in completing loan documents, rental applications or relocation claims. Relocation agents will also provide information on security deposits, interest rates and terms, typical down payments, veterans administration and Federal Housing Administration loan requirements, real property taxes, and consumer education literature on housing.

All eligible displacees have a choice in the selection of replacement housing. If they decide not to accept the replacement housing offered, they may secure a replacement dwelling of their choice, providing it meets DS&S housing standards. Federal law requires that all services and/or benefits shall be administered to the general public without regard to race, color, national origin, or sex. Displacees have the right to appeal any relocation decision to the Water Authority regarding their relocation benefits and eligibility.

Sufficient housing resources exist within the SV 100K local community impact area for relocation of a potential seven displaced residences due to the Proposed Action. The availability of sufficient replacement housing resources and relocation assistance from the Water Authority would mitigate the significant impact of relocation.

2.7.2 Economic Impact Mitigation Measures

2.7.2.1 Recreation Impacts

There are no feasible mitigation measures to reduce the impacts from the temporary closure of San Vicente Marina and Reservoir for an extended period during construction of the Proposed Action. While the City of San Diego could expand or allow increased use of other reservoir recreational facilities in the region or construct recreational facilities at City lakes that currently do not provide fishing and water sports activities (e.g., bass fishing, waterskiing, and wakeboarding), such mitigation is outside the jurisdictional control of the Water Authority to implement. The Water Authority has asked the City about the possibility of new or increased recreational uses at their other reservoirs. However, it is unknown whether the City could

commit to constructing or expanding other reservoir recreational facilities for fishing and water sports now or in the future to compensate for the temporary loss of these activities at San Vicente Marina and Reservoir during construction of the Proposed Action.

2.8 RESIDUAL IMPACTS AFTER MITIGATION

Because it is unknown whether the City will construct or expand recreational facilities for fishing and water sports at their other reservoirs to compensate for the loss of these activities at San Vicente Marina and Reservoir during construction of the Proposed Action, this recreation impact would be significant and unmitigable. However, it should be noted that this impact is transient and would be limited to the period of the reservoir closure. A Statement of Overriding Considerations would be necessary for project approval.

Significant impacts to recreation would cease upon completion of the relocated San Vicente Marina subsequent to the dam raise and refilling of the expanded San Vicente Reservoir. The relocated and expanded marina would ultimately provide greater fishing and water sports recreational opportunities for recreational users than current conditions.

2.9 CUMULATIVE IMPACTS

No business displacements or employment loss would result from the Proposed Action, and a negligible loss of property tax revenues would occur. No cumulative impacts are expected to employment or business sales. The annual construction output for the Proposed Action is estimated at $70 million per year and would represent about 0.5% of regional construction output and employment. The total economic output of approximately $125 million per year (direct, indirect, and induced) would represent an insignificant portion of the $161

billion regional economy. Therefore, the potential cumulative direct and indirect economic impacts, both beneficial and adverse, are not substantial.

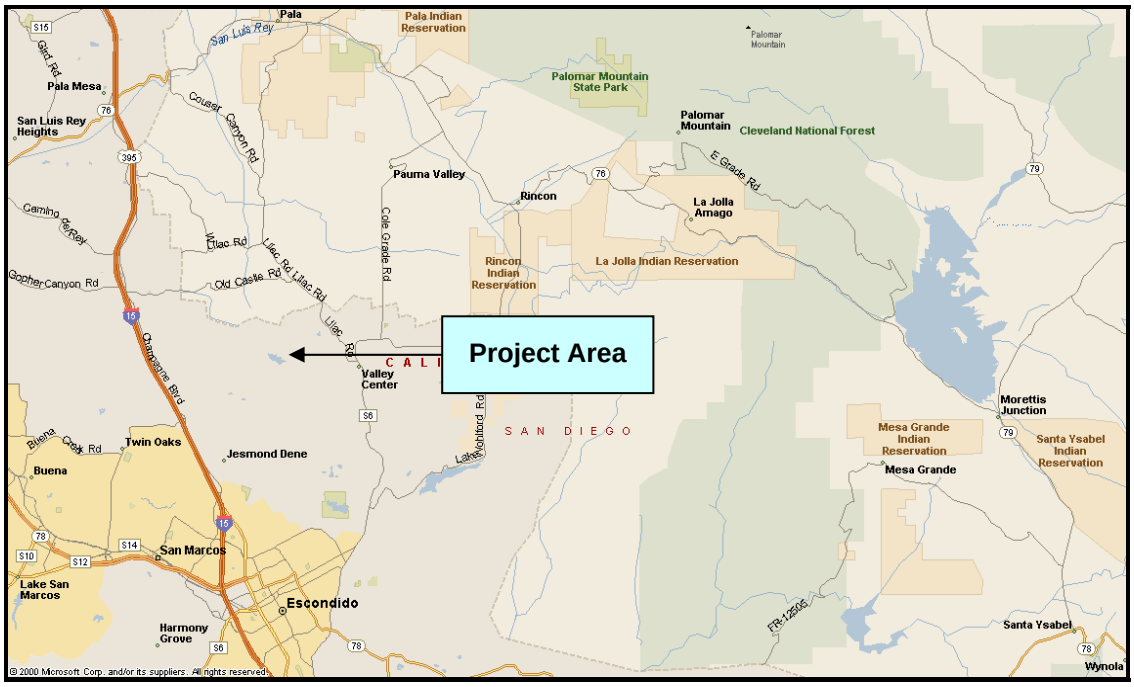
3.0 ALTERNATIVE 2: MOOSA 100,000 AF RESERVOIR

3.1 ENVIRONMENTAL SETTING

3.1.1 Study Area

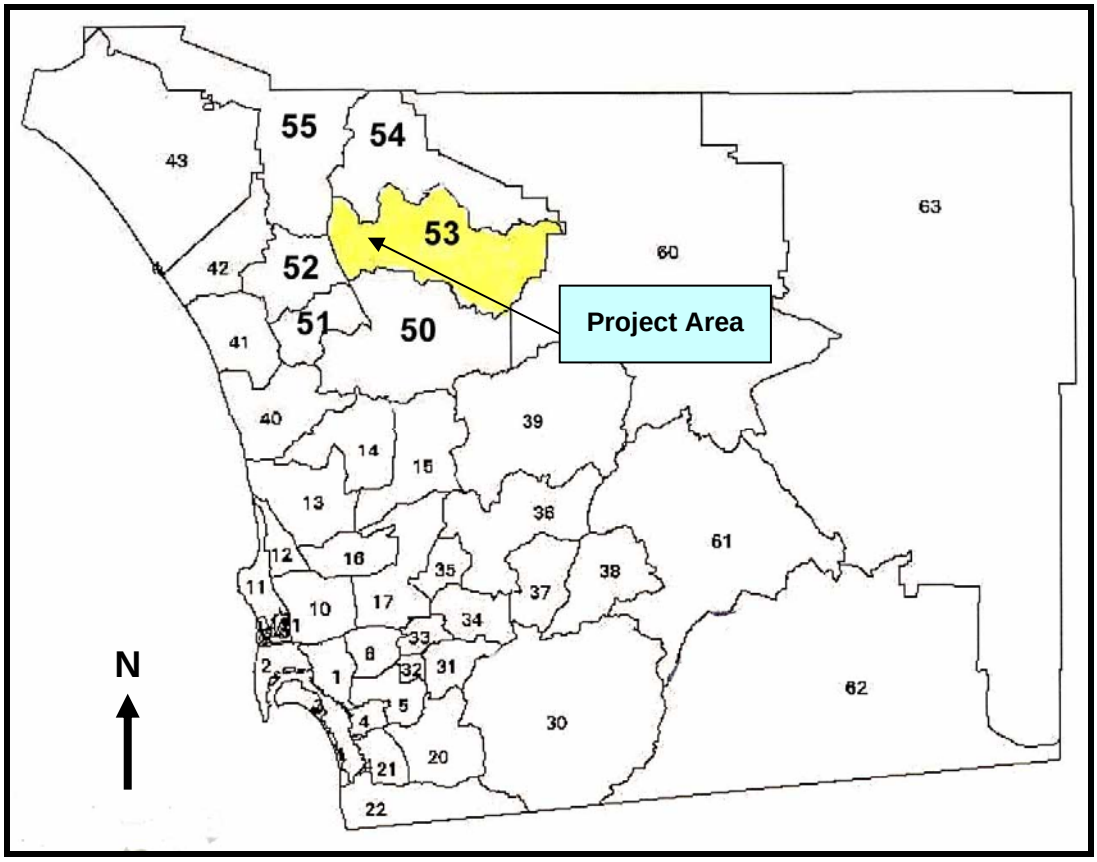
The Moosa 100K Alternative would be located in a relatively unpopulated area 3.5 miles northwest of Valley Center in San Diego County (Figures 8). The site is approximately 15 miles north of the City of Escondido and four miles east of Interstate 15 (I-15). Existing uses within Moosa Canyon include Turner Lake, scattered residences, agricultural lands and undeveloped areas. Access to the site is via Old Castle Road, Lilac Road and Betsworth Road.

Figure 8
Moosa 100K Alternative – Site Vicinity Map



The local community impact area for the Moosa 100K Alternative is defined as the SANDAG Subregional Area 53 (SRA 53) located within the large North County East Major Statistical Area (MSA: Figure 9).

Figure 9
San Diego Sub-Regional Areas



Sub-Regional Areas:

50 – Escondido	53 – Valley Center
51 – San Marcos	54 – Pauma
52 – Vista	55 – Fallbrook

3.1.1.1 North County East MSA

The North County East Metropolitan Statistic Area (MSA) comprises the SANDAG defined SRAs of Escondido (SRA 50), San Marcos (SRA 51), Vista (SRA 52), Valley Center (SRA 53), Pauma (SRA 54), and Fallbrook (SRA 55).

3.1.1.2 Escondido (SRA 50)

Escondido is located at Interstate 15 and Highway 78. It is about 18 miles east of the coast and 30 miles northeast of downtown San Diego. The City is 23,185 acres and 36.2 square miles in size. Escondido has a wide range of homes, from very affordable, to homes in the

$400,000-$1,000,000 range. These homes are found in established neighborhoods and new housing developments.

By mid 2003, a number of developers began assembling land in the Escondido area in order to build higher-density, market-rate, urban residential products such as row homes, condos, and town homes. Although Escondido has a wide range of housing choices, higher-density urban development will provide more opportunities for home ownership and will create more pressure on the northern inland San Diego County rural character.

There are three major business areas in Escondido: The Mercado Business District encompasses 11 acres bordered by Valley Parkway to the north, Pine Street/Centre City Parkway to the east, and Quince Street to the west. A reconfiguration of the Grand Avenue intersection at Centre City Parkway improved traffic flow and united the downtown area with the Mercado District.

The East Valley Business and Shopping Area is experiencing a renaissance. This business area begins just east of Palomar Medical Center and is bordered by the hospital professional zone to the south, Washington Avenue to the north and Citrus Avenue to the east. As major retail anchors locate on the Parkway, such as Home Depot, an Albertson's anchored Vineyard Shopping Center, and a probable WalMart, the entire area has revitalized and property values and lease rates have increased. A cluster of educational uses further anchors the Parkway on the easterly end with Palomar College and the new Escondido Charter High School. Many new homes have been built, or are on the drawing board, for the easterly part of the city.

The South Escondido Boulevard Business Area has a mix of office, restaurant, vehicle sales, real estate offices, banks, and retail uses. The area is bordered by the historic downtown to the east, Citracado Parkway to the south, Centre City Parkway to the east, and Fifth Avenue

to the north. The City and SDG&E funded the undergrounding of utilities. The City has installed new sidewalks, lighting, streetscape and public art for the Boulevard.

3.1.1.3 San Marcos (SRA 51)

Covering 34 square miles, San Marcos is located 30 miles north of San Diego at the northwestern intersection of interstates 15 and 5. The city offers a mix of residential development from apartment and condos to homes and ranches. Three-quarters of the land area is developed with an assessed value of $7.5 billion. There are about 1.7 million s.f. of office space, 4.7 million s.f. of retail space, and 5.4 million s.f. of industrial space in the area.

San Marcos has a population of about 73,000 and a median household income of about $56,207. The number of dwelling units is 21,415 and the median home price is at $526,000.[5] Around 900 to 1,200 dwelling units are built each year, and building construction valuation for 2004 was $553 million.

San Marcos has about 3,650 businesses employing over 28,900 people. Top employers with over 100 employees include the San Marcos Unified School District, the California State University, San Marcos, Palomar College and the Hunter Industries, Inc.

3.1.1.4 Vista (SRA 52)

As of 2005, Vista had a total population of 89,857. The City is historically aligned with Oceanside and Carlsbad to make up what is called the Tri-City area of North San Diego County. Vista has 28,877 households and there are 29,814 housing units.[6]

The cities of Vista and nearby San Marcos have a significant community of Asian/Pacific Islanders, but the older sections of Vista are predominantly Hispanic. SANDAG has reported an estimated 2005 median household income of $60,531 for Vista. When adjusted for inflation

[5] City of San Marcos, SANDAG and ESRI, San Diego Board of Realtors, HDL and the County of San Diego Assessors Office.
[6] Op Cit, SANDAG.

(1999 dollars; comparable to Census data above), the median household income was $49,153. The median home price for Vista was $480,000 in 2005, with a price gain of 12.7% over 2004.

The majority of the businesses located in Vista are manufacturing, education and government. The largest employers are the Vista Unified School District, Watkins Manufacturing Corporation, and the San Diego Superior Court.

There is a significant amount of permanent open space in Vista, especially in the north, with large dedicated park areas. The two most well-known within the city are Brengle Terrace Park and Guajome County Park.

3.1.2.5 Valley Center (SRA 53)

The Valley Center SRA is located south of SR-76 and east of Interstate 15. While many other communities in the northern San County region have experienced rapid urbanization, Valley Center has remained a rural community and largely agricultural. This is largely due to its relative physical isolation from other established urban areas. Another reason that urbanization has not taken place in Valley Center is the moratorium that prohibits the issuance of building permits and septic permits within the central basin area. Most of the developments are custom single-family homes on large individual lots, and there are very few housing tracts within the SRA-53 area. Figure 6 illustrates land uses in the Moosa 100K local community impact area.

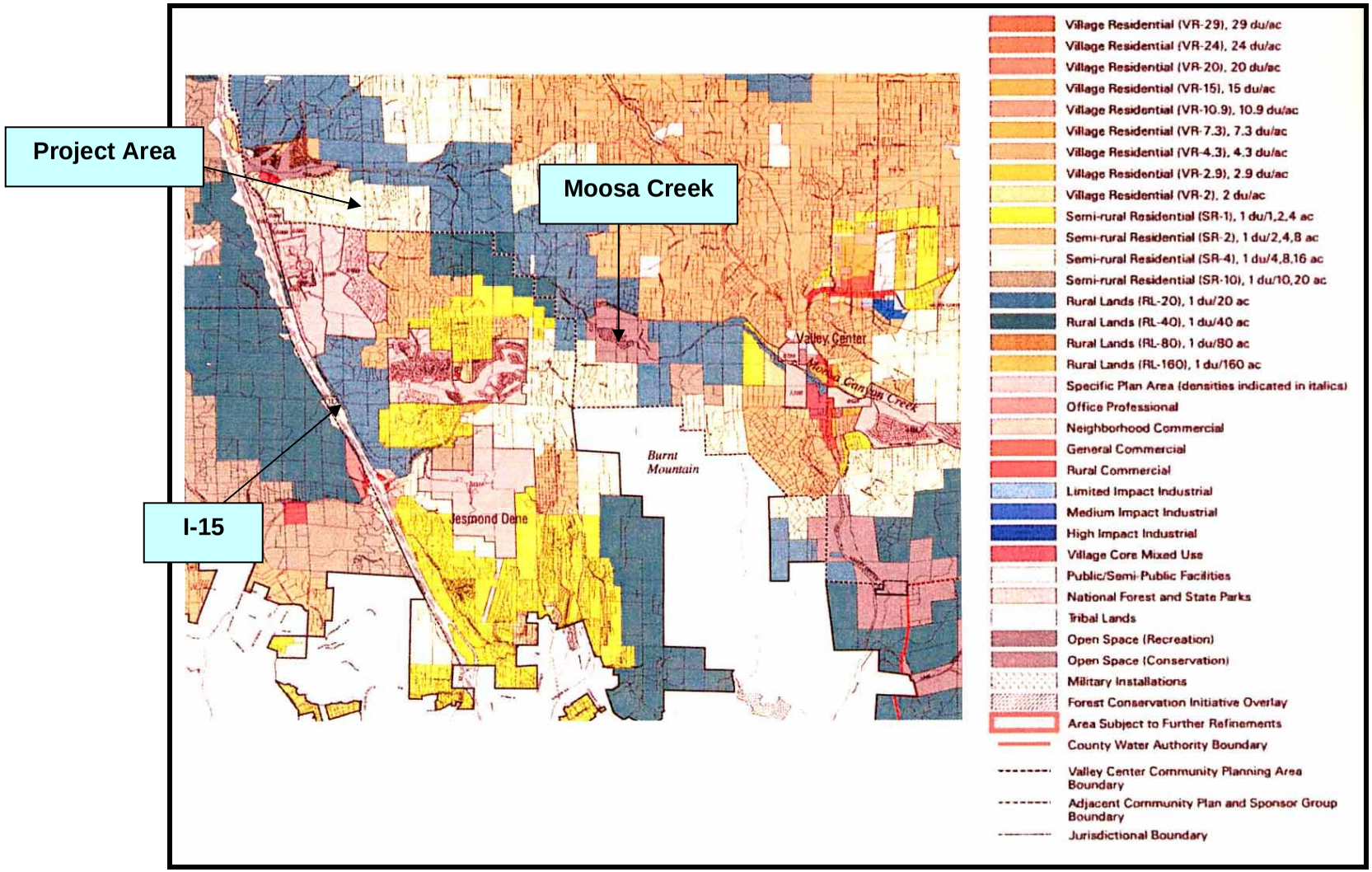
3.1.1.6 Pauma (SRA 54)

The Pala-Pauma SRA is located in northeastern San Diego County and is approximately 115 square miles in size. The northern boundary of the SRA forms the common boundary between San Diego and Riverside Counties. The SRA contains large areas of potentially developable land. Nearly 11% of the SRA is in agricultural production, although limited urban

levels of development have occurred. The present population of the Pauma community is 6,177. Within the SRA are also two major casinos on Indian reservations. [7]

[7] San Diego County, Department of Planning and Land Use. General Plan 2020, Pala/Pauma Subregion.

Figure 10
Valley Center Community Planning Area and Adjacent Land Uses



Source: San Diego County, Department of Land Use, General Plan 2020, Valley Center Community Plan, August 2006

3.1.1.7 Fallbrook (SRA 55)

The community of Fallbrook consists of 36,000 acres and is located south of Riverside County and east of Camp Pendleton. Its neighboring communities are Bonsall to the south, Pala to the east, and Rainbow to the northeast.

Most of the area of Fallbrook is characterized by rolling hills covered in avocado and citrus orchards. The area has a village atmosphere characterized by predominantly low density residential development and agricultural uses. The Santa Margarita River crosses through the rugged terrain in the northern portion of the SRA and the San Luis Rey River runs along the southern boundary that Fallbrook shares with Bonsall. The eastern portion is dominated by steep slopes and Interstate 15.

The town center of Fallbrook is located near the western boundary. The town center incorporates an historical district that has become the focus of a current revitalization effort. Fallbrook's primary business is agriculture and is referred to as the “Avocado Capital of the World.” Fallbrook has been a primary avocado growing area since the fruit was first planted locally in 1912. Annual revenues from avocados alone reach approximately $26 million, earned mostly on small groves of two to ten acres.

With nursery products and market flowers annually producing approximately $83 million and citrus crops adding another $1.3 million, agriculture accounts for just under a third of the area's personal income.[8] Fallbrook has a healthy retail and service business base. Retail trade is supplemented by seven shopping centers in Fallbrook and in neighboring Bonsall.

[8] Fallbrook Chamber of Commerce- Fallbrook History.

3.2 PROJECT DESCRIPTION

3.2.1 Core Impact Area

The Moosa 100K Alternative would provide for approximately 100,000 AF of carryover storage at Moosa Canyon through construction of a new dam and inundation of a natural canyon (Figure 1). A new 384-foot high dam would be constructed. The dam crest elevation would be 1,258 feet AMSL. A saddle dam with spillway would be constructed approximately 1,000 feet to the northeast of the main dam; the spillway elevation would be 1,246 feet AMSL. The saddle dam/spillway would be approximately 84 feet high and 1,090 feet long. Both the main dam and saddle dam would be concrete-face rockfill dams. Dam construction is estimated to take about four years.

3.2.2 Outlying Facilities

The following new conveyance facilities would be required to connect the reservoir to the Water Authority's aqueduct system: three pump stations, flow regulatory storage tank, pipeline, and appurtenant facilities. The Moosa Creek pump station would lift water from the Moosa Reservoir to a flow regulatory storage tank. Water would be conveyed by gravity from the tank to the Second Aqueduct via a 6.4-mile-long, 90-inch-diameter steel pipeline. The pipeline alignment would follow Moosa Creek to Old Castle Road and continue west to the Second Aqueduct on the west side of I-15. The pipeline would be installed within an open-cut trench, except for the portion crossing I-15, which would be in a tunnel. Additional facilities would include a marina, new access roads, and new electrical supply to the pump station and other facilities. A portion of the First Aqueduct located below the reservoir inundation area would require reconstruction and relocation.

3.3 AFFECTED ENVIRONMENT

3.3.1 Demographics Characteristics

The social and demographic characteristics of residents of San Diego County, the North County East MSA, and the Valley Center SRA 53 are listed in Table 11. The Valley Center SRA 53 represents the Moosa 100K local community impact area.

Overall, the demographic data indicate that the residents of the Valley Center SRA 53 are more predominantly white (70%), than the North County East (52%) or the overall County (52%). Furthermore, the SRA has significantly fewer Hispanic residents (21%) than the North County East (38%) or the County of San Diego (29%). Nearly 8 out of 10 residents (81%) indicated that they only speak English at home, while only 15% reported speaking Spanish in the home and 1% reported speaking an Asian language in the home. Residents of the Valley Center SRA 53 typically have higher incomes and are generally older than the residents of the County.

Residents of the Valley Center SRA 53 reported a median household size of 2.8 people. In comparison, the County recorded 2.8 people per household and the North County East MSA recorded 3.0 people per household. Within the Valley Center SRA 53, the percentage of the population over 25 years old with a college degree is 29%, compared to 23% for the North County East MSA and 30% for the region. The percentage of the labor force that was unemployed was a little lower in the Valley Center SRA 53 than the North County East MSA or the County (2.0%, 4.0%, and 4.0%, respectively).

Table 11
Valley Center SRA 53, North County East MSA & San Diego County
Population and Housing Characteristics

Characteristic	Valley Center SRA 53	North County East MSA	San Diego County
Population			
Total Population (2000 U.S. Census)	18,959	380,430	2,813,833
Total Population (Jan 1, 2005 SANDAG Estimates)	21,584	417,855	3,211,721
2030 Population Forecast (SANDAG)	43,812	552,913	3,855,085
Population percent change (2005-2030)	103.0%	32.3%	20.0%
Gender			
Male	49.9%	49.5%	49.8%
Female	50.1%	50.5%	50.2%
Age Distribution* 2005 (SANDAG)	100.0%	100.0%	100.0%
Under 5 years	5.3%	7.8%	7.3%
5 to 19	21.0%	22.7%	21.1%
20 to 34	14.4%	21.9%	23.1%
35 to 54	27.5%	27.3%	28.7%
55 to 64	12.8%	8.4%	8.8%
65+	19.0%	11.9%	11.0%
Median Age 2005 (SANDAG)	43.4	33.3	34.0
Median Household Income 2005 (SANDAG)	$65,856	$51,302	$52,192
Families Below The Poverty Level (2000 U.S. Census)	5.1%	7.9%	8.9%
Population Below The Poverty Level (2000 U.S. Census)	8.0%	13.0%	12.4%
Population 25+ yrs. College Graduates (2000 U.S. Census)	29.0%	23.0%	29.6%
Race 2005 (SANDAG)	100.0%	100.0%	100.0%
Non-Hispanic	**78.9%**	**62.0%**	**71.2%**
American Indian and Alaska Native	3.3%	0.9%	0.5%
Asian & Pacific Islander	1.7%	4.2%	10.3%
Black or African American	1.3%	2.2%	5.3%
White	70.3%	52.2%	51.6%
Other or Multiple Race	2.3%	2.5%	3.4%
Hispanic	**21.1%**	**38.0%**	**28.8%**
Lanuguage Spoken At Home (2000 U.S. Census)	100.0%	100.0%	100.0%
English Only (%)	81.0%	66.0%	67.0%
Spanish (%)	15.0%	28.0%	20.1%
Asian Pacifc Language (%)	1.0%	3.0%	7.3%
Other Language (%)	3.0%	3.0%	5.6%

* Poway, Ramona, Lakeside, and Santee SRAs as defined by SANDAG.

Source: 2000 U.S. Census unless otherwise indicated

(Continued)

Table 11 (Cont.)

Valley Center SRA 53, North County East MSA & San Diego County
Population and Housing Characteristics

Characteristic	Valley Center SRA 53	North County East MSA	San Diego County
Total Housing Units (Census 2000)	7,248	131,101	1,040,149
Total Housing Units (SANDAG 2005)	8,182	141,817	1,108,500
Housing Units percent change (2000-2005)	12.9%	8.2%	6.6%
Total Occupied Units	7,622	136,552	1,061,027
% Owner-Occupied Housing (2000 Census)	85.0%	62.0%	55.4%
% Renter-Occupied (2000 Census)	15.0%	38.0%	44.6%
2030 Forecast (SANDAG)	15,944	185,352	1,354,088
Housing units percent change (2005-2030)	94.9%	30.7%	30.2%
Housing Unit Type (2005 SANDAG)	100.0%	100.0%	100.0%
Single Family Residence (detached)	73.8%	62.2%	61.2%
Attached Units	9.2%	28.5%	34.7%
Mobile Homes and Other	17.0%	9.3%	4.2%
Persons/Dwelling Unit (SANDAG 2005)	2.8	3.0	2.8
Average Rent (2000 Census).	$717	$714	$711
Median Housing Value (2000 Census)	$283,451	$214,240	$223,363
Median Housing Value 2005 (Dataquick, Inc.)	$706,000	$536,660	$500,000
Housing Vacancy Rates 2005 (SANDAG)	6.8%	3.7%	4.3%
Year Built (2000 U.S. Census)	100.0%	100.0%	100.0%
2000 to 2006	N/A	N/A	N/A
1990 to 2000	23.0%	17.0%	13.9%
1980 to 1989	28.0%	29.0%	21.9%
1960 to 1979	41.0%	41.0%	41.3%
1940 to 1959	6.0%	11.0%	17.8%
1939 or earlier	2.0%	2.0%	5.1%
Unemployment Rate (Census 2000)			
(Persons 16 years or over)	2.0%	4.0%	4.0%
Employment			
Employment (2000 Census)	8,311	162,107	1,232,739
Employment 2005 (Calif. EDD)	N/A	N/A	1,471,000
2030 Employment Forecast (SANDAG 2005)	9,499	210,820	1,824,030
Employment percent change (2000-2030)	14.3%	30.0%	48.0%
Occupation (2000 U.S. Census)	100.0%	100.0%	100.0%
Management, professional, and related occupations	35.0%	30.0%	37.7%
Service Occupations	13.0%	17.0%	16.1%
Sales and office Occupations	27.0%	26.0%	27.2%
Farming, Forestry and Fishing Occupations	3.0%	2.0%	0.5%
Construction, extraction, and maintenance Occupations	13.0%	12.0%	8.7%
Production, transporation, and material occupations	9.0%	13.0%	9.9%

* Poway, Ramona, Lakeside, and Santee SRAs as defined by SANDAG.

Source: 2000 U.S. Census unless otherwise indicated

The housing inventory for the Valley Center SRA 53 consists of 7,248 total units, which are predominantly owner-occupied (85%), compared to 62% in the North County East MSA and 55% reported for the County. The median value of owner-occupied housing in the project area was $706,000 in 2005, compared to $537,000 for the North County East MSA and $500,000 for the County. The average monthly residential rent for the Valley Center SRA 53 was $717 in 2000, compared to $714 for the North County East MSA and $711 for the County. The percentage of mobile homes is much higher in the Valley Center SRA 53 (17%) than the North County East MSA (9%) and the County (4%). Whereas the number of attached units is significantly lower in the Valley Center SRA 53 (9%) than the North County East MSA (29%) or the County (35%).

In terms of income comparisons, about 8% of the Valley Center SRA 53 residents were below the poverty level in 2000, as compared to 13% in the North County East MSA and 12% in the County. The estimated median household income in 2005 was $65,856 for the Valley Center SRA 53 and is substantially higher than the median income for North County East MSA ($51,302) or the County ($52,192). The median U.S. household income was $44,700 in 2005.[9] The U.S. Department of Health and Human Services poverty guideline for 2005 was $19,350 for a family of four people. For a three-person family the 2005 poverty guideline was $16,090 and for a two-person family the poverty guideline was $12,830.

3.3.2 Moosa 100K Local Study Area Residential Community

As previously indicated, SANDAG reported 85% owner-occupied housing within the Valley Center SRA 53 for 2000. This is a substantially higher rate of owner-occupied housing than the North County East MSA (62%) or the County (61%). The average value reported in 2005 for housing in the Valley Center SRA 53 was $706,000 (Table 12). Housing values in the Valley Center SRA 53 are substantially higher than in the North County East MSA and the

County ($537,000 and $500,000, respectively). The 2000 U.S. Census reported monthly rent for housing in the Valley Center SRA 53 was $717, about the same as for the North County East MSA region ($714) and for San Diego County ($711).

Table 12
Median Home Sales Price
Valley Center SRA 53, North County East MSA, and San Diego County

County/City/ Area	2005		2004		Percent Change	
	# Sold	Median Price	# Sold	Median Price	Units Sold	Med. Price
Valley Center (92802)	374	$706,000	445	$609,000	-16.0%	15.9%
Escondido N. (92026)	976	$515,000	1,236	$466,000	-26.6%	10.5%
Fallbrook (92028)	828	$587,000	995	$502,000	-16.8%	16.9%
Pauma Valley (92061)	15	$483,000	54	$442,000	-72.2%	9.3%
San Marcos N. (92069)	1,014	$502,000	1,493	$474,000	-32.1%	5.9%
Vista West (92083)	501	$441,000	576	$382,000	-13.0%	15.4%
North County East	3,708	$536,660	4,799	$478,861	-22.7%	12.1%
San Diego County	49,998	$500,000	53,455	$460,000	-6.5%	8.7%

Source: Dataquick Inc., Dqnews.com, CA Home Sale Activities by City, YTD 2004-2005.

Housing vacancy information from SANDAG's 2005 estimates indicate that 6.8% of the residential units in the Valley Center SRA 53 were vacant. Currently, vacancy rates for rental housing throughout the region are low, as shown in Table 11. The vacancy rate reported for the North County East MSA and San Diego County was 4.0%. A rental vacancy rate below 5% indicates a relatively tight housing market.

3.3.3 Economic Character and Fiscal Setting

This section describes the San Diego regional economy in general as well as the San Diego business community and tax base. It is helpful to establish an overall perspective of regional trends in the economy when evaluating the impacts of major public infrastructure projects and local-area development (refer to section 2.3.3 of this report).

3.3.3.1 Regional Economy

Refer to Section 2.3.3.1.

[9] U.S. Bureau of the Census, *Current Population Survey*.

3.3.3.2 Community Tax Structure

The Valley Center SRA 53 includes property tax rate areas (TRAs) 74065, 94050, 94075, 94105 and 94139. The average tax rate for these five TRAs is 1.059932% of assessed value. Other taxing agencies in addition to the County that receive a notable share of the property taxes include: school districts, water districts, fire districts, and the State of California.

The retail sales tax rate for taxable sales originating within the incorporated cities of the North County East MSA (San Marcos, Escondido, and Vista) is 7.75%. Retail sales in San Diego County have grown from $36.2 billion in 2000 to $46.7 billion in 2005 representing an increase of 29% (Table 13). The cities of Escondido, San Marcos, and Vista recorded larger increases in retail sales over the last 5 years (33%, 70%, and 31%, respectively). Total sales were $2.9 billion in Escondido, $1.4 billion in San Marcos, and $1.1 billion in Vista in 2005.

Table 13
Taxable Retail Sales

	All Taxable Retail Sales							
	San Diego County		Escondido		San Marcos		Vista	
Year	Sales ($000s)	Percent Change	Sales ($000s)	Percent Change	Sales ($000s)	Percent Change	Sales ($000s)	Percent Change
2000	$36,245,418	10.7%	$2,184,383	N/A	$848,436	N/A	$853,093	N/A
2001	$37,699,333	4.0%	$2,305,610	5.5%	$871,180	2.7%	$873,949	2.4%
2002	$38,595,547	2.4%	$2,357,235	2.2%	$899,773	3.3%	$913,626	4.5%
2003	$40,863,978	5.9%	$2,573,075	9.2%	$1,064,209	18.3%	$999,817	9.4%
2004	$44,470,338	8.8%	$2,896,376	12.6%	$1,357,171	27.5%	$1,036,036	3.6%
2005	$46,679,471	5.0%	$2,904,634	0.3%	$1,442,193	6.3%	$1,113,593	7.5%
Percent Change (2000-2005)		**28.8%**		**33.0%**		**70.0%**		**30.5%**

N/A Not available

Source: California State Board of Equalization, 12/7/06.

3.3.3.3 Local Business Community

Moosa Canyon is a rural area north of Escondido. The closest regional shopping center is the North County Fair in Escondido, accessible by Interstate 15. Minimal support services exist within the rural community such as restaurants and gas stations located on main streets like Lilac Road, Valley Center Road, Mountain Meadow, and Champagne Boulevard. A few markets/supermarkets are located near the Meadow Lake Country Club. There are also other smaller retail stores on Lilac Road and Valley Center Road. Some cattle ranches and plant

nurseries are located northwest of Lilac Road and Valley Center Road as well. Personal services such as medical, insurance, and financial are very limited or nonexistent in the Valley Center SRA 53.

3.3.4 Growth Dynamics

Valley Center is a rural area with a population of less than 20,000, and 7,250 households. However, the population will more than double over the 30-year period of 2000 to 2030. SANDAG forecasts that total population will increase 131% (approximately 24,850 more residents) and households will increase 120% (8,700 units). Employment for the Valley Center SRA 53 will increase 122% during the 30-year period of 2000 to 2030. In contrast, population for the County will increase 37% and employment in the County will only increase 32% (Table 14).

Table 14
Growth Forecasts for the Valley Center SRA 53 and San Diego County

	2000	2010	2020	2030	2000-2030	
					Number	% Change
Moosa Valley Project Area*						
Total Population	18,959	23,290	29,572	43,812	24,853	131%
Total Housing Units	7,248	8,618	10,820	15,944	8,696	120%
Total Employment	4,287	5,854	8,145	9,499	5,212	122%
San Diego County						
Total Population	2,813,833	3,211,721	3,528,605	3,855,085	1,041,252	37%
Total Housing Units	1,040,149	1,166,094	1,254,647	1,354,088	313,939	30%
Total Employment	1,384,676	1,528,522	1,672,883	1,824,030	439,354	32%

*Valley Center SRA (as defined by SANDAG - see Figure 3)
Source: U.S. Census, SANDAG Final 2030 Cities/County Forecast (Feb 2004)

3.5 THRESHOLD OF SIGNIFICANCE

Refer to Section 2.5.

3.6 ENVIRONMENTAL CONSEQUENCES

3.6.1 Social (Land Use) Impacts

3.6.1.1 Division of an Established Community

For the Moosa Canyon community, the natural landscape and unique topographic features associated with the community setting and character would be disrupted by changing the existing valley and canyon terrain into a reservoir. The canyon, which is a defining attribute of the community, would be permanently lost with the Moosa 100K Alternative reservoir in its place. In addition, existing access across the valley would be removed; however, access around the reservoir would be provided by relocating existing roads outside the Moosa 100K Alternative inundation area. Therefore, impacts from the reservoir footprint of the Moosa 100K Alternative related to physically dividing an established community would be significant.

The Moosa 100K Alternative pipeline alignments would be placed in either cut and cover trenches or tunnels. Most of these alignments would be located in existing rights-of-way or in undeveloped settings. Where trenching occurs in roadways, the roads would be restored to their former state. While a permanent right-of-way would be required for the pipeline alignments, this is not expected to disrupt or divide the physical arrangement of an established community. Additionally, none of the other components would result in a disruption or division of established communities. Therefore, impacts from the other components of the Moosa 100K Alternative related to physically dividing an established community would be less than significant.

3.6.1.2 Conflicts with Applicable Plans, Policies or Regulations

Under Section 53091 of the California Government Code, zoning ordinances do not apply to the location or construction of facilities used for the production, generation, storage, or transmission of water. Specific objectives, policies and standards that support the

implementation of water storage and transmission facilities and recreational opportunities in the vicinity of the Moosa 100K study area are listed below, and are derived from the County of San Diego General Plan Public Facility Element, Valley Center Community Plan, North County Metropolitan Subregional Plan, and City of Escondido General Plan. Other objectives, policies and standards from these plans do not apply to the Moosa 100K Alternative since it would involve construction of a water storage reservoir and appurtenances which are allowed under Section 53091 of the California Government Code. Therefore, there would be no impacts of the Moosa 100K Alternative with respect to potential conflicts with land use plans, policies or regulations.

County of San Diego General Plan

The County of San Diego General Plan identifies long-range goals and policies for the comprehensive development of land within its jurisdiction. The County General Plan includes the following 12 specific planning elements: Open Space, Regional Land Use, Noise, Seismic Safety, Public Facility, Scenic Highway, Energy, Conservation, Public Safety, Recreation, Circulation, and Housing. The Public Facility Element of the General Plan recognizes the need for the timely provision of water facilities concurrent with approved development and growth in the county. Section 13 (Water Provision Systems), Objective 2, Policy 2.1 of the Public Facility Element states that the "County will encourage the regional coordination of water resource management." Implementation measure 2.1.2 of this policy states that the "County will support the Water Authority to obtain sufficient local, regional, and statewide water development facilities to meet the planned need."

Community plans are used to focus the General Plan goals and policies to the specific or unique circumstances existing in individual communities throughout the County. Each community plan incorporates the goals and policies developed by the community to ensure that

they will be compatible with those found in the General Plan. Community plans that are relevant to the Moosa 100K study area are discussed below.

Valley Center Community Plan. The Moosa 100K study area is located within the Valley Center area of the County of San Diego. The Valley Center Community Plan was adopted on December 31, 1979, and amended on April 17, 2002. The Valley Center Community Plan Area is comprised of approximately 94 square miles in the unincorporated area of northern San Diego County. The Valley Center Community Plan Area is distinguished by its unique topographic features, its agricultural activities, and its large number of estate residential development. The rural character of the community results from the low population density and the dominance of large areas of open space provided by agriculture. The Valley Center Community Plan contains the following elements: Community Character, Land Use, Housing, Circulation, Public Facilities and Services, Conservation, Open Space, Parks and Recreation, and Noise. According to the Water Service Goal of the Public Facilities and Services Element, "Ensure that enough water is available from both local and outside sources to adequately all users in the community plan area." In addition, Policy #1A from the water supply and conservation policies of this Element encourages "Support of cost effective storage facilities such as emergency storage facilities located near demand areas or away from earthquake faults."

North County Metropolitan Subregional Plan. The North County Subregional Plan was adopted on January 3, 1979, and amended on December 19, 1990. The North County Metropolitan Subregional Plan Area is comprised of many non-contiguous "island" areas spread out among the cities of Escondido, San Diego, San Marcos, Vista and Oceanside, with the most easterly portion adjacent to Valley Center. The Plan supplements all existing Elements of the San Diego County General Plan with specific emphasis on the planning needs of the North County Metropolitan Subarea.

City of Escondido General Plan

Land use and development policies for the City of Escondido are governed by the City of Escondido General Plan. The City's General Plan includes Quality of Life Standards and a Growth Management Element to assist in maintaining these standards. Quality of Life Standard 10 (Water System) and Water Policy G1.1 in the Community Facilities and Services Element address the City's requirement to provide for adequate water supply, pipeline capacity, and storage capacity to meet normal and emergency situations. Quality of Life Standard 10 identifies the goal to provide a minimum of 600 gallons per day per household.

NCCP Consistency

The Moosa 100K study area does not occur within the boundaries of any adopted HCP or NCCP. The development of the North County MSCP, a NCCP subregional plan, is currently in process, but has not been completed. Moosa 100K construction may require temporary vacation of a small portion of the Daley Ranch Open Space Preserve. Therefore, there would be no impacts associated with NCCP consistency for the Moosa 100K Alternative.

3.6.1.3 Loss of Existing Uses

Impacts to Private Properties and Residences

The Moosa 100K Alternative would conflict with the Valley Center Community Plan. More than 200 parcels would be impacted by this alternative including the inundation area, construction areas, and septic system offset areas. Preliminary engineering estimates indicate that this alternative would result in a 352-hectare (870-acre) inundation area. A 267-hectare (660-acre) septic system buffer area around the reservoir would also be required. The septic buffer zone would average about 305 meters (1,000 feet.). The total combined inundation area and septic system buffer would be 619 hectares (1,530 acres). The maximum potential take area for this alternative would be 619 hectares (1,530 acres) as listed in Table 15. This would represent a significant impact to local area property owners.

Table 15

Alternative 2: Moosa 100K Alternative
Estimated Take Area and Loss of Property Tax

Private Parcel Acquisitions	Area of Take		Estimated Annual Property Tax Loss	Percent of S.D. County Property Taxes*
	Hectares	Acres		
Inundation Area	352.08	870.00	$ 699,480	0.019%
Septic Buffer Area	267.10	660.00	$ 530,640	0.015%
Total Property Take	619.18	1,530.00	$ 1,230,120	0.034%

* San Diego County Tax Assessor, Fiscal Year 2006 Property Tax Assessment ($3.594 billion).
Moosa Avg. property tax per acre = $804

Source: San Diego County Tax Assessor
CIC Research, Inc.

Preliminary estimates indicate that the Moosa 100K Alternative would result in approximately 39 homes taken by the 870-acre inundation area. The 660-acre septic system buffer area around the reservoir would average about 305 meters (1,000 feet.). The septic buffer would result in the potential taking of an additional 88 homes. No other components of this alternative would result in physical displacement of residences. The total number of homes potentially taken by this alternative would be 127 (inundation area and septic buffer area). The reported median household size for the Valley Center SRA of 2.8 people would yield a preliminary estimate of 356 residents that would be relocated by this alternative. The displacement of even one residence is considered a significant impact to the resident household. Furthermore, the large number of homes taken and residents relocated by the Moosa 100K Alternative would generate a significant community impact.

Business Relocations and Access Impacts

No business relocations or access impacts were identified for the Moosa 100k Alternative.

3.6.2 Economic Impacts

3.6.2.1 Direct Loss of Property Tax Revenue

The total combined take area for the Moosa 100K Alternative (inundation area and septic buffer area) would be 619 hectares (1,530 acres). The average property tax collected in the five TRAs for the Moosa 100K footprint was $804 per acre for FY2006. The estimated total tax loss due to the taking of private property for this alternative would be $1,230,000. This represents a miniscule 0.034% of the Countywide property tax assessment for FY2006 (Table 15).

3.6.2.2 Property Value Changes

Potential positive and negative property value changes may be associated with the Moosa 100K Alternative. Property value impacts are not easily quantified without a thorough real estate appraisal and are therefore discussed in a general manner. Negative changes in property values related to construction activities such as dust, noise, or visual effects could occur during the construction period. These changes are expected to be temporary and would be minimized by construction best management practices. The Moosa 100K acre-foot reservoir would be much larger than the existing Turner Lake and would provide enhanced lake views and recreational opportunities that would likely result in permanent increased property values for the area. The regional economy and hence property values would also benefit from more reliable water resources. No significant permanent impacts to property values are expected from the Moosa 100K Alternative.

3.6.2.3 Retail Sales Impacts

The preliminary engineering estimate of $900 million in construction expenditures over five years for the Moosa 100K Alternative would generate an estimated $490,000 in retail sales tax revenue per year (direct, indirect, and induced). Total taxable retail sales in San Diego

County were estimated at $46.7 billion for 2005. Total tax revenue for local governments was about $500 million for 2005. The Moosa 100K Alternative would generate a net increase in retail sales tax revenue for the region, but it would represent an insignificant 0.09% of taxable retail sales within the region.

3.6.9.4 Construction Labor and Materials Impacts

The following section presents the direct and indirect non-recurring economic impacts resulting from construction of the Moosa 100K Alternative. The direct economic impact of the $900 million construction project includes the expenditure of funds on labor and materials. It is expected that San Diego County would provide the majority of the labor pool for the construction activity.

The direct impact would be the $900 million in estimated construction cost and 8,226 years of labor effort (job-years). The indirect and induced impacts would total $708 million, yielding a total economic output of $1.61 billion and an economic multiplier of 1.79 times the direct economic impact. The total economic output of $1.61 billion would require 14,049 years of labor effort and would generate $774 million in income. As the Moosa 100K Alternative would require approximately five years for construction, the labor activity would be distributed over the five-year period and would result in an estimated 1,645 jobs per year direct impact and 2,810 jobs per year total impact. Table 16 identifies the direct and indirect economic impacts resulting from construction of the Moosa 100K Alternative.

Table 16
Estimated Total Economic Impacts
From Construction of the Moosa 100K Alternative

Impact Category	Direct Effects	Indirect Effects	Induced Effects	Total	Economic Multiplier*
Output	$ 900,000,000	$ 197,900,000	$ 511,900,000	$ 1,609,800,000	1.79
Income	$ 507,800,000	$ 86,600,000	$ 179,900,000	$ 774,300,000	0.86
Employment (job years)	8,226	1,512	4,311	14,049	17.95
Employment (per year)	1,645	302	862	2,810	17.95

* Economic multiplier per million dollars of direct effect.
Source: CIC Research, "IMPLAN/Pro-San Diego County Regional Input-Output Model," 2006.

The $180 million average annual construction expenditure generating about 1,645 jobs per year over a five-year construction period would not represent a significant portion of the $15 billion in annual sales for the San Diego construction sector or the 118,000 construction employees (refer to Table 4). This is especially true if the nationwide decrease in construction activity extends for a period of several years. No significant impacts are anticipated in terms of direct or indirect negative impacts to regional businesses as a result of construction labor displacement or inter-industry sales during the construction period for the Moosa 100K Alternative.

3.6.2.5 Farmland Impacts

There are several active farms and nurseries that would be directly impacted by the Moosa 100k Alternative. This alternative would also impact two Williamson Act contract parcels. The Moosa 100K Alternative footprint would encompass approximately 589 hectares (1,455.3 acres). Within this footprint, a total of 53.4 hectares (131.9 acres) of Prime and Unique Farmland soils and a total of 30.9 hectares (76.4 acres) of Statewide and Local Important Farmland soils would be converted. The resulting total farmland soils converted would be 84.3 hectares (208.3 acres), or approximately 2.2% of the county total of 45,720 farmable hectares (112,974 acres).

The potentially converted Prime and Unique Farmland soils consist of Greenfield sandy loam, 5% to 9% slopes, Visalia sandy loam (VaA), 2% 5% slopes, and Visalia sandy loam (VaA), 5% to 9% slopes. The potentially converted Statewide and Local Important Farmland soils consist of Greenfield sandy loam, 9% to 15% slopes, Placentia sandy loam, 2% to 9% slopes, Placentia sandy loam, thick surface, 2% to 9% slopes, and Tujunga sand, 0% to 5% slopes. Based on the site assessment criteria for the 12 impact categories, the overall farmland conversion impact rating for the Moosa 100k Alternative is 192, which is above the significance rating threshold of 160 (see Appendix Form AD-1006).

The converted farmland acreage would represent a significant percentage of farmable land in the county (2.2%), and based on consultation with the NRCS and completion of Form AD-1006 the farmland rates "a high level of consideration for protection." Therefore, there would be significant impacts to agricultural resources created by the Moosa 100K Alternative.

3.6.2.6 Recreation Impacts

The Moosa 100K Alternative would increase lake recreational opportunities within northern San Diego County. The reservoir could generate more than 25,000 lake user days annually. Based on the previously mentioned survey of recreational users at San Diego City Lakes and the telephone survey of San Diego residents to determine the frequency and types of activities at San Diego City Lakes (see Section 2.1.1), no negative impacts to recreational activities in San Diego County were identified for the Moosa 100K Alternative.

3.6.2.7 Growth Impacts

The Moosa 100K Alternative would address the existing and projected demand for water that may result from extended periods of drought or catastrophic events. Overall, there would be no net impact on potential housing construction for the surrounding SV 100K local community impact area or the region. Therefore, the Proposed Action would not significantly impact growth within the local community or the region.

3.6.3 Environmental Justice Impacts

No potential environmental justice impacts were identified for the Moosa 100k Alternative. Based on the demographics of the residents within the Moosa 100K local community impact area, this alternative would not disproportionately impact low-income or minority populations. Implementation of this alternative would provide a regional benefit to the residents and businesses of San Diego County and is unlikely to disproportionately impact low-income or minority populations.

3.7 MITIGATION MEASURES

3.7.1 Social (Land Use) Mitigation Measures

3.7.1.1 Property Loss and Residential Relocations

In areas requiring easements or property acquisition as a result of part-takes and full-takes resulting from construction, reservoir inundation and septic system setbacks, the Water Authority shall use certified independent fee appraisers to determine fair market value for all easements and parcels required for the Moosa 100K Alternative. Landowners will be offered fair market value, based on the approved appraisal.

In areas requiring relocation assistance, each qualified resident shall be relocated by the Water Authority in compliance with the terms of the federal Uniform Relocation Assistance Act (as amended). Refer to Section 2.7.1.1 for a detailed description of these procedures. However, due to the large number of residences that would be permanently impacted by the Moosa 100K Alternative, the relocation of 127 homes, including an estimated 356 residents is significant and unmitigable.

3.7.2 Economic Impact Mitigation Measures

3.7.2.1 Farmland Impacts

There are no feasible mitigation measures to reduce the loss of approximately 208 acres of land designated as farmable soils within the Moosa 100K footprint. The farmland conversion impacts from inundation, the septic buffer zone, and offsite pipeline construction would be significant and unmitigable for the Moosa 100k Alternative.

3.8 RESIDUAL IMPACTS AFTER MITIGATION

Residual unmitigable socioeconomic impacts to the Moosa 100K local community impact area and to San Diego County would result from the loss of an estimated 127 homes and 208

acres of agricultural farmland due to implementation of the Moosa 100K Alternative. A Statement of Overriding Considerations would be necessary for project approval.

3.9 CUMULATIVE IMPACTS

No cumulative impacts are expected for employment or business from the Moosa 100k Alternative because the moderate size of this construction project (estimated $180 million per year) would represent about 1.1% of regional construction output and employment over a five-year period. However, permanent significant cumulative impacts to agriculture would result from implementation of the Moosa 100K Alternative. The converted farmland acreage would represent a significant percentage of farmable land in the county (2.2%) and would continue the significant long-term trend of declining farmland soils throughout the County. Therefore, the potential cumulative direct and indirect economic impact from this farmland loss would be considered significant and unmitigable.

4.0 ALTERNATIVE 3: SAN VICENTE 50,000 AF AND MOOSA 50,000 AF RESERVOIRS

4.1 ENVIRONMENTAL SETTING

Information on existing conditions within the project footprints, the local community impact areas, and SRAs, and background information, for the Proposed Action (SV 100K) and the Moosa 100K Alternative are described in the previous Sections 2.1 and 3.1. These descriptions equally apply to the SV 50K and Moosa 50K components of this alternative.

4.2 PROJECT DESCRIPTION

This alternative involves a reduced raise of San Vicente Dam, which would provide approximately 50,000 AF of carryover storage at San Vicente Reservoir, and construction of a new dam at Moosa Canyon to create a new reservoir that would provide another 50,000 AF of carryover storage capacity. The two projects taken together would provide a combined 100,000 AF of carryover storage. It is assumed that both projects would be constructed concurrently.

San Vicente Dam would be raised an additional 32 feet beyond the approved 54-foot dam raise for the ESP, increasing the overall height of the dam by 86 feet (or a total dam height of up to 306 feet). The dam raise would increase the usable volume of San Vicente Reservoir by approximately 102,100 AF. The elevation of the spillway crest would be raised from 650 to 735 feet AMSL. The San Vicente Dam raise associated with the SV 50K/Moosa 50K Alternative would be accomplished using the same methods and techniques described for the Proposed Action; namely continuous (20 to 24 hours per day) RCC placement on the downstream face of the dam. The same options for the provision of aggregate for RCC production that are under consideration for the Proposed Action are also being evaluated for this alternative. Reservoir water level lowering would be the same as described for the Proposed Action. The reduced

increase in reservoir capacity and elevation, as compared to the Proposed Action, would not require the construction of saddle dams. As with the Proposed Action, additional facilities associated with this alternative would include a downstream control facility, an outlet pipeline, a relocated bypass pipeline, relocated marina facilities, new access roads to the dam crest, a relocated marina, and a diversion structure.

In addition to an approximate 50,000 acre-foot increase in the capacity of San Vicente Reservoir, a new 300-foot high dam would be constructed at Moosa Canyon to create a reservoir with 50,000 AF of carryover storage. The dam crest elevation would be 1,185 feet AMSL. A spillway would be constructed approximately 1,500 feet to the northeast of the main dam; the spillway crest elevation would be 1,170 feet AMSL. As described in Section 3.2, the main dam would be a concrete-face rockfill dam. This alternative would involve the same conveyance facilities and the pipeline would follow the same alignment described in Section 3.2. Additional facilities would include a marina, new access roads, and new electrical supply to the pump station and other facilities. A portion of the Water Authority's First Aqueduct located below the reservoir inundation area would require reconstruction.

4.3 AFFECTED ENVIRONMENT

The information provided in Sections 2.3 and 3.3 on demographic characteristics, residential communities, and economic character/fiscal setting (regional economy, community tax structure, and local business community) for the Proposed Action and the Moosa 100K Alternative also applies to the SV 50K/Moosa 50K Alternative.

4.4 GROWTH DYNAMICS

The population growth projections provided in Sections 2.4 and 3.4 for the Proposed Action and the Moosa 100K Alternative also apply to the SV 50K/Moosa 50K Alternative.

4.5 THRESHOLD OF SIGNIFICANCE

Refer to Section 2.5.

4.6 ENVIRONMENTAL CONSEQUENCES

4.6.1 Social (Land Use) Impacts

4.6.1.1 Division of an Established Community

Similar to the Proposed Action, the SV 50K reservoir footprint would not separate residents from existing neighborhoods in the community and it would not reduce residents' access to public services and facilities, most of which are located out of the area. Therefore, the SV 50K reservoir footprint would not result in a significant impact in terms of division of an established community.

Although the Moosa 50K reservoir inundation footprint would be slightly smaller than that of the Moosa 100K Alternative, it would still result in the permanent loss of Moosa Canyon, which is a defining attribute of the community. Therefore, impacts from the Moosa 50K reservoir footprint related to physically dividing an established community would be significant.

Because construction would occur at two separate locations, the total impact of the SV 50K/Moosa 50K Alternative related to physically dividing an established community would be greater than that of either the Proposed Action or the Moosa 100K Alternative alone.

4.6.1.2 Conflicts with Applicable Plans, Policies or Regulations

Land Use Plans, Policies or Regulations

SV 50K. As with the Proposed Action (see Section 2.6.1.2), local land use plans, policies, and regulations do not apply to the SV 50K component of this alternative, which is fully contained within the SV 100K study area, since it would involve construction of a water storage reservoir and appurtenances which are allowed under Section 53091 of the California Government Code.

Moosa 50K. As with the Moosa 100K Alternative (see Section 3.6.1.2), local land use plans, policies, and regulations do not apply to the Moosa 50K component of this alternative, which is fully contained within the Moosa 100K study area, since it would involve construction of a water storage reservoir and appurtenances which are allowed under Section 53091 of the California Government Code.

Combined Impacts. There would be no conflicts with local land use plans, policies, or regulations for the SV 50K/Moosa 50K Alternative.

NCCP Consistency

SV 50K. For the same reasons as described for the Proposed Action (see Section 2.6.1.2), the SV 50K component of this alternative, which is fully contained within the SV 100K study area, would not conflict with City of San Diego MSCP land use adjacency guidelines, conservation goals, or MHPA preserve design guidelines. General Conditions and Standard Specifications and project design features and engineering measures would be implemented to minimize edge effects and adjacency impacts to the surrounding natural habitat in the MHPA. Therefore, impacts to biological resources associated with MSCP land use adjacency guidelines, conservation goals and MHPA preserve design guidelines would be less than significant for the SV 50K component of this alternative.

Moosa 50K. As stated in Section 3.6.1.2, the Moosa 100K Alternative is not within the boundaries of any adopted HCP or NCCP. Therefore, there would be no impacts associated with NCCP consistency for the Moosa 50K component of this alternative.

Combined Impacts. There would be no NCCP conflicts for the SV 50K/Moosa 50K Alternative.

4.6.1.3 Loss of Existing Uses

Impacts to Private Properties and Residences

More than 180 parcels would be impacted by the SV 50K/Moosa 50K Alternative. These impacts to parcels include the inundation area, construction areas, and septic system offset

areas. Preliminary engineering estimates indicate that this alternative would result in a combined 217-hectare (535-acre) inundation area, including both sites. A total combined 388-hectare (958-acre) septic system buffer area around the reservoirs would also be required. The septic buffer zone would average about 305 meters (1,000 feet). The total combined inundation area and septic system buffer would be 604 hectares (1,493 acres) for both sites. This alternative would result in a maximum potential take area for both sites of 604 hectares (1,493 acres) as listed in Table 17. This would represent a significant community impact to property owners.

Table 17

SV 50k/Moosa 50k Alternative
Estimated Take Area and Loss of Property Tax

Private Parcel Acquisitions	Area of Take		Estimated Annual Property Tax Loss	Percent of S.D. County Property Taxes*
	Hectares	Acres		
Inundation Area	216.51	535.00	$ 430,140	0.012%
Septic Buffer Area	387.72	958.07	$ 500,426	0.014%
Total Property Take	604.23	1,493.07	$ 930,566	0.026%

* San Diego County Tax Assessor, Fiscal Year 2006 Property Tax Assessment ($3.594 billion).

Moosa Avg. property tax per acre = $804

Source: San Diego County Tax Assessor
CIC Research, Inc.

The SV 50K reservoir footprint may require the removal of a maximum of seven dwelling units with an estimated 20 residents. The total number of homes potentially taken by the Moosa 50K reservoir footprint would be 64 with an estimated 179 residents (535-acre inundation area and 570-acre septic buffer area). The estimated total combined displacement would be approximately 71 homes and 199 residents. The total combined number of homes taken and residents relocated by the SV 50K/Moosa 50K Alternative would generate a significant community socioeconomic impact.

Business Relocations and Access Impacts

No business relocations were identified for the SV 50K/Moosa 50K Alternative. Access would be maintained during construction for all businesses located within the SV 50K and Moosa 50K local community impact areas, which are the same as the SV 100K and Moosa 100K local community impact areas described above. No significant impacts to business access or sales within these local community impact areas are expected during the construction period for the SV 50K/Moosa 50K Alternative.

4.6.2 Economic Impacts

4.6.2.1 Direct Loss of Property Tax Revenue

The acquisition of private property for the SV 50K/Moosa 50K Alternative would directly affect the property tax revenues of the County. The County Tax Assessor's total property tax assessment for FY2006 was $3.594 billion. The average property tax collected in the five TRAs for the Moosa 50K footprint was $804 per acre for FY2006. This alternative would result in a total combined take area (inundation area and septic buffer area for both the SV 50K and Moosa 50K footprints) of 604 hectares (1,493 acres) removed from the property tax roll and would result in an estimated direct loss of $931,000 in annual property tax revenues. The $931,000 in decreased annual property tax revenue would be an insignificant 0.026% of the countywide property tax assessment (see Table 17).

4.6.2.2 Property Value Changes

Potential positive and negative property value changes may be associated with the SV 50K/Moosa 50K Alternative. The previous discussions of property value impacts for the Proposed Action (Section 2.6.2.2) and Moosa 100K Alternative (Section 3.6.2.2) also apply to this alternative. The regional economy would benefit from the incomes generated by construction and from more reliable water resources created by the CSP, and this will indirectly benefit regional assessed values through the increase of countywide sales (see next section).

Although these fiscal benefits would not be significant, they will be substantially larger than the $931,000 annual direct property tax loss generated by the SV 50K/Moosa 50K Alternative.

4.6.2.3 Retail Sales Impacts

The $1.63 billion in total regional output (direct, indirect, and induced) generated by the $910 million in construction expenditures over five years for the SV 50K/Moosa 50K Alternative would generate an estimated $680,000 in retail sales tax revenue per year. Total taxable retail sales in San Diego County were estimated at $46.7 billion for 2005. Total sales tax revenue for local governments was about $500 million for 2005. This Alternative would generate a net increase in retail sales tax revenue for the region, but it would represent an insignificant 0.1% of taxable retail sales within the region. No net loss of retail sales tax revenue is expected as a result of the SV 50K/Moosa 50K Alternative and no significant impact would result.

4.6.2.3 Construction Impacts

The direct impact would be the $910 million in estimated construction cost and 8,317 years of labor effort (job-years). The indirect and induced impacts would total $718 million, yielding a total economic output of $1.63 billion and an economic multiplier of 1.79 times the direct economic impact. The total economic output of $1.63 billion would require 14,205 years of labor effort and would generate $783 million in income. As this alternative would require approximately five years for construction, the labor activity would be distributed over the five-year period and would result in an estimated 1,663 jobs per year direct impact and 2,841 jobs per year total impact. Table 18 identifies the direct and indirect economic impacts resulting from construction of the SV 50K/Moosa 50K Alternative.

Table 18
Estimated Total Economic Impacts
From Construction of the SV 50K/Moosa 50K Alternative

Impact Category	Direct Effects	Indirect Effects	Induced Effects	Total	Economic Multiplier*
Output	$ 910,000,000	$ 200,100,000	$ 517,600,000	$ 1,627,700,000	1.79
Income	$ 513,400,000	$ 87,500,000	$ 181,900,000	$ 782,800,000	0.86
Employment (job years)	8,317	1,529	4,359	14,205	17.95
Employment (per year)	1,663	306	872	2,841	17.95

* Economic multiplier per million dollars of direct effect.

The $182 million average annual construction expenditure generating about 1,663 jobs per year over a five-year construction period would not represent a significant portion of the $15 billion in annual sales for the San Diego construction sector or the 118,000 construction employees (refer to Table 4). This is especially true if the nationwide decrease in construction activity extends for a period of several years. No significant impacts are anticipated In terms of direct or indirect negative impacts to regional businesses as a result of construction labor displacement or inter-industry sales during the construction period for the SV 50K/Moosa 50K Alternative.

4.6.2.5 Farmland Impacts

As discussed in Section 2.6.2.5, the SV 100K footprint does not include any active farms and the soils are largely unsuitable for farming. This conclusion also applies to the smaller SV 50K footprint. Therefore, there would be no significant impacts to agricultural resources from the SV 50K footprint and no mitigation or minimization measures are required. However, there are several active farms and nurseries that would be directly impacted by the Moosa 50K component of the SV 50K/Moosa 50K Alternative. Significant farmland impacts would result from the Moosa 50K footprint including direct impacts to two Williamson Act contract parcels.

The total combined area of the SV 50K/Moosa 50K Alternative footprints would encompass approximately 2,304 hectares (5,694 acres). Within this combined area, a total of 53.8 hectare (132.8 acres) of Prime and Unique Farmland soils would be converted. A total of 34.6 hectares (85.6 acres) of Statewide and Local Important Farmland soils would be

converted. The resulting combined total farmland soils converted would be 88.4 hectares (218.4 acres), or approximately 2% of the countywide total that is rated Prime and Unique or Statewide and Locally Important; this loss would represent a significant impact.

The potentially converted Prime and Unique Farmland soils would consist of Greenfield (GrC) sandy loam, 5% to 9% slopes; and Visalia sandy loam (VaA), 2% to 5% slopes. The potentially converted Statewide and Local Important Farmland soils would consist of Greenfield sandy loam (GrD), 9% to 15% slopes; Fallbrook sandy loam, 5% to 9% slopes eroded; and Tujunga sand, 0% to 5% slopes (TuB). Based on the site assessment criteria for the 12 impact categories the overall farmland conversion impact rating for the SV 50K/Moosa 50K Alternative was 186, which is above the significance rating threshold of 160.

Based on consultation with the NRCS and completion of Form AD-1006, the farmland rates “a high level of consideration for protection.” Therefore, there would be significant impacts to agricultural resources created by the SV 50K/Moosa 50K Alternative.

4.6.2.6 Recreation Impacts

As evaluated in Section 2.6.2.6, the loss of recreational use of San Vicente Reservoir due to construction of the Proposed Action would extend 5 to 7 years, significantly impacting freshwater fishing and water sports activities within the County. This conclusion also applies to the SV 50K component of the SV 50K/Moosa 50K Alternative, although the construction timeframe may be slightly shorter. Although the loss of recreational opportunities at San Vicente Reservoir during construction would be a significant impact, the relocated and expanded San Vicente Marina will ultimately provide greater recreational opportunities for County residents, than the current facilities.

The Moosa 50K component of this alternative would increase lake recreational opportunities within northern San Diego County. Although the reservoir would be slightly smaller than the Moosa 100K Alternative, it could generate more than 25,000 lake user days

annually. Based on the previously mentioned survey of recreational users at San Diego City Lakes and the telephone survey of San Diego residents to determine the frequency and types of activities at San Diego City Lakes (see Section 2.6.2.6), no negative impacts to recreational activities in San Diego County were identified for the Moosa 50K component of this alternative.

Overall, the SV 50K/Moosa 50K Alternative would result in significant impacts to water-based reservoir recreational resources because the Water Authority does not have the ability to mandate the construction of new reservoir recreational facilities, or the expansion of existing or planned facilities, at other reservoir locations in the county due to the loss of recreational opportunities at San Vicente Reservoir during construction of the SV 50K component of this alternative.

4.6.2.7 Growth Impacts

No growth impacts were identified for the SV 50K/Moosa 50K Alternative for the same reasons as addressed in Sections 2.6.2.7 (Proposed Action) and 3.6.2.7 (Moosa 100K Alternative); this alternative would address the existing and projected demand for water that may result from extended periods of drought or catastrophic events. Overall, there would be no net impact on potential housing construction for the surrounding SV 50K and Moosa 50K local community impact areas or the region.

4.6.3 Environmental Justice Impacts

As with the Proposed Action and the Moosa 100K Alternative discussed in Sections 2.6.3 and 3.6.3, respectively, no potential environmental justice impacts were identified for the SV 50K/Moosa 50K Alternative. Based on the demographics of the residents within the SV 50K and Moosa 50K local community impact areas, this alternative would not disproportionately impact low-income or minority populations. Implementation of this alternative would provide a regional benefit to the residents and businesses of San Diego County, and is unlikely to disproportionately impact low-income or minority populations.

4.7 MITIGATION MEASURES

4.7.1 Social (Land Use) Impact Mitigation Measures

4.7.1.1 Property Loss and Residential Relocations

In areas requiring easements or property acquisition as a result of part-takes and full-takes resulting from construction, reservoir inundation and septic system setbacks, the Water Authority shall use certified independent fee appraisers to determine fair market value for all easements and parcels required for the SV 50K/Moosa 50K Alternative. Landowners will be offered fair market value, based on the approved appraisal.

In areas requiring relocation assistance, each qualified resident shall be relocated by the Water Authority in compliance with the terms of the federal Uniform Relocation Assistance Act (as amended). Refer to Section 2.7.1.1 for a detailed description of these procedures. However, due to the large number of residences that would be permanently impacted by the Moosa 50K component of this alternative, the relocation of 71 homes and an estimated 199 residents is significant and unmitigable .

4.7.2 Economic Impact Mitigation Measures

4.7.2.1 Recreation Impacts

There are no feasible mitigation measures to reduce the impacts from closure of San Vicente Marina and Reservoir for an extended period during construction of the SV 50K component of this alternative. While the City of San Diego could expand or allow increased use of other reservoir recreational facilities in the region or construct recreational facilities at City lakes that currently do not provide fishing and water sports activities (e.g., bass fishing, waterskiing, and wakeboarding), such mitigation is outside the jurisdictional control of the Water Authority to implement. The Water Authority has asked the City about the possibility of new or increased recreational uses at their other reservoirs. However, it is unknown whether the City

could commit to constructing or expanding other reservoir recreational facilities for fishing and water sports now or in the future to compensate for the temporary loss of these activities at San Vicente Marina and Reservoir during construction of the SV 50K component of the SV 50K/Moosa 50K Alternative.

4.7.2.2 Farmland Impacts

There are no feasible mitigation measures to reduce the loss of approximately 218 acres of land designated as Prime and Unique or Statewide and Locally Important farmland within the Moosa 50K footprint of this alternative. Therefore, the overall farmland conversion impacts from inundation, the septic buffer zone, and offsite pipeline construction would be significant and unmitigable for the SV 50K/Moosa 50K Alternative.

4.8 RESIDUAL IMPACTS AFTER MITIGATION

Because it is unknown whether the City will construct or expand recreational facilities for fishing and water sports at their other reservoirs to compensate for the loss of these activities at San Vicente Marina and Reservoir during construction of the SV 50K component of this alternative, this recreation impact would be significant and unmitigable. Significant impacts to recreation would cease upon completion of the relocated San Vicente Marina subsequent to the dam raise and refilling of the expanded San Vicente Reservoir. The relocated and expanded marina would ultimately provide greater fishing and water sports recreational opportunities for recreational users than current conditions.

Residual unmitigable socioeconomic impacts to the Moosa 50K local community impact area and to San Diego County would result from the loss of approximately 71 homes and 218 acres of agricultural farmland due to implementation of the Moosa 50K component of this alternative.

A Statement of Overriding Considerations would be necessary for project approval.

4.9 CUMULATIVE IMPACTS

Significant cumulative impacts to agriculture would result from implementation of the SV 50K/Moosa 50K Alternative because the converted farmland acreage would represent a significant percentage of the farmland in the county that is rated Prime and Unique or Statewide and Locally Important (2%). Therefore, the potential cumulative direct and indirect economic impact from this farmland loss would be considered significant and unmitigable.

No business displacements or employment loss would result from the SV 50K/Moosa 50K Alternative, and a negligible loss of property tax revenues would occur. No cumulative impacts are expected to employment or business sales. The direct construction economic output of this alternative (estimated at $182 million per year) would represent only about 1.2% of the regional construction output and employment. Therefore, the potential cumulative direct and indirect economic impacts, both beneficial and adverse, are not substantial.

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Contacts:

Dixie Switzer, Planner, General Plan 2020, Lakeside area, County of San Diego. Phone interview, September 23, 2005. Phone: 858-694-3041, email: Dixieswitzer@sdcounty.ca.gov.

Joe Weber, Lakes Supervisor, City of San Diego, multiple phone discussions and meetings, September 2005 through November 2006, ph: (619) 668-2030; email:<jweber@sandiego.gov>.

Terry Chenowth, San Diego Council of Bass Clubs; Phone interview October 31, 2006, ph (619) 602-6072.

Frank Glenn, President, San Diego Watersports Assoc.; Phone interview November 3, 2006; ph: (619) 840-5860; email: <f.glenn@cox.net>.

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Alyssa Maxson, Planning Manager, County of San Diego, Department of Planning and Land Use. Phone conversation, April 25, 2007. Phone: 858-694-3737.

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APPENDIX A

COMMUNITY IMPACT ASSESSMENT CHECKLIST

Table A-1

Socioeconomic Impact Checklist for San Vicente CSP
Alternative 1

	Socioeconomic Impacts	Potential Impact		Substantial Impact		
	Planning Impacts	Yes	No	Yes	No	Maybe
1	State Urban Strategy violated?		X			
2	Regional and/or local plans violated?		X			
3	Conflict among State, Regional and Local Plans exposed		X			
	Social Impacts					
4	People Displaced?	X			X	
5	Affordable housing loss?		X			
6	Community divided?		X			
7	Community profile changed		X			
8	Population(s) of people of color impacted?		X			
9	Certain groups injured more than benefited?		X			
10	Community aesthetic character changed?		X			
11	Health, safety, law and order impaired?		X			
12	Parking space and access decreased?		X			
13	Public service delivery curtailed?		X			
	Economic Impacts					
14	Businesses removed?		X			
15	Business access curtailed?		X			
16	Jobs loss or job opportunity curtailed?		X			
17	Agricultural and/or farmland loss?		X			
18	Taxbase loss?		X			
19	Local economy impacted by construction and/or operating project?		X			
	Growth Impacts					
20	Population increase?		X			
21	Housing supply increase?		X			
22	Employment and business activity increased?		X			
23	Recreation, resource extraction, or through traffic increased?	X			X	
24	Development opportunities enhanced?		X			
25	Areas of potential growth changed?		X			
26	Public services overtaxed?		X			
27	Growth caused by related projects?		X			

Table A-2

Community Impact Assessment Checklist for San Vicente CSP
Alternative 2

	Socioeconomic Impacts	Potential Impact		Substantial Impact		
	Planning Impacts	Yes	No	Yes	No	Maybe
1	State Urban Strategy violated?		X			
2	Regional and/or local plans violated?	X		X		
3	Conflict among State, Regional and Local Plans exposed		X			
	Social Impacts					
4	People Displaced?	X		X		
5	Affordable housing loss?		X			
6	Community divided?		X			
7	Community profile changed		X			
8	Population(s) of people of color impacted?		X			
9	Certain groups injured more than benefited?		X			
10	Community aesthetic character changed?		X			
11	Health, safety, law and order impaired?		X			
12	Parking space and access decreased?		X			
13	Public service delivery curtailed?		X			
	Economic Impacts					
14	Businesses removed?		X			
15	Business access curtailed?		X			
16	Jobs loss or job opportunity curtailed?		X			
17	Agricultural and/or farmland loss?	X		X		
18	Taxbase loss?		X			
19	Local economy impacted by construction and/or operating project?		X			
	Growth Impacts					
20	Population increase?		X			
21	Housing supply increase?		X			
22	Employment and business activity increased?		X			
23	Recreation, resource extraction, or through traffic increased?	X			X	
24	Development opportunities enhanced?		X			
25	Areas of potential growth changed?		X			
26	Public services overtaxed?		X			
27	Growth caused by related projects?		X			

Table A-3

Socioeconomic Impact Checklist for San Vicente CSP
Alternative 3

	Socioeconomic Impacts	Potential Impact		Substantial Impact		
	Planning Impacts	Yes	No	Yes	No	Maybe
1	State Urban Strategy violated?		X			
2	Regional and/or local plans violated?	X		X		
3	Conflict among State, Regional and Local Plans exposed		X			
	Social Impacts					
4	People Displaced?	X		X		
5	Affordable housing loss?		X			
6	Community divided?		X			
7	Community profile changed		X			
8	Population(s) of people of color impacted?		X			
9	Certain groups injured more than benefited?		X			
10	Community aesthetic character changed?		X			
11	Health, safety, law and order impaired?		X			
12	Parking space and access decreased?		X			
13	Public service delivery curtailed?		X			
	Economic Impacts					
14	Businesses removed?		X			
15	Business access curtailed?		X			
16	Jobs loss or job opportunity curtailed?		X			
17	Agricultural and/or farmland loss?	X		X		
18	Taxbase loss?		X			
19	Local economy impacted by construction and/or operating project?		X			
	Growth Impacts					
20	Population increase?		X			
21	Housing supply increase?		X			
22	Employment and business activity increased?		X			
23	Recreation, resource extraction, or through traffic increased?	X			X	
24	Development opportunities enhanced?		X			
25	Areas of potential growth changed?		X			
26	Public services overtaxed?		X			
27	Growth caused by related projects?		X			

APPENDIX B

SELECTED SAN VICENTE RESERVOIR PHOTOS

San Vicente Dam

San Vicente Reservoir

Boat Launch Ramp

Restrooms

Parking Area

Concession at San Vicente Reservoir (closed by City)

APPENDIX C

FARMLAND CONVERSION RATING FORM
AD-1006

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 10/27/06
Name Of Project San Vicente Dam Raise CIA	Federal Agency Involved San Diego Water Authority
Proposed Land Use Reservoir & Dam	County And State San Diego, CA
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 10/27/06

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes ☑	No ☐	Acres Irrigated 69,537 / Average Farm Size 80
Major Crop(s) Nursery, Flower, Fruit/Nut	Farmable Land In Govt. Jurisdiction Acres: 112,974 % 4		Amount Of Farmland As Defined in FPPA Acres: 91,812 % 3
Name Of Land Evaluation System Used CA - Storie System	Name Of Local Site Assessment System None		Date Land Evaluation Returned By NRCS 11/15/06 CSC

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	1,039.3			
B. Total Acres To Be Converted Indirectly	3,558.4			
C. Total Acres In Site	4,597.7	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.9			
B. Total Acres Statewide And Local Important Farmland	44.9			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.4			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	Data Not Available			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	40	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Nonurban Use	15	11			
2. Perimeter In Nonurban Use	10	10			
3. Percent Of Site Being Farmed	20	0			
4. Protection Provided By State And Local Government	20	0			
5. Distance From Urban Builtup Area	15	10			
6. Distance To Urban Support Services	15	10			
7. Size Of Present Farm Unit Compared To Average	10	0			
8. Creation Of Nonfarmable Farmland	10	0			
9. Availability Of Farm Support Services	5	5			
10. On-Farm Investments	20	0			
11. Effects Of Conversion On Farm Support Services	10	0			
12. Compatibility With Existing Agricultural Use	10	0			
TOTAL SITE ASSESSMENT POINTS	160	46	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	40	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	46	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	86	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side)

Form AD-1006 (10-83)

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U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 12/11/06
Name Of Project Moosa Valley Alternative - CIA	Federal Agency Involved San Diego Water Authority
Proposed Land Use Reservoir & Dam	County And State San Diego, CA
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 12/11/06

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes ☑	No ☐	Acres Irrigated 69,537 / Average Farm Size 80
Major Crop(s) Nursery, Flower, Fruit/Nut	Farmable Land In Govt. Jurisdiction Acres: 112,974 % 4		Amount Of Farmland As Defined in FPPA Acres: 91,812 % 3
Name Of Land Evaluation System Used CA - Storie System	Name Of Local Site Assessment System None		Date Land Evaluation Returned By NRCS 12/11/06

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	1,455.3	1,096.0		
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	1,455.3	1,096.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	131.9	0.3		
B. Total Acres Statewide And Local Important Farmland	76.4	40.7		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	2.2	2.0		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	74	68	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Nonurban Use	15	15	15		
2. Perimeter In Nonurban Use	10	10	10		
3. Percent Of Site Being Farmed	20	12	12		
4. Protection Provided By State And Local Government	20	20	20		
5. Distance From Urban Builtup Area	15	15	15		
6. Distance To Urban Support Services	15	10	10		
7. Size Of Present Farm Unit Compared To Average	10	8	8		
8. Creation Of Nonfarmable Farmland	10	0	0		
9. Availability Of Farm Support Services	5	5	5		
10. On-Farm Investments	20	20	20		
11. Effects Of Conversion On Farm Support Services	20	3	3		
12. Compatibility With Existing Agricultural Use	10	0	0		
TOTAL SITE ASSESSMENT POINTS	160	118	118	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	74	68	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	118	118	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	192	186	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side) **Form AD-1006 (10-83)**

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