



**Water Supply Assessment  
For the Proposed  
Mitsubishi Cement Corporation  
South Quarry**

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## **1.0 EXECUTIVE SUMMARY**

A Preliminary Water Supply Assessment (WSA) was prepared in conjunction with the preparation of a California Environmental Quality Act (CEQA) Initial Study for Mitsubishi Cement Corporation's (MCC) proposed South Quarry mine operation ("Proposed Project") located south of Lucerne Valley in San Bernardino County, California. The WSA was updated in November 2011 to incorporate Mojave Water Agency's Final 2010 Urban Water Management Plan (UWMP) adopted in June of 2011, and for use in certification of the Proposed Project's Environmental Impact Report.

The Proposed Project would develop a new high grade limestone quarry adjacent and to the south of MCC's existing Cushenbury Cement Plant, which includes the existing East Pit and West Pit (e.g. quarries) that are under development. The Project Site is not within the service area of a public water supplier, but is within the boundaries of the Mojave Water Agency (MWA). MWA is a State Water Project contractor, a regional groundwater management agency, and serves as Watermaster for the adjudicated Mojave Basin. MCC owns four on-site wells on their property and six off-site water wells. Five of these wells are presently used to provide water for dust control and plant operations at the existing mine. This water source will be used to meet water demands of the South Quarry operations.

The South Quarry is within portions of Sections 14, 15, 22, and 23 Township 3 North, Range 1 East, SBBM. The Project Site and the surrounding land uses consist of vacant public lands administered by the San Bernardino National Forest (SBNF). The Proposed Project would entail approximately 153.6 acres located almost entirely on National Forest System Lands. SB 610 requires a WSA in connection with the CEQA review of, among other things, any "processing plant" on more than 40 acres of land.

MCC currently operates two quarries on private land just north of the proposed South Quarry, the existing East Pit on 214 acres and the West Pit under development on 184 acres, approved by the County of San Bernardino in 2004. The extent of MCC's other adjacent holdings include approximately 750 acres of owned lands, 40 acres of unpatented claims, and 240 acres of fee land under lease to MCC.

The South Quarry will be mined at an average production rate of 1.3 million tons per year (MTPY) of ore and 150,000 tons of waste rock for up to 120 years. At this time, MCC is requesting a 120-year operations plan (through the year 2131) excavating approximately 156 MT of ore. MCC's Cushenbury Cement Plant requires a limestone feed of up to approximately 2.6 MTPY, and this will not change as a result of the South Quarry Project. Production from the East and West Pits will be reduced to a combined average of 1.3 MTPY of ore and 150,000 tons of waste rock. Therefore the overall limestone production of 2.6 MYPY and 300,000 tons of waste rock at the mining complex will not change from the approved production.

For purposes of this WSA, the total water demand for plant operations and dust control, with the proposed South Quarry in operation is estimated at 585.3 acre-feet/year. The current operations'

verified water production has averaged 484 acre-feet/year over the 10-year period of Water Years 2000/01 through 2009/10. Therefore, the future operations, including the West Pit and the Proposed Project would represent an increase of 101.3 acre-feet/year, or a 21% increase over the most recent 10-year average verified water production for the existing East Pit quarry, dust control and operations at the adjacent cement plant. The supply would be the existing MCC wells which use groundwater pumped from the Este Subarea of the adjudicated Mojave Basin.

The Watermaster for the Mojave Basin, the Mojave Water Agency, in its Seventeenth Annual Report of the Mojave Basin Area for Water Year 2009-10, dated May 1, 2011, indicates that water levels in the Este Subarea have remained stable for the past several years, indicating a relative balance between recharge and discharge. Unused FPA for the Este Subarea, as reported by the Watermaster, was 13,632 acre-feet in Water Year 2008-09 and 14,430 for Water Year 2009-10. Based on the Watermaster report, the 2010-11 Free Production Allowance (FPA) for the Este Subarea was recommended to be set at 80% of the Base Production Allowance of 20,205 acre feet, or 16,164 acre feet.

**Table 1**  
**Watermaster Data for Este Subarea Groundwater Production**  
**(in acre-feet)**

<b>2009-10 Verified Production</b>	<b>Production Safe Yield</b>	<b>2010-11 FPA</b>
4,848	4,729	16,164

The Proposed Project's net increase in demand of 58.6 acre-feet/year would represent 4% of the minimum Este Subarea groundwater deficit of 1,500 acre-feet projected to occur during a single dry year event, and 2% of the maximum deficit of 3,050 acre-feet. The single dry year event is based on the Agriculture 2 Scenario which was adopted as part of the Mojave Water Agency 2004 Regional Water Management Plan as the basis for further planning. Under this scenario, there are assumed significant decreases in agricultural consumptive use based on voluntary transfers of FPA from agricultural to non-agricultural uses.

The existing operation's and Proposed Project's water demand would total an estimated 585.3 acre-feet per year or 52% of MCC's current FPA of 1,116 acre feet. In the event the reliability of water supplies becomes limited due to State-wide or local hydrologic conditions, MCC could maintain a limitation on its water use to be equivalent or less than 50% of its Base Production Allowance (50% of 1,299 = 649 acre-feet), if imposed by the Watermaster. The Base Production Allowance (BPA) is a percentage of water production that occurred during the "base year" as established in the Judgment and is used by the Watermaster for purposes of annually establishing a Free Production Allowance (FPA) for each major groundwater producer.

This Proposed Project will not have a significant impact on agricultural, potable or industrial users. Neither will this Project affect the water supply for any lower-income housing projects. As described herein, MCC has a right to groundwater extracted from a basin that has been adjudicated and the Proposed Project combined with other existing and planned operations will not result in water demand exceeding that water right.

## **2.0 INTRODUCTION**

### **2.1 BACKGROUND**

Mitsubishi Cement Corporation (MCC) is proposing to develop and reclaim a new high grade limestone quarry to the south of its existing East Pit and Cushenbury Cement Plant. The proposed quarry is designated as the South Quarry and is located approximately 6 miles south of the community of Lucerne Valley in San Bernardino County, California (see Figure 1). The South Quarry will total approximately 153.6 acres consisting of a 128-acre quarry, a 2.7 acre landscape berm, a 22.2-acre haul road 1.8 miles in length, and a temporary construction road of 0.7 acres. The South Quarry and haul road would be located almost entirely (147.0 acres) on 440 acres of unpatented claims owned by MCC on public federal land under the jurisdiction of the San Bernardino National Forest (SBNF) with approximately 6.6 acres of the haul road located on MCC-owned land where it enters the existing East Pit.

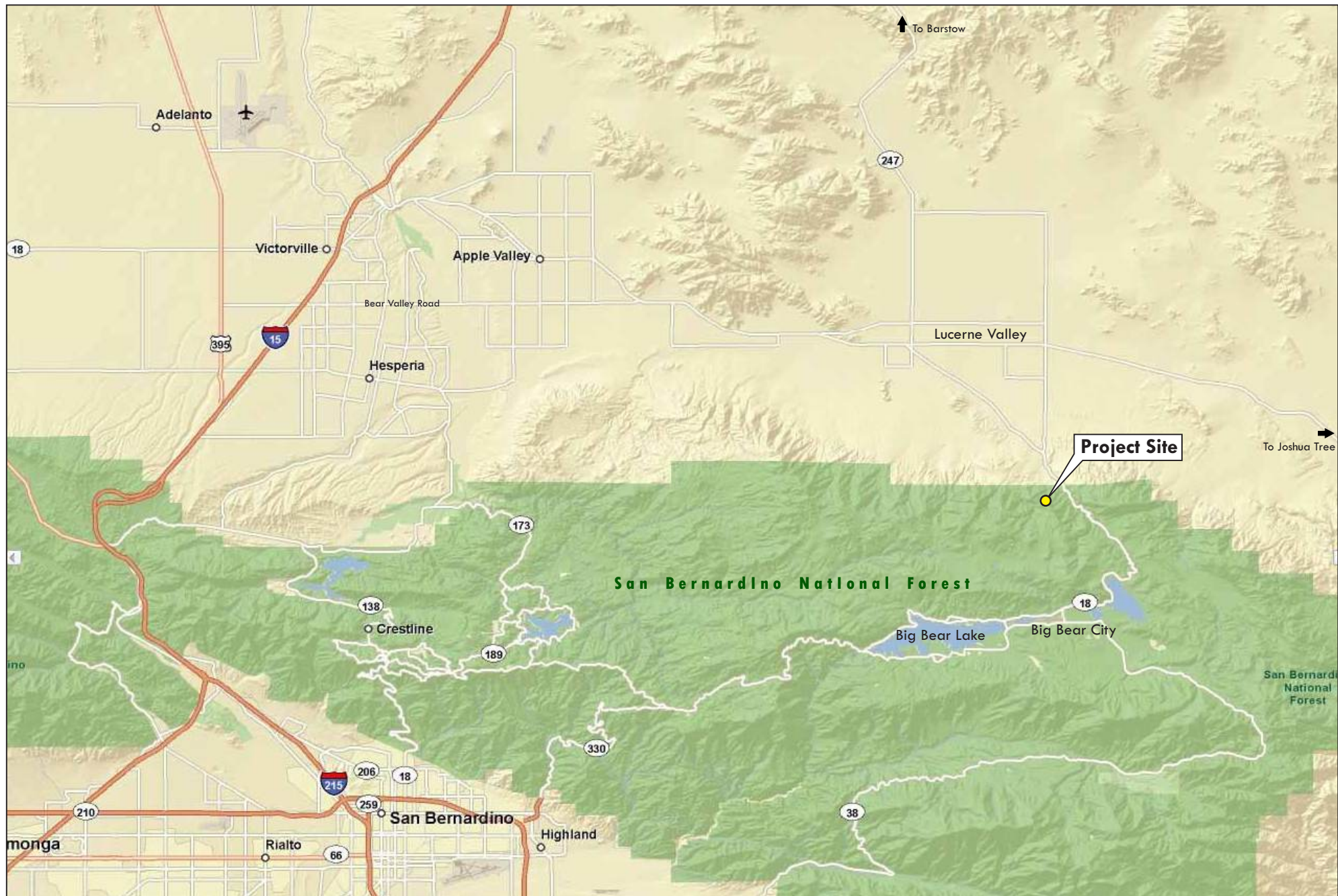
The Cushenbury Cement Plant and related quarries are accessed directly from Highway 18 south of Lucerne Valley (see Figure 2). The Quarry site and the surrounding land uses consist of vacant public lands administered by the San Bernardino National Forest (SBNF). MCC currently operates two quarries on private land just north of the proposed South Quarry, the East Pit on 214 acres and the West Pit (under development) on 184 acres, approved by the County in 2004.

Based on drilling conducted during the winter of 2009 and 2010, the site has estimated proven reserves of over 200 million tons of high to medium grade limestone. This higher grade limestone will be blended with lower grade limestone excavated from the West and East Pits at a ratio of approximately 50/50 in order to meet the limestone specifications to feed the Cushenbury Cement Plant. The South Quarry will be mined at an average production rate of 1.3 million tons per year (MTPY) of ore for up to 120 years. MCC is requesting a 120-year operations plan (to year 2131) excavating approximately 156 MT of ore. MCC's Cushenbury Cement Plant requires a limestone feed of up to approximately 2.6 MTPY, and this will not change as a result of the South Quarry Project. Production from the East and West Pits will be reduced to a combined average of 1.3 MTPY of ore and 150,000 tons of waste rock. Therefore the overall limestone production at the mining complex will not substantially change from the approved production.

Specific reclamation activities will occur concurrent with excavations and throughout the life of the operations such as slope reduction, stockpile management, erosion control, and revegetation. At the conclusion of excavations, 5 years of active reclamation and revegetation would be implemented followed by revegetation monitoring until revegetation goals are achieved.

The ore will be transported by off-road haul trucks to the existing crushing and screening system at the Cushenbury Cement Plant for use in the production of cement.

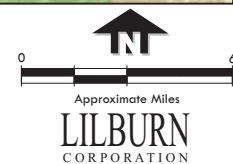
Since the Proposed Project is subject to the California Environmental Quality Act process (CEQA) A Draft Environmental Impact Report has been prepared. The County of San Bernardino,



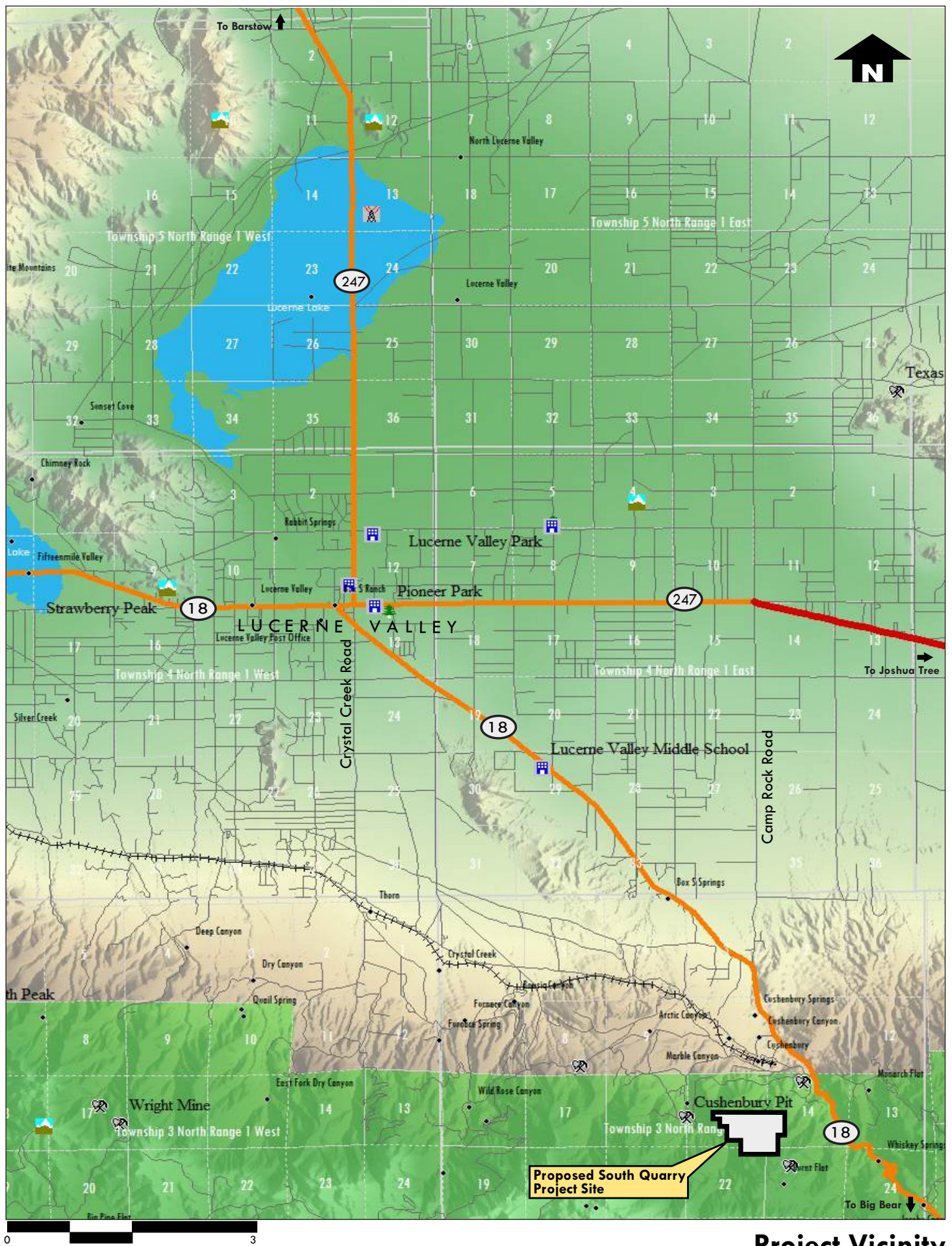
## Regional Location

Mitsubishi Cement Corporation - South Quarry Water Supply Assessment  
County of San Bernardino, CA

Figure 1







## Project Vicinity

Mitsubishi Cement Corporation - South Quarry Water Supply Assessment  
County of San Bernardino, CA

Figure 2

CEQA Lead Agency for the Proposed Project, has requested that the Preliminary Water Supply Assessment (WSA) be finalized to complete the Project's CEQA process and to approve the project for development.

## **2.2 PURPOSE OF DOCUMENT**

Upon request of a local government, a public water supplier (PWS) is required by law to provide documentation regarding the water supply for new projects. The WSA is included in the CEQA documentation and it becomes information used in the approval process. In the case of the Proposed Project, there is no PWS that provides water service to the area of the Project Site.

At completion, the Proposed Project (South Quarry) will generate a maximum water demand for dust control totaling an estimated 79.2 acre-feet per year (103,253 gallons per day x 250 operating days/year). This assumes water application is required every day of operations regardless of weather conditions. The supply would be the existing groundwater wells currently used by and owned by MCC, located both on-site and off-site. The Proposed Project would demand approximately 79.2 acre-feet per year, in addition to the average of 484 acre-feet per year used by existing mining and cement plant operations. MCC intends to shift mining from the East Pit to both the West Pit and South Quarry. Production levels would be the same and therefore an increase or decrease in plant water consumption is not expected. Section 3.0 details total water demands at the mine site.

The regional water management agency overlying the source of water supply is the Mojave Water Agency (MWA) and therefore the MWA 2010 Urban Water Management Plan and their 2004 Regional Water Management Plan was referenced in preparation of this WSA. This document discusses the historic and current water supplies of the Project Site and the Proposed Project's impact on the Este Subarea's water supplies. Project water demands are evaluated in light of the single dry year event and multiple dry year event to determine the adequacy of water supply.

### **2.2.1 Applicability of a Water Supply Assessment**

A WSA is required for a project consisting of a "proposed industrial, manufacturing or processing plant" occupying more than 40 acres of land (Water Code Section 10912; SB 610). In the May 2010 decision in *Center for Biological Diversity v. County of San Bernardino*, the Court of Appeal held that a biosolids composting facility is a "processing plant" and thus a "project" within the meaning of SB 610 if it meets the 40-acre threshold, even if only small structures will be constructed on-site. It is less likely that MCC's proposed South Quarry would be considered a "project" under SB610, since the project does not involve any new processing equipment within the mine, or any new or modified equipment at the adjacent cement plant. Nonetheless, given the uncertainty created by the *Center for Biological Diversity* decision, this Water Supply Assessment has been prepared to support MCC's South Quarry application.

## 2.3 PUBLIC WATER SYSTEM

### 2.3.1 Description

The project is located south of the unincorporated community of Lucerne Valley and north of Big Bear Lake, in the San Bernardino Mountains. Residents of Lucerne Valley receive their water via individual wells, mutual water companies, or small County water districts. The County of San Bernardino has a County Service Area (CSA 29) in Lucerne Valley that serves commercial customers only and does not overlie the Project Site. On the north shore of Big Bear Lake, the community of Fawnskin is served by the Big Bear Department of Water and Power, and the remainder of the north shore lies within a County Service Area (CSA 53-C). The Big Bear Department of Water and Power could not provide a water supply to the Project Site without expansion of the City of Big Bear Lake incorporated boundaries. CSA 53-C lies approximately 8 miles south of the project site, and furthermore does not presently have a water supply system developed. A PWS therefore is not applicable to the Proposed Project.

## 3.0 WATER DEMANDS

During operations, the Proposed Project will generate a water demand for dust control totaling an estimated 79.2 acre feet per year (103,253 gallons per day x 250 operating days/year). This assumes water application is required every day of operations regardless of weather conditions. The existing mine operations utilize on- and off-site wells for plant operations and dust control. The average annual production from the five wells in service during the 10-year period of 2000/01 to 2009/2010 was 484 acre-feet.

MCC intends to shift mining from the East Pit to both the West Pit and South Quarry. Production levels would be the same and therefore an increase or decrease in plant water consumption is not expected. The water demands for each element of the mine plan are as shown in Table 2 below. The total water use upon approval of the South Quarry and termination of mining at the East Pit would be 585.3 acre-feet per year ( $484 - 20.6 + 42.7 + 79.2$ ).

**Table 2**  
**Location and Estimated Water Use**

Site	Water Use (acre-feet/year)	Source of Estimated Use
Plant Site	484	Verified Production
East Pit	(20.6)	Included in Plant Site
West Pit	42.7	2005 EIR
South Quarry	79.2	2010 POO*

\*POO = Plan of Operation for South Quarry

Lucerne Valley lies within the Este Subarea of the Mojave Basin (see Figure 3). The Final 2010 UWMP shows that the subarea had a population of 6,680 in 2005 and the population was projected to grow to 11,785 by the year 2035. Water production in the Este subarea has declined



# Mojave Water Agency Adjudicated Boundary



## Mojave Water Agency Adjudicated Boundary

Mitsubishi Cement Corporation - South Quarry Water Supply Assessment  
County of San Bernardino, CA

Figure 3

according to reports filed with the Mojave Basin Watermaster. Water production was 9,700 acre-feet in 1996, 7,100 acre-feet in 1998 and 2000 and 5,900 acre-feet in 2003. Projected water demand within the Este subarea was estimated to increase from 6,981 acre feet in 2005 to 7,369 acre feet in 2035 (*Final 2010 Urban Water Management Plan, Mojave Water Agency, June 9, 2010*).

### **3.1 PROJECT-SPECIFIC WATER CONSERVATION**

No water conservation measures are proposed for the Proposed Project because water use will be limited to dust control and is not projected to exceed 5% of MCC's current FPA. In the event water supplies become limited, MCC could maintain a limitation on its water use to be equivalent or less than 50% of its' BPA (50% of 1,299 = 649 acre-feet). Under current projections, this limitation on water use would not require the implementation of conservation measures but would limit the amount of water available for MCC to sell to others for annual replacement (see Section 4.3.2 of this WSA).

## **4.0 WATER SUPPLY ASSESSMENT**

### **4.1 GENERAL**

A requirement of the WSA is to identify and describe the water supply sources in the PWS that will serve the Project. Water Code Section 10910(d) requires a WSA to include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the PWS.

### **4.2 IDENTIFICATION OF WATER SOURCES**

#### **4.2.1 Primary Water Sources**

The Proposed Project will use water (may be non-potable) for dust control. A water supply has been developed on the mine site and a PWS does not serve the site. The source of water for dust control will be the existing MCC wells located both on- and off-site. These wells pump groundwater from the Este Subarea of the Mojave Water Basin.

#### **4.2.2 Additional Water Sources**

MCC is currently using five (5) of the ten (10) wells it has developed. Groundwater would continue to be the sole source of supply as long as MCC's available allowance under the Stipulated Judgment (*discussed below*) will meet production demands. No recycled water exists in the area that could be made available to the Project Site.

## **4.3 ANALYSIS OF WATER SUPPLY**

### **4.3.1 Aquifer Adjudication**

The Mojave Basin, including the Este Subarea where the Proposed Project will be located, has been the subject of an adjudication to determine the water rights of the various producers. The adjudication process of the groundwater in Mojave Basin began in 1990 with cross complaints filed in 1991. In 1992 numerous parties agreed to conduct good faith negotiations and by 1993 over 75 percent of the parties involved were agreed to the Stipulated Judgment, thus binding the involved parties. In 1995 a trial of the non-stipulated parties was completed. The final judgment was entered in 1996 adopting the physical solution set forth in the Stipulated Judgment. The purpose of the Stipulated Judgment was to create incentives to conserve local water, guarantee that downstream producers will not be adversely affected by upstream producers, and assess producers to obtain funding for the purchase of imported water.

In addition, the Stipulated Judgment required that the Mojave Basin Area Watermaster generate an annual report summarizing the yearly Watermaster activities and water supply conditions for the Mojave Water Basin. The Mojave Water Basin includes the Alto Subarea, Baja Subarea, Centro Subarea, Este Subarea and the Oeste Subarea. The Project Site obtains groundwater from wells located in the Este Subarea.

### **4.3.2 Groundwater**

To carry out the Mojave Basin Judgment (the Adjudication), the MWA assigned Base Annual Production (BAP) amounts to each producer using 10-acre feet per year or more, based on historical production (1986-1990). The total BAP from all producers was ramped down in each year from 1994 to 2005 in order to achieve the point where water imports and inflows versus consumption achieve safe yield of the basin. The MWA achieved its target rampdown in 2004/2005.

Each pumper also has been assigned a variable Free Production Allowance (FPA), which is a uniform percentage of BAP set for each area. A substantial make-up water assessment is charged for water pumped in excess of the assigned FPA. Water purveyors also have the option of leasing additional water rights from the open market.

MCC has a Free Production Allowance (FPA) that was allocated as part of the Basin Adjudication. MCC's original (1993) base production was set at 1,299 acre-feet. This has been ramped down annually to a Free Production Allowance that is currently 1,116 acre-feet (85.9% of BAP).

Any groundwater that MCC pumps over and above the FPA is subject to replacement. Replacement can occur either by paying the Watermaster to purchase supplemental water from MWA or by acquiring/transferring unused production rights within that sub area from another party to the Judgment. Historically, MCC has had prior year carryover from unused FPA and has sold FPA to others for replacement water. In 2009/2010, MCC produced (verified production)

319.1 acre-feet of its 1,116 acre-foot FPA, with a prior year carryover of 1,116 acre-feet, 52 acre-feet sold as replacement water, and a total adjusted FPA of 2,159 acre-feet. Table 3 shows FPA, verified production, carryover credits, lost carryover (exceeded FPA), and water sold for the period of water years 1997-98 through 2009-2010.

#### **4.3.3 Historical Groundwater Data**

According to the MWA 2010 UWMP, verified groundwater production in the Este Subarea decreased from 8,800 acre-feet in 1994 to 6,500 acre-feet in 2004. Since 1998, verified groundwater production in the Este Subarea has been less than 7,100 acre-feet.

The Mojave Basin Area Adjudication mandates that groundwater extraction from the basin not exceed the estimated annual supplies, and empowers the Watermaster to enforce pumping limits as mandated by the Court. MWA will continue to recharge the aquifer so that groundwater will remain a reliable source of water for the foreseeable future. Among other things, MWA has established a groundwater replenishment program for the Mojave Basin, including the Este Subarea, the purpose of which is to reduce annual and cumulative groundwater overdraft through artificial recharge to the groundwater basin.

Depth to groundwater data is collected by MCC from their production and monitoring wells. Thirteen years of data for Monitoring Wells 1 and 2 show ranges between 18 feet and 50 feet below ground surface; Monitoring Wells 3 and 4 show ranges between 100 feet and 120 feet below ground surface. Nine years of data for production wells show measured depth to groundwater in Wells 5, 6, 8, and 10 ranging between 150 feet and 200 feet below ground surface and; a range between 200 feet and 225 feet for Wells 7 and 9. Twenty years of data for Wells 2 and 4 show depth to groundwater ranging between 30 feet and 60 feet; Wells 1 and 3 measured depth to groundwater ranged between 225 feet and 300 feet below ground surface.

#### **4.3.4 State Water Project Water**

MWA is one of the 29 State Water Project (SWP) contractors. The SWP includes 660 miles of aqueduct and conveyance facilities extending from Lake Oroville in the north to Lake Perris in the south. The SWP is contracted to deliver 4.1 million ac-ft/yr to the 29 contracting agencies. However, State and federal biological opinions to protect endangered fish, climate change, and levee vulnerability in the Delta have decreased projected deliveries to 60% of contracted amounts until the year 2028, increasing to 61% in 2029. SWP delivery reliability factors of between 60 and 61% were utilized in the MWA 2010 UWMP, yielding projected supplies as shown in Table 4 below.

MWA has recognized the need for additional imported water in order to eliminate groundwater overdraft, and has purchased additional water from the SWP when available. Additional SWP water is not expected to be available on a regular basis in the future and should not be relied upon as the only long-term source of overdraft reduction in the Mojave Water Basin. Purchase of

**Table 3**  
**Mitsubishi Cement Plant**  
**Water Year Production**  
**1997/98 - 2009/10**

Water Year Oct. 1 - Sep. 30	1997/1998	1998/1999	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010
Free Production Allowance (FPA)*	1040	1040	1040	1040	1040	1040	1040	1116	1116	1116	1116	1116	1116
Reported Production	424	416.91	372.2	450.73	569.63	464	481.8	458.6	473.6	476.7	621.7	550.1	319.1
Verified Production	424	417	382	421	541	495	490	453	473	476	621	550	319
Prior Year Carryover**	1105	1040	1040	1040	1040	1040	1040	1117	1116	1116	1116	1116	1116
Total Adjusted FPA (FPA + Carryover)-Sold C.O.	1879	1730	1930	1970	1736	1622	1984	2215	1853	2074	2121	2180	2159
Lost Carryover	415	273	508	509	155	87	454	646	264	482	384	514	724
Sold ac-ft. (for annual replacement)	266	350	150	110	344	458	96	18	379	158	111	52	73

\* Includes reduction for MWA adjudication

\*\* Prior Year Carryover - Current year production  
Carryover good for one year only



**Table 4**  
**Mojave Water Agency**  
**Summary of Current and Planned Water Supplies (Acre Feet/Yr)**

<b>Supply Type</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Local	131,994	137,633	141,314	147,121	152,921	54,778
State Water Project	49,680	51,480	53,880	53,880	54,778	158,712
Total	181,674	189,113	195,194	201,001	207,699	213,490

Source: Final 2010 Urban Water Management Plan, Table 3-1:

additional SWP water involves the purchase of water on the spot market, as opposed to the purchase of entitlement to an ongoing supply of that water. It should be noted that the spot market comes into play when all of MWA's entitlements are being imported into the basin.

MWA reached agreement with the Metropolitan Water District (MWD) of Southern California in 2003 to store up to 75,000 (45,000 delivered to date) acre-feet for MWD in the Mojave basin. This storage is being provided in exchange for MWD's right to receive an equal amount of water in the future, through entitlement exchange, should there be a significant drought. In addition to spot market, on an on-going basis MWA is pursuing additional SWP entitlements when they become available. In dry years when SWP or Colorado River supplies are reduced, MWD will have the ability to call back some of the transferred water stored in the Mojave Basin, based on the limitations of the storage agreement between MWD and MWA.

#### **4.3.5 Surface Water**

The Mojave River is the primary source for replenishment of the Mojave Basin, with an average natural inflow of 65,500 acre-feet. The local surface inflows depend on climatic conditions and represent a small portion of the total supply. Recharge flows are often sub-surface and not available for surface water capture or treatment. Water from the State Water Project is the only other surface water that may be considered for treatment or direct use, and is limited by the variability of the supply from the delta and the amount of water MWA has available after contractual deliveries are met. Surface water is not treated or used for domestic water purposes.

#### **4.3.6 Recycled Water**

No recycled water is available to the project site or within the area of the water supply. The existing Cushenbury plant administrative offices are connected to a septic system. Portable toilets are used at the quarry sites.

#### **4.3.7 Single and Multiple Dry Year Scenarios**

The Mojave Water Agency 2004 Regional Water Management Plan projects the single-dry year conditions to be based on the 1977 southern California drought conditions. Such hydrologic conditions are used by the State Department of Water Resources as conditions under which State

Water Project water deliveries would be limited to 4% of SWP contractors' entitlements. As shown in Table 5-16 of the MWA 2004 Regional Water Management Plan, the Este Subarea would experience deficits (in 5-year increments) as follows:

2005	(2,650) acre-feet
2010	(2,850) acre-feet
2015	(3,050) acre-feet
2020	(1,500) acre-feet
2025	(1,650) acre-feet
2030	(1,850) acre-feet

The projected additional net demand of 58.6 acre-feet/year over MCC's 10-year average production, would represent 4% of the minimum basin subarea groundwater deficit of 1,500 acre-feet during a single dry year event, and 2% of the maximum deficit of 3,050 acre-feet. As stated in Section 3.1 above, in the event water supplies become limited, MCC could maintain a limitation on its water use to be equivalent or less than 50% of its' BPA (50% of 1,299 = 649 acre-feet). Under current projections, this limitation on water use would not require the implementation of conservation measures but would limit the amount of water available for MCC to sell to others for annual replacement.

The water supplies and demands of the Mojave Water Agency's entire service area were projected in the Final 2010 Urban Water Management Plan in the event of a single-dry year event and a four-year multiple-dry year event occurring during the period 2010 through 2035. The analyses presented in the UWMP show that MWA has adequate supplies to meet demands during average, single-dry, and multiple-dry years throughout the 20-year planning period (*Final 2010 Urban Water Management Plan, Mojave Water Agency, pages 6-7*).

## **5.0 IMPACTS ON OTHER PROJECTS**

This Project will not have a significant impact on agricultural, potable or industrial users. Neither will this Project affect the water supply for any lower-income housing projects. As described herein, MCC has a right to groundwater extracted from a basin that has been adjudicated. The Watermaster responsible for carrying out the terms of the adjudication establishes the amount of groundwater available to MCC on an annual basis. Since water year 1993/94, MCC has not utilized its full entitlement to groundwater and the Proposed Project does not exceed MCC's FPA thereby requiring the acquisition of replacement water that might impact other projects. To the contrary, MCC has historically sold replacement water to others.

## **6.0 RIGHTS TO GROUNDWATER**

Under the Stipulated Judgment and applicable law, producers in Lucerne Valley continue to have the right to pump groundwater from the Este Subarea. As previously noted, the aquifer from

which water supply would be produced for the Proposed Project has been adjudicated. The MWA acts as the Watermaster for the adjudicated basin. The amount of water that may be produced in any subarea in any year by a producer free of any replacement obligation is that producer's share of the Free Production Allowance. The Base Production Allowance (BPA) has been ramped down (from the base year of 1993-94) for the first ten years following the adjudication, as a part of the physical solution established by the Judgment. The Watermaster for the Mojave Basin, the Mojave Water Agency, in its Seventeenth Annual Report of the Mojave Basin Area for Water Year 2009-10, dated May 1, 2011 recommends that each Producer's FPA be established at 80% of the base year for the ensuing water year.

MCC has a Free Production Allowance (FPA) that was allocated as part of the Basin Adjudication. For the 2010-11, the Watermaster recommends a FPA for the Este Subarea at 80% of BAP, subject to future rampdown to 65% immediately if water use conditions change.

The existing operation's and Proposed Project's water demand would total an estimated 585.3 acre-feet per year or 52% of MCC's current FPA of 1,116 acre feet. In the event the reliability of water supplies becomes limited due to State-wide or local hydrologic conditions, MCC could maintain a limitation on its water use to be equivalent or less than 50% of its Base Production Allowance (50% of 1,299 = 649 acre-feet), if imposed by the Watermaster. The Proposed Project's water demands could be met within the FPA of MCC with no need to purchase replenishment water and no need for additional rights to groundwater to be acquired.

## **7.0 VERIFICATION**

This document verifies the water supply for the Project as required by California Government Code 66473.7 is available.

### **List of Supporting Documentation**

Supporting documentation was used in preparing this assessment. These include the following:

- California Department of Water Resources Water Data Base:  
[www.water.ca.gov/waterdatalibrary](http://www.water.ca.gov/waterdatalibrary)
- Mojave Water Agency 2004 Regional Water Management Plan
- Final 2010 Urban Water Management Plan, Mojave Water Agency, June 9, 2011
- Mojave Water Agency Seventeenth Annual Report of the Mojave Basin Area for Water Year 2009-10, dated May 1, 2011