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# **APPENDIX H**

## **PUBLIC SERVICES AND UTILITIES**

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# **Water Supply Assessment**

## **Amended Plan of Operations and Mine Reclamation Plans for the Butterfield - Sentinel Quarries and the White Knob - White Ridge Quarries**

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June 2013

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## **1.0 EXECUTIVE SUMMARY**

Omya California's (Omya) has requested approval from the U.S. Department of Agriculture, Forest Service (USFS) and the County of San Bernardino (County) to expand the existing Butterfield – Sentinel quarries and White Knob - White Ridge quarries located south of Lucerne Valley in San Bernardino County. The Amended Plans are subject to the California Environmental Quality Act process (CEQA) and Environmental Impact Reports are being prepared. The County of San Bernardino, as CEQA Lead Agency, has requested a Water Supply Assessment (WSA) to be prepared to complete the CEQA process and to approve the Amended Plans.

The existing permitted Butterfield - Sentinel quarries are located within the San Bernardino National Forest and White Knob - White Ridge quarries are located on private property. The proposed Amended Plans would provide for mining at the various quarries to be extended up to the year 2055. The current production combined from all quarries would increase to a permitted maximum of 680,000 tons per year of ore to the Lucerne Valley processing plant. Mined material is crushed at the quarry sites and the ore is processed at the Lucerne Valley processing plant located north and east of the quarries. Reclamation will occur concurrently with mining.

Water is used at Omya's operations for dust control at the quarries, overburden placement areas, haul roads, crushers, and for establishment of vegetation in reclaimed areas. The water source is two wells owned and operated by Omya; one located at the processing plant site in Lucerne Valley, and one located in Crystal Creek Canyon near Turnout 5 on the Crystal Creek Haul Road. Small increases in water use for dust control will occur with the implementation of the proposed Amended Plans for the quarries. Omya's existing operation's and proposed projects' water demands would total an estimated 17.55 acre-feet per year or 92.3% of Omya's current Free Production Allowance (FPA) of 19 acre-feet.

The proposed operational changes will not have a significant impact on agricultural, potable or industrial users. Neither will there be an affect on the water supply for any lower-income housing projects. As described herein, Omya has a right to groundwater extracted from a basin that has been adjudicated and the proposed projects combined with other existing and planned operations will not result in water demand exceeding that water right.

## **2.0 INTRODUCTION**

### **2.1 BACKGROUND**

Omya California's (Omya) is proposing to amend its Plan of Operations and Mine Reclamation Plans for the Butterfield - Sentinel Quarries and the White Knob - White Ridge Quarries. The quarries are located south of Lucerne Valley in San Bernardino County, California (see Figure 1). Omya California (Omya), a division of Omya Inc., has requested approval from the U.S. Department of Agriculture, Forest Service (USFS) and the County of San Bernardino (County) to expand the existing Butterfield - Sentinel, and White Knob - White Ridge quarries.

The existing permitted Butterfield - Sentinel quarries are located within the San Bernardino National Forest and the White Knob - White Ridge quarries are located on private property (see Figure 2). Once permitted, available ore resources will provide an additional 40 years to the mine life of the Butterfield Quarry, 20 years to the Sentinel Quarry, and 24 years to the White Knob - White Ridge quarries. Mining at the various quarries would be extended through the year 2055. The quarries combined ore production rates will be a maximum of 680,000 tons per year. Mined material is crushed at the quarry sites and the ore is processed at the Lucerne Valley processing plant located north and east of the quarries. Reclamation (including revegetation) will occur concurrently with mining.

Since the Amended Plans are subject to the CEQA process, Environmental Impact Reports are being prepared. The County, the CEQA Lead Agency, has requested a Water Supply Assessment (WSA) be prepared to complete the CEQA process and to approve the Amended Plans. The Butterfield - Sentinel Quarries are also subject to review under the National Environmental Policy Act with the U.S. Forest Service acting as lead federal agency.

Quarry development and expansion will be phased. Disturbance proposed for the Amended Plans includes expansion of the existing quarries, associated overburden placement sites, additional internal access roads and ancillary facility areas, and minor adjustments to existing disturbance boundaries. Less than 1/2-acre-foot of the total annual water use is hauled by truck for establishing vegetation at reclaimed areas.

### **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 projects, there is no PWS that provides water service to the area of the Project Site.

At completion, the proposed projects will generate a maximum water demand for dust control and irrigation totaling an estimated 3.75 acre-feet per year (over existing water use). This is based on historic water use records compared to proposed quarry production. The supply source







Source: World Topo Map, 2012

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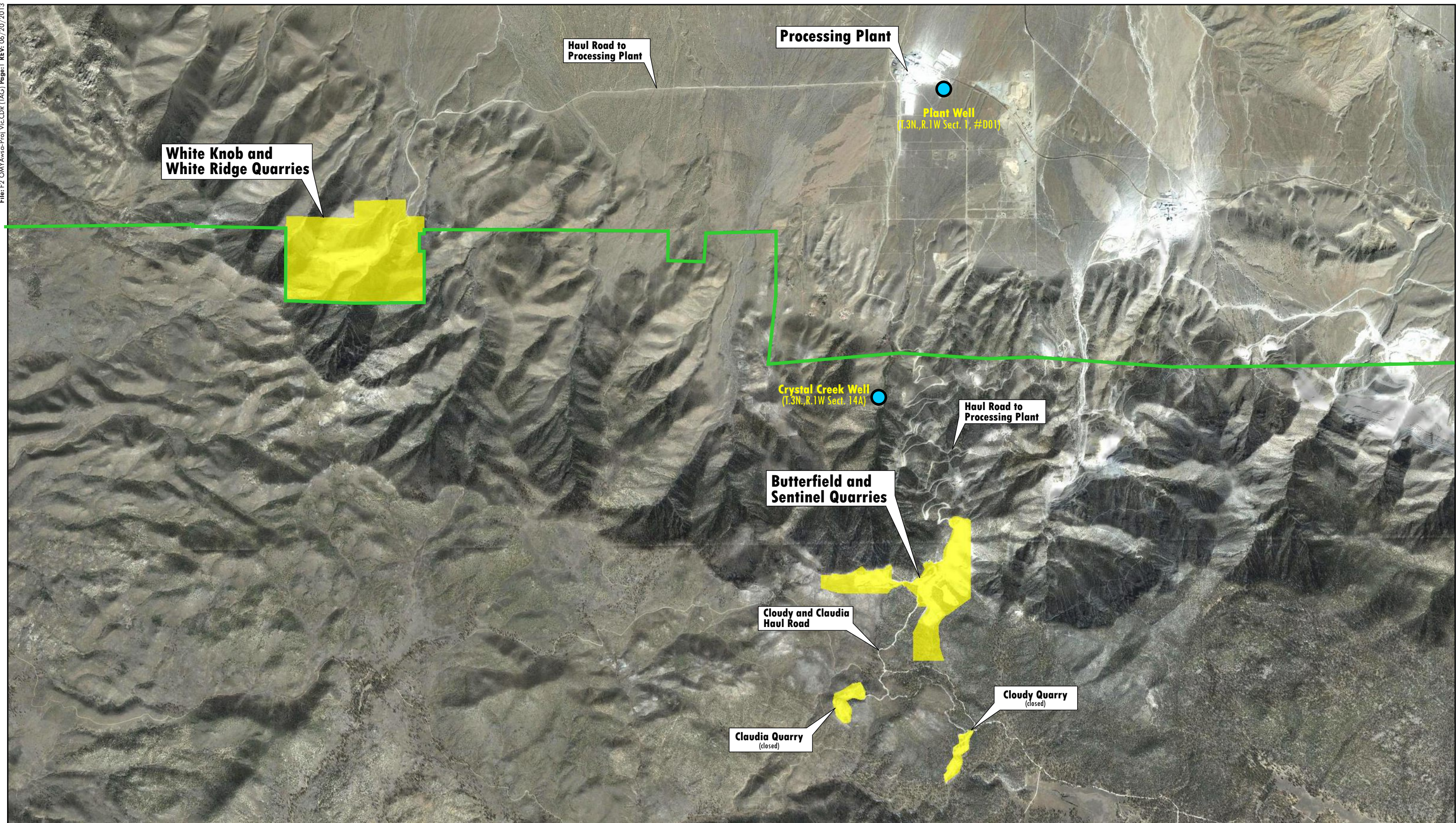
## REGIONAL LOCATION

WHITE KNOB-WHITE RIDGE QUARRIES and BUTTERFIELD-SENTINEL QUARRIES  
Water Supply Assessment  
Omya California, San Bernardino National Forest, California

 **FIGURE 1**







**LEGEND**



Well Location



USFS Boundary







would be the existing groundwater wells currently owned and used by Omya, located both on-site and off-site. The total demand at maximum production would be approximately 17.55 acre-feet per year.

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 the 2004 Regional Water Management Plan was referenced in preparation of this WSA. The WSA discusses the historic and current water supplies of the Project Site and the proposed projects' impact on the Este Subarea's water supplies. Project water demands are evaluated in light of the single dry year event and a multiple dry year event to determine the adequacy of the 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 Omya's proposed quarry expansions 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 plant. Nonetheless, given the uncertainty created by the *Center for Biological Diversity* decision, this Water Supply Assessment has been prepared to support Omya's quarry applications.

## **2.3 PUBLIC WATER SYSTEM**

### **2.3.1 Description**

The projects are located south of the unincorporated community of Lucerne Valley and north of the City 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 Sites. 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 CSA 53-C. The Big Bear Department of Water and Power could not provide a water supply to the Project Sites 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 projects.

## **3.0 WATER DEMANDS**

During operations, the existing and proposed quarry operations will generate a water demand for dust control totaling an estimated 17.55 acre feet per year. This assumes water application is

required based on historic data maintained by Omya. The existing mine and processing plant operations utilize on- and off-site wells for dust control. The average annual production from the two wells, verified by the Watermaster during the 5-year period of 2007/08 to 2011/2012 was 13.8 acre-feet.

Omya intends to increase production of processed materials to a permitted maximum from all quarries of 680,000 tpy. An increase in water consumption of 3.75 acre-feet per year to be used for dust control is expected concurrent with the increase in production rates. Future operations are estimated to require an additional 1.5 acre-feet/year for the Butterfield - Sentinel quarries, and 2.25 acre-feet/year for the White Knob - White Ridge quarries, for a total increase in water production of 3.75 acre-feet/year, representing an increase of 27% at maximum production over the most recent 5-year average verified water production. The supply would continue to be the existing Omya wells which use groundwater pumped from the Este Subarea of the adjudicated Mojave Basin.

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 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*).

The proposed projects' net increase in demand of 3.75 acre-feet/year would represent 0.25% of the minimum Este Subarea groundwater deficit of 1,500 acre-feet projected to occur during a single dry year event, and 0.12% 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 future 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. Existing water uses in the Este Subarea are primarily Agricultural followed by Industrial.

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

No water conservation measures are proposed for the proposed projects because water use will be limited to dust control and a minor amount (less than ½-acre-foot/year) used for occasionally establishing revegetation areas. In the event water supplies become limited, Omya could maintain a limitation on its annual water use to be equivalent or less than 65% of its BPA (65% of 23 = 14.95 acre-feet). Under current projections, this limitation on water use would not require the implementation of conservation measures but would limit the operations when sufficient water was not available during dry hydrologic conditions to meet dust control and/or irrigation demands.

# Mojave Water Agency Adjudicated Boundary



## MOJAVE WATER AGENCY ADJUDICATED BOUNDARY

WHITE KNOB-WHITE RIDGE QUARRIES and BUTTERFIELD-SENTINEL QUARRIES

Water Supply Assessment

Omya California, San Bernardino National Forest, California



FIGURE 3





## **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 projects will use well water for dust control. A water supply has been developed on Omya properties (two wells) and a PWS does not serve the site. The source of water for dust control will be the existing Omya wells located both on- and off-site (refer to Figure 2). These wells pump groundwater from the Este Subarea of the Mojave Water Basin.

The Watermaster for the Mojave Basin, the Mojave Water Agency, in its Nineteenth Annual Report of the Mojave Basin Area for Water Year 2011-12, dated May 1, 2013, 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 Free Production Allowance (FPA) for the Este Subarea, as reported by the Watermaster, was 14,430 acre-feet for Water Year 2009-10, 13,632 acre-feet for Water Year 2010-11, and 14,800 for Water Year 2011-12. Based on the Watermaster report, the Water Year 2012-13 FPA for the Este Subarea is recommended to be set at 80% of the Base Production Allowance of 19,277 acre feet, or 15,422 acre feet. Table 1 below summarizes the 2011-12 Watermaster Report data.

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

<b>2011-12 Verified Production</b>	<b>Production Safe Yield</b>	<b>2011-12 Free Production Allowance</b>	<b>2012-13 Recommended Free Production Allowance</b>
5,433	7,156	16,376	15,422

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

Omya is currently using both of the wells it has developed. Groundwater would continue to be the sole source of supply as long as Omya'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 Sites.

## **4.3 ANALYSIS OF WATER SUPPLY**

### **4.3.1 Aquifer Adjudication**

The Mojave Basin, including the Este Subarea where the proposed projects 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.

Omya has a FPA that was allocated as part of the Basin Adjudication. Omya's original (1993) base production was set at 23 acre-feet per year. This has been ramped down annually to a FPA that is currently 19 acre-feet per year (82.6% of BAP).

Any groundwater that Omya 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 subarea from another party to the Judgment. Historically, Omya has had prior year carryover from unused FPA. In 2011/2012, Omya produced (verified production) 14 acre-feet of its 19 acre-foot FPA, with a prior year carryover of 19 acre-feet, and a total adjusted FPA of 38 acre-feet. Table 2 shows

FPA, verified production, carryover credits, and unused FPA for the period of water years 2002-03 through 2011-12.

**Table 2**  
**Omya Free Production Allowance & Production**  
**Water Years 2002-03 through 2011-12**

<b>Water Year</b>	<b>FPA</b>	<b>Verified Production</b>	<b>Carryover Credits</b>	<b>Unused FPA</b>
2002-03	19	15	19	19
2003-04	19	14	19	19
2004-05	19	14	19	19
2005-06	19	18	19	19
2006-07	19	19	19	19
2007-08	19	14	19	19
2008-09	19	14	19	19
2009-10	19	14	19	19
2010-11	19	13	19	19
2011-12	19	14	19	19

#### **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.

The Omya production well located near the plant (“Plant Well”) was drilled in 1987; depth to groundwater at the time of well installation was 867 feet below ground surface (bgs). The second well located in Crystal Canyon (“Crystal Creek Well”) was drilled in 1990 and depth to groundwater was recorded as 85 feet bgs. Omya has not recently maintained depth to water records for either well.

#### 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 3 below.

**Table 3**  
**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
<b>Total</b>	<b>181,674</b>	<b>189,113</b>	<b>195,194</b>	<b>201,001</b>	<b>207,699</b>	<b>213,490</b>

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

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 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 sites or within the area of the water supply. The existing plant administrative offices are connected to a septic system. Portable toilets are used at the quarry sites.

#### **4.4 Sufficiency Analysis (see Example)**

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 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 FPA for each major groundwater producer. According to the Nineteenth Annual Report of the Mojave Basin Area Watermaster, the Este Subarea may be subject to future rampdown of the BPA to 65% immediately if water use conditions change.

The projected additional net demand of 3.75 acre-feet/year over Omya's 10-year average production, would represent 0.25% of the minimum basin subarea groundwater deficit of 1,500 acre-feet during a single dry year event, and 0.123% of the maximum deficit of 3,050 acre-feet. As stated in Section 3.1 above, in the event water supplies become limited, Omya could maintain a limitation on its water use to be equivalent or less than 65% of its' BPA (65% of 23 = 14.95 acre-feet). Under current projections, this limitation on water use would not require the implementation of conservation measures.

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**

These Projects will not have a significant impact on agricultural, potable or industrial users. Neither will these Projects affect the water supply for any lower-income housing projects. As described herein, Omya 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 Omya on an annual basis. Since water year 1993/94, Omya has not utilized its full entitlement to groundwater and the proposed projects do not exceed Omya's FPA thereby requiring the acquisition of replacement water that might impact other projects.

## **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 projects 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 FPA. The 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.

Omya has a 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 projects' water demand would total an estimated 17.55 acre-feet/ year or 92.3% of Omya's current FPA of 19 acre-feet/year. In the event the reliability of water supplies becomes limited due to State-wide or local hydrologic conditions, Omya could maintain a limitation on its water use to 65% of its Base Production Allowance (65% of 23 = 14.95 acre-feet/year) if imposed by the Watermaster. The proposed projects' water demands could be met by Omya purchasing replenishment water.

## **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)
- Final 2010 Urban Water Management Plan, Mojave Water Agency, June 9, 2011
- Mojave Water Agency 2004 Regional Water Management Plan, Mojave Water Agency, September 2004
- Watermaster Annual Report for Water Year 2002-03, Mojave Basin Area Watermaster, April 1, 2004
- Watermaster Annual Report for Water Year 2003-04, Mojave Basin Area Watermaster, April 1, 2005
- Watermaster Annual Report for Water Year 2004-05, Mojave Basin Area Watermaster, April 1, 2006
- Watermaster Annual Report for Water Year 2005-06, Mojave Basin Area Watermaster, April 1, 2007
- Watermaster Annual Report for Water Year 2006-07, Mojave Basin Area Watermaster, April 1, 2008
- Watermaster Annual Report for Water Year 2007-08, Mojave Basin Area Watermaster, May 1, 2009
- Watermaster Annual Report for Water Year 2008-09, Mojave Basin Area Watermaster, May 1, 2010
- Watermaster Annual Report for Water Year 2009-10, Mojave Basin Area Watermaster, May 1, 2011
- Watermaster Annual Report for Water Year 2010-11, Mojave Basin Area Watermaster, May 1, 2012
- Watermaster Annual Report for Water Year 2011-12, Mojave Basin Area Watermaster, May 1, 2013

