DRAFT SUPPLEMENTAL

ENVIRONMENTAL IMPACT REPORT

NURSERY PRODUCTS LLC

HAWES COMPOSTING FACILITY

State Clearinghouse No.

2006051021

Prepared for:

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TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF TABLES

LIST OF APPENDICES

LIST OF ACRONYMS

AB 32	California Global Warming Solutions Act of 2006
AEP	Association of Environmental Professionals
AF	Acre-Foot or -Feet (i.e., 1 acre x 1 foot deep)
AFY	Acre-Foot or -Feet per Year
BMPs	Best Management Practices
Board	San Bernardino County Board of Supervisors
BofA	Bank of America
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	Climate Action Team
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	Methane
CIWMB	California Integrated Waste Management District
CO_2	Carbon Dioxide
County	County of San Bernardino
Court	Superior Court of the State of California, County of San Bernardino, Barstow District
DSCR	Debt service coverage ratio
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
FEIR	Final Environmental Impact Report
GCC	Global Climate Change
GHG	Greenhouse Gas
gpd	Gallons Per Day
gpm	Gallons Per Minute
GPY	Gallons Per Year
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
IERCA	Inland Empire Regional Composting Authority
IERCF	Inland Empire Regional Composting Facility
IEUA	Inland Empire Utility Agency
ISO	Insurance Service Organization
Kv	Kilovolt

LEA	Local Enforcement Agency
LV	Las Virgenes Composting Facility
LVMWD	Las Virgenes Municipal Water District
MDAQMD	Mojave Desert Air Quality Management District
MWA	Mojave Water District
N_2O	Nitrous Oxide
O_3	Ozone
OPR	Office of Planning and Research
Petitioners	The Center for Biological Diversity and HelpHinkley.Org
pH	Measure of acidity or alkalinity
Project	Nursery Products Hawes Composting Facility Project
SCE	Southern California Edison
SEIR	Supplemental Environment Impact Report
SWP	State Water Project
Tg CO_2 Eq	teragrams of carbon dioxide equivalent
tpy	tons per year
VOC	Volatile Organic Compounds

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EXECUTIVE SUMMARY

INTRODUCTION

The Nursery Products Hawes Composting Facility (Project) is a biosolids and green material composting facility proposed on 80 acres of a 160-acre parcel located within an unincorporated area of the County of San Bernardino (County), California. The facility would compost biosolids and green material to produce Class A compost. A detailed description of the Project is provided in Section 2 of the Draft Environmental Impact Report (DEIR) previously prepared for the Project.

In December 2005, Nursery Products LLC (Nursery Products) filed a discretionary application with the County seeking approval of the Project. Pursuant to the California Environmental Quality Act (CEQA) the DEIR was prepared for the Project and circulated commencing in September 2006 for public review. The public review period extended through November 2006. A Final Environmental Impact Report (FEIR) was issued November 21, 2006, and certified by the County Planning Commission on November 30, 2006. This approval of the Project was appealed to the County Board of Supervisors (Board), which denied the appeal, approved the Project, and certified the FEIR on February 27, 2007.

The Center for Biological Diversity and HelpHinkley.Org (Petitioners) jointly filed a lawsuit in the Superior Court of the State of California, County of San Bernardino, Barstow District (the Court) alleging that the County had violated CEQA in certifying the FEIR. The case, titled *Center for Biological Diversity, a California non-profit corporation, and HELPHINKLEY.ORG, an unincorporated association vs. County of San Bernardino (Nursery Products, LLC)*, San Bernardino County Superior Court Case No. BCV 09950 was heard on February 8, 2008.

On April 11, 2008, the Court issued its Statement of Decision and Order (Court's Decision) thereon and found partially in favor of the Petitioners and set aside the Nursery Products Hawes Composting Facility Environmental Impact Report (2007). The Court directed the County to provide additional evidence in the Administrative Record that an enclosed composting facility was not economically feasible, and to identify a single water source and conduct a water supply assessment thereof. This Draft Supplemental Environmental Impact Report (Draft SEIR) has been prepared to respond to the Court's Decision.

The Court's decision affirmed all other portions of the Nursery Products Hawes Composting Facility EIR, and affected only those portions pertaining to the water assessment and the support for the economic feasibility of the proposed enclosed facility alternative.

The Draft SEIR has been prepared in accordance with CEQA (CEQA Statutes) (Public Resource Code, Section 21000, et. Seq.) and the State Guidelines for implementation of CEQA (CEQA Guidelines) (Title 12, California Code of Regulations (CCR), Section 15000, et. Seq.). The Draft SEIR will be used by the County of San Bernardino Land Use Services Department in its consideration of the water supply and economic feasibility of the enclosed facility alternative to the Project. In addition, the Draft SEIR evaluates greenhouse gas (GHG) emissions and climate change impacts associated with the Project. The County is the lead agency and has the primary responsibility for preparing this Draft SEIR.

When an EIR has been prepared for a project, a subsequent EIR is required only if "substantial changes" in the project or its circumstances will result in new or substantially more severe impacts that require additional analysis (CEQA, §21166.). The additional analysis directed by the Court did not result in changes to the Project but rather changed circumstances, thus a supplemental EIR (SEIR) is the appropriate document. An SEIR, as its name implies, supplements the EIR already prepared for a project to address project changes, changed circumstances, or new information that was not known, and could not have been known with the exercise of reasonable diligence at the time the prior document was certified. The purpose of the SEIR is to address the changed circumstances, as established by the

Court's Decision, in the previous EIR. Accordingly, the SEIR contains only the analyses necessary to respond to the Court's Decision.

The Court's Decision directed additional analysis of the Project. Whether the additional analysis will result in a new, or substantially more severe, environmental impacts is often not known until the supplemental analysis is prepared; therefore, the preparation of an SEIR does not necessarily imply that the additional analysis will result in new or more severe impacts. The analysis for this Draft SEIR was conducted and is presented here for purposes of full disclosure in response to the Court's Decision.

PROJECT LOCATION

The Project site is located west of the City of Barstow, approximately 8 miles west of Hinkley, and approximately 12.3 miles east of Kramer Junction. The site is approximately one mile south of State Route 58 and one mile west of Helendale Road. The Project would be located on land owned by Nursery Products, LLC, near the abandoned Hawes Airport. The Assessor's Parcel Number for the site is 0492-021-24-0000, and the site is the southeast quarter of Section 36 in Township 10N, Range 5W, San Bernardino Base and Meridian (USGS Twelve Gauge Lake Quadrangle Map). The 160-acre property is roughly square in shape. Current elevations on the property range from about 2310 to 2330 feet above mean sea level.

STATEMENT OF OBJECTIVES

The main goal of the Project is to provide local, cost-efficient biosolids and green material composting capacity for the County and the Inland Empire that complies with applicable Federal, State and local requirements for safely handling these materials to generate Class A compost.

The Project has the following objectives:

- To establish an efficient reuse of biosolids in the County and the Inland Empire;
- To increase solid waste diversion through the recycling of green material in compost;
- To conduct the composting operation in a cost-effective manner;
- To produce and provide local and regional agricultural and nursery customers with high-quality composted products, especially in the Inland Empire.

The market areas for compost material include agricultural areas within the County and developing cities in the Inland Empire. The organic material and water retention properties of compost can improve the agricultural productivity of arid desert soils. The compost will also be used in nursery and landscaping operations, erosion control, and similar uses in developing areas (Section 1.5 of the DEIR).

PURPOSE OF THE DRAFT SEIR

This Draft SEIR has been prepared for the Nursery Products Hawes Composting Facility Project. Implementation of the Project will require discretionary approvals from state and local agencies, and therefore, the County has determined that this project was subject to the environmental review requirements of CEQA. This Draft SEIR has been prepared by the County to address the Court's Decision issued April 11, 2009. This Draft SEIR has been prepared in accordance with the provisions of the CEQA Guidelines, Section 15163 Supplement to an EIR, and the County's authority to implement CEQA.

The Draft SEIR evaluates whether potentially significant environmental effects will result from the Project in three specific areas. The Draft SEIR assesses the water supply, provides additional economic analysis of the proposed enclosed facility alternative, and assesses the effects of the Project on global climate

change. In these areas the Draft SEIR evaluates potentially significant impacts and feasible mitigation measures to reduce or eliminate potentially significant environmental impacts.

RELATIONSHIP TO THE PREVIOUS EIR

The following documents were used in preparing this Draft SEIR and are available for reference on the County's website at www.sbcounty.gov/landuseservices. Click on "Draft /Final EIRs/EISs" and then scroll down to Nursery Products Hawes Composting Facility.

1. Notice of Preparation 2006, "Biosolids and Green Waste Composting Facility." [SCH#2006051021].

2. Draft and Final EIR 2006, "Nursery Products Hawes Composting Facility." [SCH#2006051021].

3. Notice of Determination 2007, "Conditional Use Permit to establish a site for composting of Bio-solids and green material on an 80-acre portion of 160 acres" [SCH#2006051021], March 27, 2007.

4. Notice of Determination 2007, "Operate a compostable materials handling facility, handling bio-solids and green material, a maximum daily tonnage of 2,000 wet tons per day, the bulking agents and amendments will not exceed 200 tons per day, maximum traffic of 97 vehicles per day and hours of operation from 6:00 am to 8:00 pm daily." [SCH#2006051021] August 15, 2007.

5 Notice of Preparation 2009, "Biosolids and Green Waste Composting Facility" [SCH#2006051021].

6. Center for Biological Diversity and HelpHinkley.org vs. County of San Bernardino, BCV09950 (Superior Court of the State of California County of San Bernardino Barstow District, 2008).

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Section 15123(b) of the CEQA Guidelines requires that an SEIR contain a summary of proposed actions and their consequences, including identification of each significant effect and proposed mitigation measures and alternatives that would reduce or avoid that effect.

Table E-1, Environmental Summary of the Nursery Products Hawes Composting Facility, summarizes project impacts, mitigation measures, level of significance of impacts after mitigation, and unavoidable adverse impacts of the proposed Project. None of the analyses in this Draft SEIR result in significant environmental impacts. The finding in the DEIR that even with an enclosed facility alternative, volatile organic compounds (VOC) emissions from the Project would exceed the applicable regulatory threshold and impacts to air quality would be significant is unchanged. The proposed Project would have less than significant impacts on the water supply and quality, and the emission of GHGs.

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TABLE ES-1 ENVIRONMENTAL SUMMARY OF THE NURSERY PRODUCTS HAWES COMPOSTING FACILITY

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
4.1 Green House Gas		
The proposed Project has the potential to generate Greenhouse Gas emissions.	Construction Period Mitigation GHG-1. Prior to issuance of any grading or building permit, the Project plans and specifications shall include a statement that construction equipment shall be shut off when not in use and shall not idle for more than 15 minutes; GHG-2. Prior to issuance of any grading or building permit, the Project plans and specifications shall include a statement that on-road construction trucks and other vehicles greater than 10,000 pounds shall be shut off when not in use and shall not idle for more than 5 minutes; and GHG-3. Prior to issuance of any grading or building permit, the Project plans and specifications shall include education for construction workers about reducing waste and available recycling services. Operational Period Mitigation GHG-4. Prior to issuance of a building permit, the applicant shall demonstrate that the design of the proposed office trailer incorporates the following features: a. Dual paned or other energy efficient windows, b. Energy efficient space heating and cooling equipment, c. Energy efficient light fixtures, d. Energy efficient appliances, e. Cool roofs/light colored roofing;	**Less than Significant**
The proposed Project has the potential to conflict with applicable plans, policy and regulations governing the emission of Greenhouse gasses, specifically AB 32.		**Less than Significant**

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	GHG-5. Prior to issuance of a building permit, the applicant shall demonstrate that the proposed facility incorporates exterior storage areas for office and paper recyclables and adequate recycling containers located in the office. GHG-6. Prior to issuance of a building permit, the Project plans and specifications shall include a statement that all onsite equipment shall be shut off when not in use and shall not idle for more than 5 minutes; and GHG-7. Prior to issuance of a building permit, the Project plans and specifications shall include a statement that on-road haul trucks and other vehicles greater than 10,000 pounds shall be shut off when not in use and shall not idle for more than 5 minutes.	
4.2 Water Assessment		
The proposed Project has the potential to deplete groundwater supplies or interfere with the groundwater recharge resulting in a net deficit in aquifer volume or lowering of the local groundwater table.	Mitigation is not required	**Less than Significant**

SECTION 1.0 - INTRODUCTION AND SUMMARY

The primary purpose of this Draft Supplemental Environment Impact Report (Draft SEIR) is to satisfy California Environmental Quality Act (CEQA) requirements by providing further analysis in two areas as directed by the San Bernardino County Superior Court in its Statement of Decision and Order Thereon (Court's Decision), dated April 11, 2009, in *The Center for Biological Diversity, a California non-profit corporation, and HELPHINKLEY.ORG, an unincorporated association vs. County of San Bernardino (Nursery Products, LLC)*, Case No. BCV 09950.

When an Environmental Impact Report (EIR) has been prepared for a project, a supplemental or subsequent environmental impact report is required only if one or more of the following circumstances occurs:(CEQA, §21166.).

(a) Substantial changes are proposed in the project that will require major revisions of the environmental impact report due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
(b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
(c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

New information includes:

1. The project will have one or more significant effects not discussed in the previous Environmental Impact Report (EIR);
2. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
3. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the District declines to adopt them; or
4. Mitigation measures or alternatives, which are considerably different from those analyzed in the previous EIR, would substantially reduce one or more significant effects on the environment, but the District declines to adopt them. (CEQA Guidelines, §15162(a).) Section 15163 of the CEQA Guidelines states that a lead agency may choose to prepare a "supplement" to an EIR rather than a "subsequent" EIR if:

Since the additional analysis ordered by the Court did not result in changes to the Project components, or revisions to the previous EIR, a supplemental EIR is the appropriate document. The Project has not been changed and new information as set forth above has not impacted the Project. The Court's Decision is considered a changed circumstance. An SEIR, as its name implies, supplements the EIR already prepared for a project to address the changed circumstances, since the time the prior document was certified. The purpose of an SEIR is to provide the additional analysis necessary to make the previous EIR adequately apply to the Project. Accordingly, the SEIR need contain only the analysis necessary to respond to the, changed circumstance that triggered the need for additional environmental review. (CEQA Guidelines, §15163.) (A subsequent EIR, in contrast, is a complete EIR, largely rewritten, which focuses on the conditions described in Section 15162.) A supplement to an EIR may be circulated for public review by itself without recirculating the previous draft or final EIR.

The SEIR does not re-evaluate every potential environmental impact, but considers only the additional analysis, in light of the certified Final EIR already prepared for the project. The focus of an SEIR is whether the changed circumstance may result in a significant new or substantially more severe environmental impact than was identified and analyzed in the prior EIR. Preparation of an SEIR does not "re-open" the prior certified EIR, and the analysis is limited to whether the new analysis results in new or more severe adverse impacts.

In general, whether additional analysis, project changes or changed circumstances will result in a new or substantially more severe impact is often not known until the supplemental analysis is completed; therefore, the preparation of an SEIR does not necessarily imply that the newly presented information will result in new or more severe impacts. The analysis for this Draft SEIR was conducted and is presented here for purposes of providing additional analysis consistent with the Court's Decision.

1.1 DOCUMENT AND PURPOSE

This Draft SEIR has been prepared for the Nursery Products Hawes Composting Facility Project (Project). Implementation of the Project will require discretionary approvals from state and local agencies, and therefore, San Bernardino County (County) has determined that this project is subject to the environmental review requirements of CEQA. This Draft SEIR has been prepared by the County to address the Court's Decision. This Draft SEIR has been prepared in accordance with the provisions of CEQA, CEQA Guidelines, Section 15163 Supplement to an EIR, and the County's authority to implement CEQA.

In the Draft SEIR, the County evaluates whether potentially significant environmental effects will result from the Project in three (3) specific areas. The Draft SEIR assesses the water supply, provides additional economic analysis of a proposed enclosed facility alternative, and assesses the effects of the Project on global climate change. In these areas the Draft SEIR will identify potentially significant impacts and identify feasible mitigation measures to reduce or eliminate potentially significant environmental impacts.

In December 2005, Nursery Products LLC (Nursery Products) filed a discretionary application with the County seeking approval of the Project. A Draft Environmental Impact Report (DEIR) was prepared for the Project and circulated commencing in September 2006 for public review. The public review period extended through November 2006. A Final Environmental Impact Report (FEIR) was issued November 21, 2006, and certified by the County Planning Commission on November 30, 2006. This approval of the Project was appealed to the County Board of Supervisors (Board), which denied the appeal, approved the Project, and certified the FEIR on February 27, 2007.

The Center for Biological Diversity and HelpHinkley.Org (Petitioners) jointly filed a lawsuit alleging that the County had violated CEQA in certifying the FEIR. *The Center for Biological Diversity, a California non-profit corporation, and HELPHINKLEY.ORG, an unincorporated association vs. County of San Bernardino (Nursery Products, LLC),* San Bernardino County Superior Court Case No. BCV 09950 was heard on February 8, 2008. On April 11, 2008, the Court issued its Statement of Decision and Order Thereon on the five (5) issues identified below for consideration. The first three (3) issues identified below were those the Court denied the Petitioner's prayer for relief. On the remaining two (2) issues the Court granted the Petitioner's prayer for relief and set aside the certification of the FEIR.

1. **Air Quality:** The Court ruled that the County adequately analyzed the Project's air quality impacts, including greenhouse gas (GHG) emissions.
2. **Endangered Species:** The Petitioners alleged that the FEIR did not adequately address Project impact on endangered species, including the desert tortoise and the Mohave ground squirrel. The Court disagreed and found the analysis adequate under CEQA.

3. **Recirculation:** As mitigation, the Board reduced the Project size from 160 acres to 80 acres. The Petitioners alleged that this change was so significant as to require re-analysis and recirculation of the FEIR. The Court disagreed.
4. **Economic Feasibility:** The Petitioners challenged the adequacy of County's analysis of alternatives, including the analysis of an enclosed facility. The Court agreed and directed the County to further analyze the enclosed facility alternative as mitigation to the Project as pertaining to economic feasibility and infrastructure availability.
5. **Water Supply:** The Court directed that the County should have more completely analyzed Project water supply and directed the County to identify a single water source and conduct an assessment thereof.

Thus, consistent with the Court's Decision, the Draft SEIR analyzes water supply and the economic feasibility of an enclosed facility as a Project alternative. In addition, the Draft SEIR will present analyses pertaining to Project GHG emissions and global climate change. The State has proposed draft changes to the CEQA Guidelines regarding greenhouse gas (GHG) analysis and the Lead Agency is anticipating their adoption and subsequent requirement in subsequent CEQA analysis.

1.2 STATEMENT OF OBJECTIVES

The main goal of the Project is to provide local, cost-efficient biosolids and green material composting capacity for the County of San Bernardino and the Inland Empire. The proposed Project complies with applicable Federal, State and local requirements for safely handling these materials to generate Class A compost. The Project has the following objectives:

- To establish an efficient reuse of biosolids in the County and the Inland Empire;
- To increase solid waste diversion through the recycling of green material in compost;
- To conduct the composting operation in a cost-effective manner;
- To produce and provide local and regional agricultural and nursery customers with high-quality composted products, especially in the Inland Empire.

The market areas for compost material include agricultural areas within the County and developing cities in the Inland Empire. The organic material and water retention properties of compost can improve the agricultural productivity of arid desert soils. The compost will also be used in nursery and landscaping operations, erosion control, and similar uses in developing areas (Section 1.5 of the DEIR).

1.3 PUBLIC REVIEW OF THE NOTICE OF PREPARATION

The Notice of Preparation was submitted for public review on March 9, 2009. As of the close of the public review period (April 8, 2009), 22 comment letters were received by the lead agency. Most of the received comments were previously addressed in the DEIR and the County's response to these comments was found by the Court to be adequate. The major topics of the received letters that are relevant to the Draft SEIR are:

1. Three comments request the analysis of an Enclosed Facility;
2. Three allege inadequate water supply;
3. Two request the analysis of the water supply; and
4. Two request the analysis of GHG emissions.

The comment letters as received and the full responses to all comments are provided in Appendix A.

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SECTION 2.0 - PROJECT DESCRIPTION

The Project is a biosolids and green material composting facility that will be built on 80 acres (as limited by the Mitigation Measure of the FEIR) of a 160 acre parcel located within an unincorporated area of the County of San Bernardino, California. The Project is unchanged from the DEIR. For a complete Project Description, please see Section 2 of the DEIR.

2.1 DESIGN AND OPERATION

The Project is expected to receive an average daily total of 1,100 wet tons of biosolids and green material (approximately 400,000 wet tons per year (tpy)). The maximum quantity that the Project would receive on any given day would be 2,000 wet tons. Clean soil or other inert materials (i.e. sand, gypsum, sawdust) will be used as a bulking agent or amendment as needed and will not exceed 200 tons per day. The Project would produce a maximum annual volume of 400,000 cubic yards of compost. Once the composting process is complete, the end product is the finished compost, dark in color with an earthy smell. Non-recoverable or non-marketable residues are placed in a trash receptacle for transport and disposal at a permitted solid waste landfill. The finished product will be temporarily stored onsite prior to being transported off-site via trucks or used onsite for erosion control, or further processing (Section 2.3 of the DEIR).

2.2 RECEIVING OPERATION

Nursery Products will require that all customers provide complete documentation of the source, description and characteristics for all biosolids and green materials in advance of delivering loads to the facility. All loads are then given a delivery time schedule specifying when the trucks can be received. No biosolids will be accepted at the facility prior to receiving this documentation and, if required, supporting laboratory analysis. Each load of biosolids will have a complete manifest. Material will be received and weighed at the scale near the main office. Random load checks will be conducted daily, and a log maintained for each inspection. Under no circumstances will the proposed facility accept hazardous waste. Green material and amendments will be load-checked prior to utilization in the composting process. The facility may reject loads due to poor green material quality (i.e. excess grass, etc.), or any other reason (Section 2.3.1 of the DEIR).

2.3 PROCESSING OPERATION

Green material typically consists of ground and unprocessed materials. The proposed facility would have a grinder on site to grind bulk green material when a sufficient quantity accumulates. Grinding may occur every two to three days when delivery of green materials are at a peak, but may not occur for a period of one month or longer in the winter when the volume of green material delivered to the site declines. Bulk green material will be stored in piles onsite during these periods between grinding. The processed green material will be placed in a partial windrow-shaped pile for initiation of composting, and will be occasionally stored up to seven days. Biosolids received at the site will be incorporated into partial windrow-shaped piles within two hours after receipt (Section 2.3.2 of the DEIR).

The windrow-shaped piles of biosolids and green material will be mechanically formed throughout each day. Windrows will be turned five (5) times in 15 days. The size of each windrow-shaped pile may vary, with the height not to exceed 12 feet, the width not to exceed 30 feet, and the length not to exceed 1,000 feet (Section 2.3.2 of the DEIR).

The Project will use a combination of windrow and modified static pile composting methodologies. With the windrow method, the active composting stage generally can last up to nine weeks for biosolids composting, though it is expected to be completed much quicker in a hot, dry, arid environment. The windrow composting process includes aeration through mechanical processes

on a periodic basis. This is referred to as turning the windrow, and is done by using heavy equipment to lift and turn the windrow inside out. The objective is to maintain the active compost under aerobic conditions at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for a pathogen reduction period of 15 days or longer. During the period when the compost is maintained at 55 degrees Celsius or higher, the windrows will be turned a minimum of five times (Section 2.3.2 of the DEIR).

The modified static pile composting process will be a 60-day process. The windrow would be monitored for temperature and may remain undisturbed for up to thirty days. On approximately the thirtieth (30th) day and then again on approximately the forty-fifth (45th) day, the windrow would be turned such that the very bottom will be exposed. The pile will remain undisturbed for fifteen more days (until approximately day 60), at which time the composting process is complete. The actual number of days and turns may be altered to maintain proper pile temperature and compost quality. Documentation of the time/temperature relationship will be maintained in daily records and by submitting samples for analytical testing (Section 2.3.2 of the DEIR).

Windrows will also be monitored for pH (a measure of acidity or alkalinity). Based on the applicant's experience, an ideal initial porosity and moisture content can minimize the turnings of the pile. When the compost process is complete the windrow-shaped piles will be processed through screening equipment to remove wood pieces that are too large to be included in high-quality compost product. The screened wood chunks will be ground and re-introduced into future compost piles. The finished compost will be placed in the storage area for sale. On occasion the finished compost will remain in the windrow shaped piles for additional curing prior to screening. In all cases, finished compost will not remain onsite for more than 720 days (Section 2.3.2 of the DEIR).

2.4 MONITORING AND TESTS

The frequency of windrow sampling will be based on the amount of biosolids compost feedstock as specified in California Code of Regulations (CCR) 17862.2, and will be conducted at a laboratory certified by the California Department of Health Services, pursuant to the Health and Safety Code. A composite sample will be representative and random from twelve locations. Temperature, moisture and pH monitoring of windrows will occur regularly (Section 2.3.3 of the DEIR).

Samples of the finished compost will be delivered monthly to a U.S. Composting Council-approved laboratory for analysis and quality control. The laboratory analytical results on parameters such as size, stability, maturity, nutrients, salts, pH, carbonates, and bulk density shall be available to the Local Enforcement Agency (LEA). Analytical testing will verify that the compost meets the maximum acceptable metal concentration limits specified in 14 CCR 17852, and pathogen reduction requirements specified in 14 CCR 17868.3 (Section 2.3.3 of the DEIR).

2.5 HIGH QUALITY FINISHED COMPOST

The finished compost will be screened onsite. The size of the finished compost that will be produced varies based on the customer. The screening equipment can produce finished compost that is sized ¼", ½", ¾", 1", or 2" (Section 2.3.4 of the DEIR).

Compost and soil amendments provide a source of organic matter (humus), nitrogen, phosphate and potassium, as well as calcium, magnesium, sulfur and other important trace elements. Finished compost is manufactured specifically for each customer and the technical requirements for their individual application. Golf courses, agriculture, nurseries, and homeowners all require a different blend of the finished compost. Soil treated with compost better retains and conserves nutrients and water, is more capable of resisting pests and diseases, and produces healthier

crops and better yields. Adding humus rich compost improves soil structure and texture, enhances moisture retention and drainage, and reduces compaction (Section 2.3.4 of the DEIR).

2.6 TRAFFIC COUNTS AND TYPES OF VEHICLES

The project access road is a north-west trending roadway traversing the northeast corner of the project site. Currently, the project access road is unpaved with no observed traffic activity. On an average operating day (1,100 tons received) approximately 48 truck loads of biosolids and/or green material will be delivered to the site (resulting in 96 daily truck trips). This will increase to approximately 87 truck loads on a peak day (2,000 tons received, or 174 daily truck trips). Less than ten daily passenger vehicle and small pickup truck trips by employees and vendors are projected (Section 2.5 of the DEIR).

2.7 ENVIRONMENTAL MONITORING AND CONTROLS

A description of the proposed methods used to monitor and control leachate, litter, odors, dust, rodents, and insects are described as follows:

Odor: Green material will be delivered on an "as-needed" basis to reduce green material odors. The facility will prepare and maintain an Odor Impact Minimization Plan, pursuant to 14 CCR 17863.4. In general, the Plan will require the following steps in the event of odors noticed at the site (Section 2.7.1 of the DEIR):

- Stop all operations that will cause off-site odor.
- Determine if onsite management practices (e.g. mixing odiferous materials with sawdust or other bulking agent, turning the windrow less frequently, remove odiferous material from the site, etc.) could remedy any odor problems and immediately take steps to remedy the situation.
- Determine whether or not the odor is traveling beyond the site by patrolling the site perimeter.
- Determine whether or not the odor has moved off-site and if so, if it is significant enough to warrant contacting the adjacent neighbors and/or the LEA.
- Do not start operations again until the wind and meteorological conditions are favorable and will not promote off-site odors.

Dust: The moisture level in the compost keeps the compost from creating dust. Efforts will be made to control particulates during high wind episodes. There will be no turning of the piles during high wind episodes that exceed 30 miles per hour. Compost operations will be conducted behind a small berm and fence situated on the property perimeter, reducing wind. As needed, a water truck will be used to apply water to suppress dust. The entryway and often-traveled paths will be overlain with crushed rock, to prevent tracking of onsite materials offsite.

Contact Water: The site will be designed and graded to collect all storm water that comes into contact with compost or windrows in onsite storm water retention basins (Figure 2.3).

Leachate: Under normal circumstances, moisture content will not exceed the field capacity of the compost material and no leachate will be produced. In heavy rains, most excess moisture would occur as runoff and would be handled by the storm water retention ponds.

Insects: A contract pest control company will be hired for insect control.

Rodents: Biosolids and green material are not "food" sources for rodents. However traps will be purchased if needed.

Litter: Biosolids and green material to be received at the site will come from sources that generate this material and litter is not typically expected to be found in these feedstocks. The facility will reject and return to the generator any load that contains excessive litter. Covered trash containers will be provided in areas where employees and visitors might generate litter. Onsite litter will be collected routinely and disposed of properly.

2.8 OTHER MONITORING AND CONTROLS

Emergency equipment failures will be handled by rental of similar equipment from a number of local sources such as Caterpillar, John Deere, United Rental, and Hertz.

Power failures will not be an issue to the actual composting operation. Power will be provided by solar panels for the office. A generator will serve as a backup power source (Section 2.7.2 of the DEIR).

Site restoration would be performed in accordance with 14 CCR Section 17870. Written notice will be provided to the LEA of intent to perform site restoration, at least 3 days prior to beginning restoration activities. Site restoration will be completed that is necessary to protect public health, safety, and the environment. The operation and facility grounds, ponds, and drainage areas will be cleaned of all residues including, but not limited to, compost materials, construction scraps, and other materials related to the operations. These residues will be recycled, reused, or disposed of at an authorized facility. All machinery will be cleaned and removed or stored securely. All remaining structures will be cleaned of compost materials, dust, particulates, or other residues related to the composting and site restoration operations.

2.9 HOURS OF OPERATION

The Project will operate daily, year-round. Normal delivery and sales operations will occur between 6:00 a.m. and 8:00 p.m. A 24-hour contact telephone number will be posted at the Project site prior to its operation (Section 2.6 of the DEIR).

SECTION 3.0 - ENVIRONMENTAL SETTING

3.1 LOCATION

The Project site is located west of the City of Barstow, approximately 8 miles west of Hinkley, and approximately 12.3 miles east of Kramer Junction. The site is approximately one mile south of State Route 58 and one mile west of Helendale Road. The Project would be located on 80 acres of a 160-acre parcel owned by Nursery Products, LLC, near the abandoned Hawes Airport. The Assessor's Parcel Number for the site is 0492-021-24-0000, and the site is the southeast quarter of Section 36 in Township 10N, Range 5W, San Bernardino Base and Meridian (USGS Twelve Gauge Lake Quadrangle Map). The 160-acre property is roughly square in shape. Current elevations on the property range from about 2,310 to 2,330 feet above mean sea level (Exhibit 3-1).

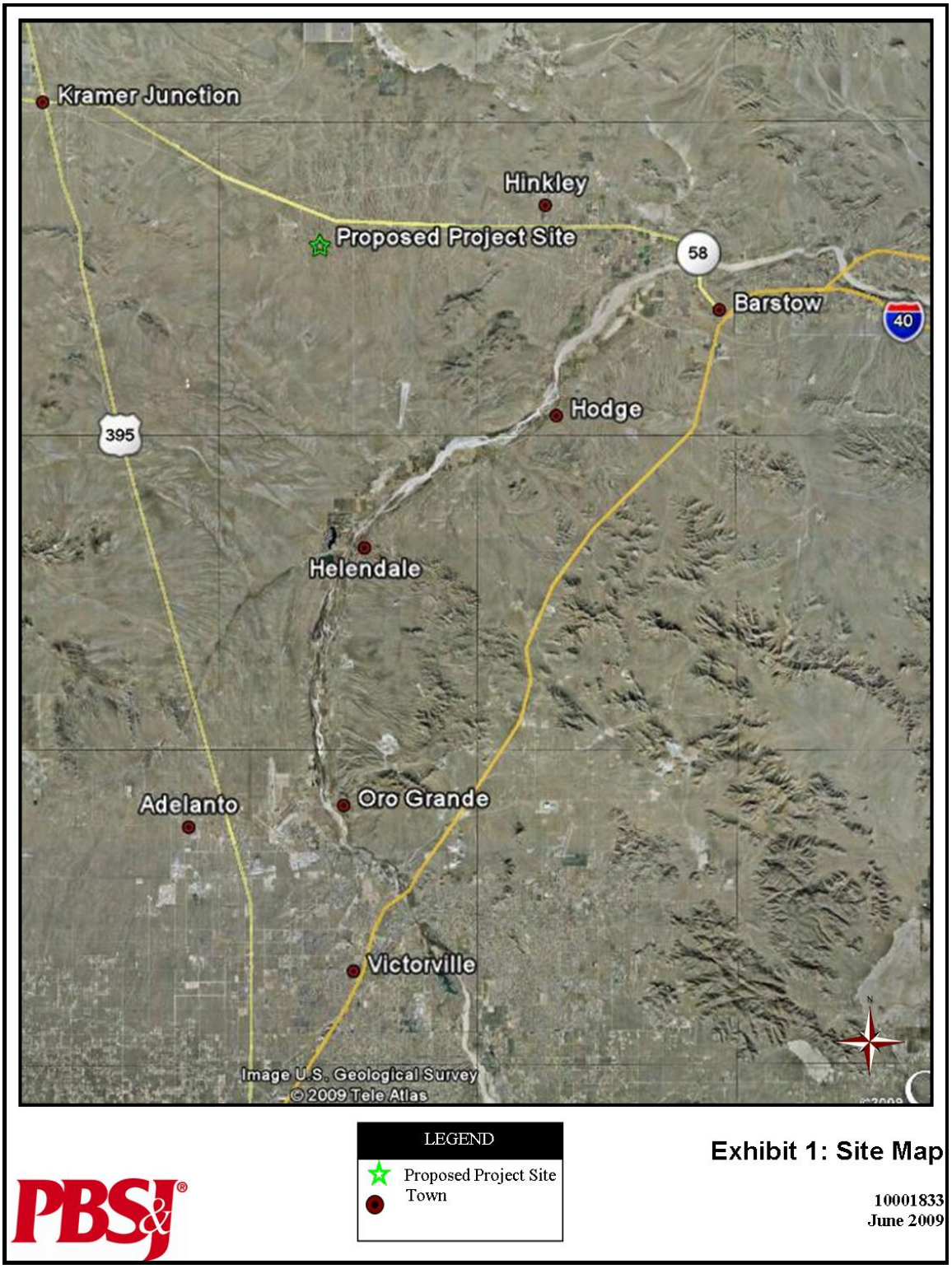
3.2 ENVIRONMENTAL SETTING

The County Development Code establishes specific development standards for each district in the County and sets forth procedures the County must follow in order to approve a particular use. According to the County General Plan, the proposed Project is located in the Resource Conservation District. The "Additional Uses" section of the Development Code allows for composting in any land use district subject to review and approval of a Conditional Use Permit (Section 2.1.1 of the DEIR).

The Project site is currently vacant desert open-space disturbed by some development including roadways, transmission lines and other abandoned development. There are no trees, rock outcroppings or historic buildings in the vicinity of the proposed Project site. The climate in the area is generally dry, experiencing an average rainfall of less than six inches per year.

The Project is a biosolids and green material composting facility proposed for a 160-acre parcel located within an unincorporated area of the County of San Bernardino, California. As set forth in the Mitigation and Monitoring Plan with the FEIR, the facility will occupy only 80 acres of the 160 acre parcel. The facility would compost biosolids and green material to produce Class A compost.

Exhibit 3-1 Site Location



SECTION 4.0 - ENVIRONMENTAL IMPACT ANALYSIS

The Draft SEIR focuses environmental impact analysis on in three (3) specific areas: (1) water supply, in order to satisfy the Court's Decision; (2) additional economic analysis of a proposed enclosed facility alternative, in order to satisfy the Court's Decision; and (3) the effects of the Project on global climate change, inasmuch as additional regulations under CEQA are expected to be adopted. As previously noted, the Court's Decision found that, in all other respects, the DEIR was adequate.

4.1 GREENHOUSE GAS ANALYSIS

A Global Climate Change (GCC) analysis was completed as part of the Draft SEIR for the Project. The report expands and supplements the analysis of GHG emissions and the impact on global climate change conducted in the DEIR previously prepared under CEQA. The GCC analysis is summarized in this section and included in full as Appendix B.

4.1.1 GLOBAL CLIMATE CHANGE BACKGROUND

Parts of the Earth's atmosphere act as an insulating blanket of just the right thickness, trapping sufficient solar energy to keep the global average temperature in a suitable range. The 'blanket' is a collection of atmospheric gases called 'greenhouse gases' (GHGs) based on the idea that the gases 'trap' heat like the glass walls of a greenhouse. These gases, mainly water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone(O_3), and chlorofluorocarbons (CFCs) all act as effective global insulators, reflecting back to earth visible light and infrared radiation. Human activities such as producing electricity and driving internal combustion vehicles have contributed to the elevated concentration of these gases in the atmosphere. Many contend that the elevated concentration is in turn causing the Earth's temperature to rise. A warmer Earth may lead to changes in rainfall patterns, much smaller polar ice caps, a rise in sea level, and impacts on plants, wildlife, and humans.

The participation of water vapor and ozone as GHGs is extremely complex and therefore not completely understood. It is unclear the extent to which water vapor acts as a GHG. A portion of the uncertainty is due to the fact that water vapor can also produce cloud cover, which reflects sunlight away from earth and can counteract the effect, if any, of water vapor as a GHG. Also, water vapor tends to increase as the earth warms, so it is not well understood whether an increase in water vapor is contributing to climate change or rather a result of climate change. Ozone tends to break down in the presence of solar radiation but again the mechanism is not well understood. These are among the reasons that methodologies approved by the Intergovernmental Panel on Climate Change (IPCC), United States Environmental Protection Agency (EPA), and the California Air Resources Board (CARB) focus on carbon dioxide, nitrous oxide, methane, and chlorofluorocarbons as GHGs. The Project will not generate emissions of CFCs and therefore they are not considered any further in this analysis.

4.1.2 SIGNIFICANCE DETERMINATION CRITERIA

The Nursery Products Project cannot generate enough GHG emissions to influence global climate change on its own. The Project participates in potential climate change by its incremental contribution (positive or negative) of GHG emissions that, when combined with the cumulative increase of all other natural and anthropogenic sources of GHGs, impact global climate change. Therefore, global climate change is a type of cumulative impact and the Project's participation in this cumulative impact is through its incremental contribution of GHG emissions. In Section 15064(h)(1) of the CEQA Guidelines, "cumulatively considerable" is defined to mean "that the incremental effects of an individual project are considerable when viewed in connection with the

effects of past projects, the effects of other current projects, and the effects of probable future projects."

The CEQA Guidelines advise that an individual project would normally be judged to produce a significant or potentially significant effect on the environment if the project were to result in a cumulatively considerable net increase of an air pollutant creating the impact. In this case, the air pollutants under consideration are GHG emissions, which are creating cumulative global climate change independent of the proposed Project.

Under CEQA, in order to determine whether or not a proposed project would cause a significant impact on the environment, the impact of a project must be determined by examining the types and levels of GHG emissions generated and comparing those to some threshold. In accordance with the CEQA Guidelines (Section 15064 (h)(3)). *"A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency…"*

The California Global Warming Solutions Act of 2006 (AB 32), serves as a standard against which to evaluate GHG emissions. AB 32 adopted a goal that GHG emitted in California be reduced to 1990 levels by the year 2020. The 2020 reduction target equates to a decrease of approximately 30 percent below current GHG emissions.

AB 32 is the state statute that addresses global climate change in California and is being implemented in concert with international efforts to address global climate change. The Legislature, in passing AB 32, set forth a program requiring that certain specific requirements under AB 32 be further elucidated by CARB. The GHG reductions mandated by AB 32 will substantially lessen the cumulative problem of GHG in the state of California and the region and fulfills the definition of a mitigation program found in the CEQA Guidelines §15064(H)(3).

The statewide GHG emission reduction targets are as follows: by 2010 reduce GHG emissions to 2000 levels; by 2020 reduce GHG emissions to 1990 levels; and by 2050 reduce GHG emissions to 80 percent below 1990 levels. Some literature equates these reductions to 11 percent of the current GHG emissions by 2010 and 25 percent of the current GHG emissions by 2020.

The analysis in this Draft SEIR uses compliance with AB 32, considered a "previously approved mitigation program," as set forth in the CEQA Guidelines §15064(h)(3), to determine if the Project's incremental contribution of GHGs is a cumulatively considerable contribution to global climate change. The Office of Planning and Research (OPR)'s proposed draft amendment to section 15064.7 of the CEQA Guidelines reinforces the use of this approach. CEQA Guideline §15064(h)(3) states three main conditions that a plan must meet to be sufficient for use as a basis for determining significance of GHG emissions. The plan must:

1) Be "a previously approved plan or mitigation program";
2) Provide "specific requirements that will avoid or substantially lessen the cumulative problem"; and
3) "Be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency."

On December 11, 2008, CARB adopted the Scoping Plan to Reduce Greenhouse Gas Emissions in California. The Scoping Plan implements additional GHG reductions under AB 32 including expanding and strengthening energy efficiency standards for buildings; a state commitment to provide 33 percent of the State's energy needs through renewable sources; and develop a cap and trade system for GHG emissions. Of interest to this Global Climate Change analysis, the Scoping Plan provides measures that will reduce approximately 1.5 teragrams of carbon dioxide equivalent (Tg CO_2 Eq) associated with land use decisions. The reduction measures in the Scoping Plan are used to meet the reduction goals of AB 32.

To date, no Federal, State, or Project area local agencies have developed thresholds against which a proposed project can be evaluated to assist lead agencies in determining whether or not the climate change impact from a proposed project is significant. The Association of Environmental Professionals (AEP) in the document titled "Alternative Approaches to Analyzing Greenhouse Gases and Global Climate Change Impacts in CEQA Documents (June 2007), gave various approaches to use in determining significance for GHG emissions. In January 2008, the California Air Pollution Control Officers Association (CAPCOA) published a White Paper also offering various approaches to determine GHG emissions significance. Both these documents recommend one method, which is to identify and quantify GHG emissions from a project, evaluate project features and mitigation measures to reduce emissions, and determine significance based upon whether or not the Project was consistent with the overall emission reduction strategies of AB 32. On June 19, 2008, the OPR published a Technical Advisory on CEQA and climate change. Recognizing the absence of specific thresholds for the determination of significance for GHG, OPR developed draft significance criteria and additional questions for inclusion within Appendix G addressing GHG emissions. The additional significance criteria proposed by OPR included an evaluation of how a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. On April 13, 2009, OPR provided draft potential amendments to the CEQA Guidelines to the California Resources Agency. The Resources Agency is charged with proposing and adopting CEQA amendments on this topic on or before January 1, 2010. The draft amendments add section 15064.4 which identifies the steps to be followed by the lead agency in determining the significance of impacts from GHG emissions. The approach taken in this analysis is consistent with the draft amendments and CEQA as well as with the approaches taken by OPR, CAPCOA, and AEP.

Therefore, to determine the Project's incremental contribution of GHG emissions to global climate change the impact analysis focuses on the techniques and methodologies supported by OPR and the current CEQA Guidelines including §15064(h)(3) and Appendix G.

4.1.3 IMPACTS FROM PROJECT GHG EMISSIONS

The primary source of GHG emissions associated with the Project results from the transportation of materials to the facility and the associated emissions from heavy duty diesel trucks. The area served by the proposed Project includes the Inland Empire, and nearby areas in Southern California (DEIR page 1-5). Currently, approximately 2,500,000 tpy of biosolids are transported from Southern California to locations in Kern County and Arizona, or to local landfills options in Southern California. The transportation of these materials to those destinations produces GHG emissions which would continue without the Project. The Project is located nearer to the source of the biosolids materials than the existing facilities in Kern County or Arizona. With the Project, the distance traveled and hence the GHG emissions will decrease. Using the best available information, a calculation indicates that diverting the trucks containing biosolids to the proposed Project would eliminate roughly 2 million miles of heavy duty truck travel annually. Similarly, the best available information indicates that the green waste material component of the facility's feedstock is currently delivered to destinations as far or farther from the points of origin than would be necessary if this facility were available (DEIR page 4-19). For purposes of this analysis, it is conservatively assumed that the emissions from transport of green waste material will remain

the same. The Project would take approximately 200,000 tpy of biosolids generated in Southern California to the Project site for composting. The Project's GHG emissions associated with the transport of biosolids is the net difference between GHG emissions currently generated to transport 200,000 tpy of biosolids to Kern County, Arizona, or landfills in Southern California and GHG emissions that would be generated to transport 200,000 tpy of biosolids to the Project site (DEIR, Section 2.5, page. 2-18).

The GHG emissions associated with the decomposition of the proposed feedstock material (biosolids and green waste) currently occur and will continue to occur, with or without the Project, into the future. Green materials and biosolids that the Project is proposing to use in its composting facility currently occur at existing composting facilities and ground applications in Arizona, Kern County, and land fills in Southern California. GHG emissions associated with the decomposition of this material are therefore, within the baseline conditions and are not an impact generated by the Project.

The following discussion reviews the potential generation of GHGs associated with the transportation and onsite vehicle usage associated with the Project. Emissions throughout the analysis are given in both tons per year for the individual gas and the Global Warming Potential (GWP) of the gas in tons per year. The concept of a GWP was developed to compare the ability of each greenhouse gas to trap heat in the atmosphere relative to another gas. The definition of a GWP for a particular greenhouse gas is the ratio of heat trapped by one unit mass of the greenhouse gas to that of one unit mass of CO_2 over a specified time period. As CO_2 is the baseline gas the global warming potential index for CO_2 is 1. The global warming potential index for methane is 21, and for nitrous oxide is 310.

4.1.3.1 CARBON DIOXIDE

In relation to the Project's operation, the largest source of carbon dioxide is from heavy-duty trucks transporting material. Carbon dioxide emissions from truck transport of biosolids were calculated using URBEMIS2007 and EMFAC2007 emission factors that are used in URBEMIS2007. On average 48 truck trips per day (24 truckloads of biosolids) will be needed to transport the proposed volume of biosolids (See DEIR page 2-18 section 2.5) to the Project. In determining the miles traveled per truck trip the proportions of trips going to Arizona, (approximately 44 percent), Kern County (approximately 44 percent) and local landfills in Southern California (12 percent) were averaged. On average, under current conditions each biosolids-containing truck trip will travel 346 miles. Carbon dioxide emissions generated due to transport of materials to these locations is shown in Table 4-1 below.

TABLE 4-1 CARBON DIOXIDE EMISSIONS WITHOUT THE PROJECT

Emission Source	Carbon Dioxide Emissions (tpy)	Global Warming Potential (GWP) (tpy)
Truck Transport of Biosolids	**14,364.37**	**14,364.37**

The Project will directly generate emissions of carbon dioxide primarily in the form of vehicle exhaust from transport trucks and onsite mobile equipment. Carbon dioxide emissions from transport trucks and onsite mobile equipment were calculated using URBEMIS2007 assumptions and EMFAC2007 emission factors that are used in URBEMIS2007. Construction of the facility will generate GHG emissions associated with the heavy equipment. The carbon dioxide emissions associated with the Nursery Products Project are shown in Table 4-2.

TABLE 4-2 UNMITIGATED CARBON DIOXIDE EMISSIONS WITH PROJECT

Emission Source	Carbon Dioxide Emissions (tpy)	Global Warming Potential (GWP) (tpy)
Construction period Emissions	4.83[1]	4.83
Vehicles (transport trucks and employee commutes)	6,808.53	6,808.53
Onsite Equipment	812.94	812.94
Electric Use[2]	3.79	3.79
Total Operational Emissions	**7,630.09**	**7,630.09**

[1] Shows the annualized construction emissions, which are calculated by taking the total construction emissions (96.62 tons) and dividing them by a reasonable economic life of the Project (20 years).

[2] Reduction in emissions associated with photovoltaic solar power, which is a Project feature, are described on page 3-5 and quantified in Table 9 below.

4.1.3.2 METHANE

Methane emissions are commonly associated with various types of composting operations. The fugitive emissions from the decomposition of the biosolids and green waste will be identical with or without the Project. The only difference is the location where the emissions will occur. Because, as discussed previously, they are part of the baseline emissions (existing conditions) they are not considered Project generated emissions and were eliminated from the analysis in order to accurately analyze Project generated impacts.

Without the Project, the heavy truck transport of biosolids material to Kern County, Arizona or local disposal facilities will generate modest amounts of methane gas. Methane emissions were estimated using EPA emission factors for on-road vehicles. The emissions are shown in Table 4-3.

TABLE 4-3 METHANE EMISSIONS WITHOUT THE PROJECT

Emission Source	Methane Emissions (tpy)	Global Warming Potential (GWP) (tpy)
Truck Transport of Biosolids	**0.14**	**2.94**

The Project will also contribute methane gas primarily through vehicle emissions including truck trips. The Project will directly generate methane emissions from truck trips, employee commutes, and onsite equipment. The total Project-generated emissions of methane are shown in Table 4-4.

TABLE 4-4 UNMITIGATED PROJECT GENERATED METHANE EMISSIONS

Emission Source	Methane Emissions (tpy)	Global Warming Potential (tpy)
Construction Period Emissions[1]	0.00250	0.0525
Vehicles (transport trucks and employee commutes)	0.09000	1.89000
Onsite Equipment[2]	0.07000	1.47000
Electric Use	0.00003	0.00067
Total Operational Emissions	**0.16253**	**3.41317**

[1] Shows the annualized construction emissions, which are calculated by taking the total construction emissions (96.62 tons) and dividing them by a reasonable economic life of the Project (20 years).

[2] Reduction in emissions associated with photovoltaic solar power, which is a Project feature, are described on page 3-5 and quantified in Table 9 below.

4.1.3.3 NITROUS OXIDE

Of the three types of GHG emissions produced by the Project, nitrous oxide is produced in the smallest quantities. However, nitrous oxide is a powerful GHG, producing 310 times the global warming potential of carbon dioxide.

Without the Project the transport of biosolids material to Kern County, Arizona or local landfills will generate small amounts of nitrous oxide. Nitrous oxide emissions from truck transport were estimated using EPA emission factors for on-road vehicles (EPA 2004). The emissions are shown in Table 4-5.

TABLE 4-5 NITROUS OXIDE EMISSIONS WITHOUT THE PROJECT

Emission Source	Nitrous Oxide Emissions (tpy)	Global Warming Potential (GWP) (tpy)
Truck Transport of Biosolids	**0.27710**	**85.901**

The Project generates small amounts of nitrous oxide from vehicle emissions. The Project will directly generate nitrous oxide emissions from truck trips, employee commutes, and onsite equipment use. Nitrous oxide emissions were estimated using EPA emission factors and the emissions with the Project are presented in Table 4-6.

TABLE 4-6 UNMITIGATED PROJECT GENERATED NITROUS OXIDE EMISSIONS

Emission Source	Nitrous Oxide Emissions (tpy)	Global Warming Potential (GWP) (tpy)
Construction Period Emissions[1]	0.00006	0.0193
Vehicles (transport trucks and employee commutes)	0.14173	43.9363
Onsite Equipment	0.01766	5.47460
Electric Use [2]	0.00002	0.00539
Total Operational Emissions	**0.15947**	**49.43559**

[1] Shows the annualized construction emissions, which are calculated by taking the total construction emissions (921.92 tons) and dividing them by a reasonable economic life of the Project (20 years).

[2] Reduction in emissions associated with photovoltaic solar power, which is a Project feature, are described on page 3-5 and quantified in Table 9 below.

4.1.3.4 GHG EMISSION SUMMARY

The primary GHG generated with or without the Project is carbon dioxide. Emissions of methane and nitrous oxide are small in comparison, however due to the global warming potential of methane and nitrous oxide these greenhouse gases also contribute to the total global warming potential of a project.

Table 4-7 summarizes the Global Warming Potential of GHG emissions generated from biosolid transportation without the Project.

TABLE 4-7 GLOBAL WARMING POTENTIAL WITHOUT PROJECT

Emission Sources	Global Warming Potential (GWP) (tpy)
Truck transport of Biosolids	**14,453.21**

Table 4-8 summarizes the Global Warming Potential of GHG emissions generated with the Project without emission reduction measures either as design features or mitigation incorporated into the Project.

TABLE 4-8 UNMITIGATED GLOBAL WARMING POTENTIAL WITH PROJECT

Emission Sources	Global Warming Potential (GWP) (tpy)
Construction Period Emissions[1]	4.90
Vehicles (transport trucks and employee commutes)	6,854.36
Onsite Equipment	819.88
Electric Use [2]	3.80
Total Operational Emissions	**7,682.94**

[1] Shows the annualized construction emissions, which are calculated by taking the total construction emissions (921.92 tons) and dividing them by the economic life of the Project (20 years).

[2] Reduction in emissions associated with photovoltaic solar power, which is a Project feature, are described on page 3-5 and quantified in Table 9 below.

As shown on Table 4-8, the total unmitigated global warming potential associated with Project-generated GHG emissions is estimated to be 7,682.94 tons/year at full capacity of the proposed facility. GHG emissions at this level are significantly below the total global warming potential for the transport of waste material (14,453.21 tons/year as shown in Table 4-7) without the Project. In other words, the Project results in a net reduction of 6770.27 tpy, or 53 percent, of GHG emissions. The Project is consistent with the AB 32 goal of reducing GHG emissions; is significantly below the 1.5 Tg CO_2 allocated by CARB; and is not in conflict with any existing guidelines or standards.

4.1.4 PROJECT FEATURES THAT REDUCE GREENHOUSE GAS EMISSIONS AND PROVIDE CONSISTENCY WITH AB 32

In order to determine the significance of the Project GHG emission impact on climate change, consistency or inconsistency with the reduction targets in AB 32 is also evaluated. To do so, Project features that implement specific reduction measures identified in the rules and regulations that implement AB 32 were evaluated.

The County has a waste reduction program that diverts green waste and recyclable material out of the municipal landfill waste stream. The Project will provide cost-efficient local biosolid and green material composting capacity for the County and the Inland Empire that complies with applicable Federal, State and local requirements for safely handling these materials.

The following Project objectives, set forth in the DEIR will all contribute to a reduction in GHG Emissions:

- Establish an efficient reuse of biosolids in the County and the Inland Empire;
- Increase solid waste diversion through the recycling of green material in compost; and
- Materials considered in this analysis are modeled as being recycled in a closed loop (e.g., green waste is recycled into compost).

The Project includes photovoltaic power generation of sufficient capacity to supply all of the Project's electrical demand. A back up generator is also included to supply power when photovoltaic power, due to cloud cover or maintenance of the photovoltaic system, is not sufficient to supply all of the electrical demand.

4.1.5 GREENHOUSE GAS MITIGATION MEASURES

In order to fully integrate the reduction measures promulgated by AB 32 into the Project and demonstrate full compliance with AB 32 (the Statewide Mitigation Program that addresses the cumulative impact of climate change), the following mitigation measures are recommended.

Construction Period

- Prior to issuance of any grading or building permit, the Project plans and specifications shall include a statement that construction equipment shall be shut off when not in use and shall not idle for more than 15 minutes;
- Prior to issuance of any grading or building permit, the Project plans and specifications shall include a statement that on-road construction trucks and other vehicles greater than 10,000 pounds shall be shut off when not in use and shall not idle for more than 5 minutes; and
- Prior to issuance of any grading or building permit, the Project plans and specifications shall include education for construction workers about reducing waste and available recycling services.

Operational Period

- Prior to issuance of a building permit, the applicant shall demonstrate that the design of the proposed office trailer incorporates the following features:
    - Dual paned or other energy efficient windows,
    - Energy efficient space heating and cooling equipment,
    - Energy efficient light fixtures,
    - Energy efficient appliances,
    - Cool roofs/light colored roofing;
- Prior to issuance of a building permit, the applicant shall demonstrate that the proposed facility incorporates exterior storage areas for office and paper recyclables and adequate recycling containers located in the office.
- Prior to issuance of a building permit, the Project plans and specifications shall include a statement that all onsite equipment shall be shut off when not in use and shall not idle for more than 5 minutes; and
- Prior to issuance of a building permit, the Project plans and specifications shall include a statement that on-road haul trucks and other vehicles greater than 10,000 pounds shall be shut off when not in use and shall not idle for more than 5 minutes.

Table 4-9 summarizes the reduction in GHGs as a result of mitigation incorporated into the proposed Project.

TABLE 4-9 REDUCED GLOBAL WARMING POTENTIAL THROUGH DESIGN FEATURES AND MITIGATION

Emission Sources	GWP of Greenhouse Gases (tpy)	Percent Reduction Resulting from Mitigation and Project Design Features
Construction Period Emissions	4.90	0.00 %[1]
Vehicles (transport trucks and employee commutes)	6,854.36	0.00 %
Onsite Equipment	624.73	23.80 %
Periodic uses of back up generator	0.04	99.9 %[2]
Total Gross Operational Emissions	**7,483.99**	**2.59 %**
Transport of Biosolids without the Project[3]	*-14,453.21*	0.00 %
Total Net Operational Emissions	***-6,969.19***	**193.12 %**

1 This reduction is associated with the use of photovoltaic electric generation and includes emissions associated with the periodic use of back up generator

2 This reduction is associated with the use of photovoltaic electric generation and includes emissions associated with the periodic use of back up generator

3 Represents current emissions from transporting biosolids to Arizona or Kern County, which is subtracted from the Project's Gross total in order to show the net emissions that would result if the Project were implemented.

Table 4-9 shows that without mitigation, the Project results in a decrease of 7,682.94 tons/year of GHG emissions. This is primarily due to the reduction in transport miles for feedstock material to the Project location. Currently much of the biosolids are transported to Arizona or Kern County for processing or land application. These feedstock materials would be transported to the proposed Project. With mitigation measures, the Project results in a reduction of 6,969.19 tons/year of GHG emissions.

The GHG analysis has followed the currently available guidance for analysis of GHG under CEQA. The approach follows that recommended by OPR and numerous professional agencies and is consistent with the early draft of the San Bernardino County GHG Emissions Reduction Plan. The GHG emissions associated with the Project have been fully described and evaluated. Even though the Project results in a net decrease of GHG emissions, GHG mitigation measures which further reduce GHG emissions have been proposed and evaluated.

The proposed Project complies with the reduction strategies found in the Climate Action Team (CAT) Report, the AB 32 Scoping Plan, and exceeds the AB 32 reduction target of 30 percent below "business as normal" levels of GHG emissions by year 2020.

The proposed Project reduces the current GHG emissions by greater than 50 percent and is in compliance with the AB 32. Therefore with mitigation, the Project's incremental contribution of GHG emissions to cumulative global climate change impacts is less than significant.

4.1.6 IMPACTS ON THE PROJECT FROM GLOBAL CLIMATE CHANGE

The average temperature in California is anticipated to increase within the next forty years. Warmer overall temperatures are expected to result in an increase in precipitation events and an increase in intensity and frequency of winter rainstorms. Precipitation is anticipated to increase rainfall in the winter while decreasing summer and overall precipitation. Currently the prevailing winds over the Gulf of California are from the north in winter and the south in summer bringing a late spring wet period. Projections show that warming trends are greater over the landmasses than over the adjacent oceans and this may amplify the northward (summer) winds and decrease the overall annual precipitation in the south-western US.

Because of the dependence of saturation vapor pressure in the atmosphere on temperature, the anticipated warming of the climate is expected to be accompanied by an increase in atmospheric moisture flux and frequency of extreme weather anomalies. The increase in extreme temperature events is anticipated to lead to prolonged hot spells and an increased diurnal temperature range resulting in severe droughts, floods, wildfires, and winter storms. The extremes in climate events may disrupt ecosystems and damage water supplies.

Although many scientists agree Global Climate Change will cause temperatures to increase, the amount and rate of that increase is still being debated as is the magnitude of the impact that temperature change will induce. The southwestern region is arid due to the subtropical ridge of high pressure associated with the thermal contrast between the land and adjacent ocean. Little is known about the consequences of higher rates of warming over land then over water, which will impact the climate over the western United States. Quantitative information on climate change impacts at a local site level is unavailable and the predictions presented here are uncertain. The information presented below provides a qualitative discussion of potential consequences of global warming on the proposed Project site. However, even though some assumptions can be made with respect to potential impacts, the overall impact from climate change remains highly speculative with regards to the localized areas, such as the Project site.

4.1.6.1 ECOSYSTEMS

The disruption in ecosystems due to changes in rainfall and temperature at the site may cause a shift in vegetation types and a loss of habitat that will force species to higher altitudes or more northern latitudes. Because the Project site is situated in an arid climate, the increased summer heat and lack of rainfall may further stress the already fragile desert ecosystem. However, it is uncertain what and when changes in temperature and rainfall will occur at the site or how these changes will ultimately impact these ecosystems because of the complex interrelationships and the uncertainty of how sensitive these interdependent systems are to any varying levels of change.

4.1.6.2 WATER RESOURCES

Eighty percent of California's rainfall occurs in the winter and is stored in snowpack on mountain ranges. Accumulation of snow in winter stores water until spring. Spring melt forms streams and rivers that supply the watershed with water for the duration of the summer. The rapid increase in temperatures projected from climate change will accelerate the water cycle by decreasing snow depth from delayed autumn snowfall and early spring snow melt. The early melt will result in more rapid, earlier, and greater spring runoff. This increased runoff has the potential to result in flooding in the spring followed by excessively dry summers, placing added stress on the already over burdened water supply system.

Excessively dry summers will increase water demands throughout the State exacerbating the demand for water in California. The Project is anticipated to operate a groundwater well to supply the process with its water needs. The well will pump approximately 15 gallons per minute (gpm)

and will be pumped to a 30,000 gallon storage tank. Daily processes are estimated to require 1,000 gallons with a total annual draw on the aquifer of approximately 360,000 gallons/year. The storage tank was designed to meet the potential fire flow requirements.

The Project is situated in the Centro Sub Basin of the Mojave Groundwater Basin. According to the Water Supply Assessment: "The Mojave Basin Aquifer is well managed and secure water supply, with a California Superior Court imposed physical solution to protect against future overdraft over the next 100 years" and the "1,000-gallon per day to be used by Nursery Products is significantly less than the amount permitted by the Mojave Basin Judgment" (WSA page 14). Therefore, the impact of climate change on the operation of the Hawes facility is less than significant.

4.1.6.3 WILDFIRES

The increase in extreme temperature events may lead to an increase in the length of the wildfire season and the number of yearly fires throughout the State. While quantitative information on the increased incidence of wildfires at the Project site due to climate change is unavailable and it is speculative to predict the extent of increased wildfires at the site, an assessment of the available wildfire fuel load in the Project area and a qualitative discussion of the likelihood of a wildfire affecting the Project are possible.

As discussed in the Hazards section of the EIR (DEIR page 4-47), the location of the proposed Project site is in an area of dry, desert vegetation that is generally low-lying and sparsely dispersed. This provides a limited fuel load for wildfires. Additionally the Project site is not listed as an area with significant wildfire potential in the County Hazard maps. "Community-wide fire protection ratings are provided by the Insurance Service Organization (ISO) based on the location of fire station, response time, and availability of water. ISO rankings are on a scale of I to X (1-10) with I (one) being the best protection and X (ten) being the worst or no protection. The current ISO rating for the Project area is II (two)." (DEIR page 4-47). The Project area's fire rating combined with the onsite fire suppression resources will mean the potential impact to the Hawes Facility from wildfires is less than significant.

4.2 WATER SUPPLY ASSESSMENT

An assessment of Hydrology and Water Quality was provided in the DEIR for the proposed Project. In the Court's Decision, the County was directed to identify a single water source and conduct an assessment thereof. This analysis is in fulfillment of the Court's direction for an analysis of the water supply and the identification of a single water source. The water supply assessment is summarized in this section and included in full as Appendix C.

4.2.1 WATER RESOURCES

The water sources available to the Mojave Basin Area are numerous and managed by a myriad of complex overlapping jurisdictions. The active management of the water resource will facilitate safe yield for well over the next one hundred years.

4.2.1.1 MOJAVE GROUNDWATER BASIN

The adjudicated boundary of the Mojave Basin Area encompasses about 3,400 square miles of land within San Bernardino County. In general the adjudicated area is bounded by the San Bernardino and San Gabriel Mountains to the south, Afton Canyon to the northeast, just beyond Lucerne Valley in the east and the Antelope Valley to the west at the San Bernardino/Los Angeles County line. For purposes of administration of the Judgment, the Basin is divided into five separate hydrologic Subareas.

The five Subareas are named: Este (East Basin), Oeste (West Basin), Alto (Upper Basin), Centro (Middle Basin) and Baja (Lower Basin). The Hawes Composting Facility is located within the Centro Sub Basin. Each Subarea was found in the adjudication to be in overdraft to some extent due to the use of water by all of the producers in that Subarea. In addition, some Subareas were found to historically have received at least a part of their natural water supply as water flowing to them from upstream Subareas either on the surface or as subsurface flow. To maintain that historical relationship, the average annual obligation of any Subarea to another is set equal to the estimated average annual natural flow (excluding storm flow) between the Subareas over the 60 year period 1930-31 through 1989-90.

All Producers in each Subarea are allowed to produce as much water as they need annually to meet their requirements, subject to compliance with the Physical Solution set forth in the Judgment. An underlying assumption of the Judgment is that sufficient water will be made available to meet the needs of the Basin in the future from a combination of natural supply, imported water, water conservation, water reuse and transfers of the Free Production Allowance among Producers. Special provisions for environmental protection are included in the Judgment, including the creation of a Biological Resources Trust Fund. The funds are provided to secure a water supply in the event that groundwater levels within specific areas are not maintained sufficient to support existing riparian vegetation.

4.2.1.2 SURFACE WATER RESOURCES

There are two surface water sources within the Mojave Basin Area. They are the Mojave River and the Mojave Watershed. The following sections describe these two surface water sources within the Mojave basin.

4.2.1.2.1 *Mojave River*

A State Division of Water Resources publication known as Bulletin 47 or "The Mojave River Investigation" reported that the Mojave River was a stream which received its principal water supply from 217 square miles of mountain headwaters from the northern slope of the San Bernardino Mountains. The total area of influence within the Mojave River measures 333 square miles and the riverbed is dry six (6) to eight (8) months during the year, according to Bulletin 47. The publication reported that the basin's water table along the stream was high enough to support salt grass, cottonwoods and tulles.

4.2.1.2.2 *Mojave Watershed*

The Mojave River Watershed is approximately 1,400 square miles and extends from the San Bernardino and the San Gabriel Mountains in the south to north of Harper and Coyote Lakes (dry). The groundwater basin is bordered on the west by Antelope Valley and shares its southeastern boundary with the Morongo groundwater basin.

The basin has received California State Water Project (SWP) water at the Rock Springs recharge site southeast of Hesperia since 1994, and has also received SWP water at the Hodge recharge site since 1999, at the Lenwood recharge site since 1999, at the Yermo/Daggett recharge site since 2003, and at the Newberry Springs recharge site since March 2006.

4.2.1.3 IMPORTED WATER SOURCES

The following sections are the imported water sources utilized by the Mojave basin.

4.2.1.3.1 *Mojave Water Agency*

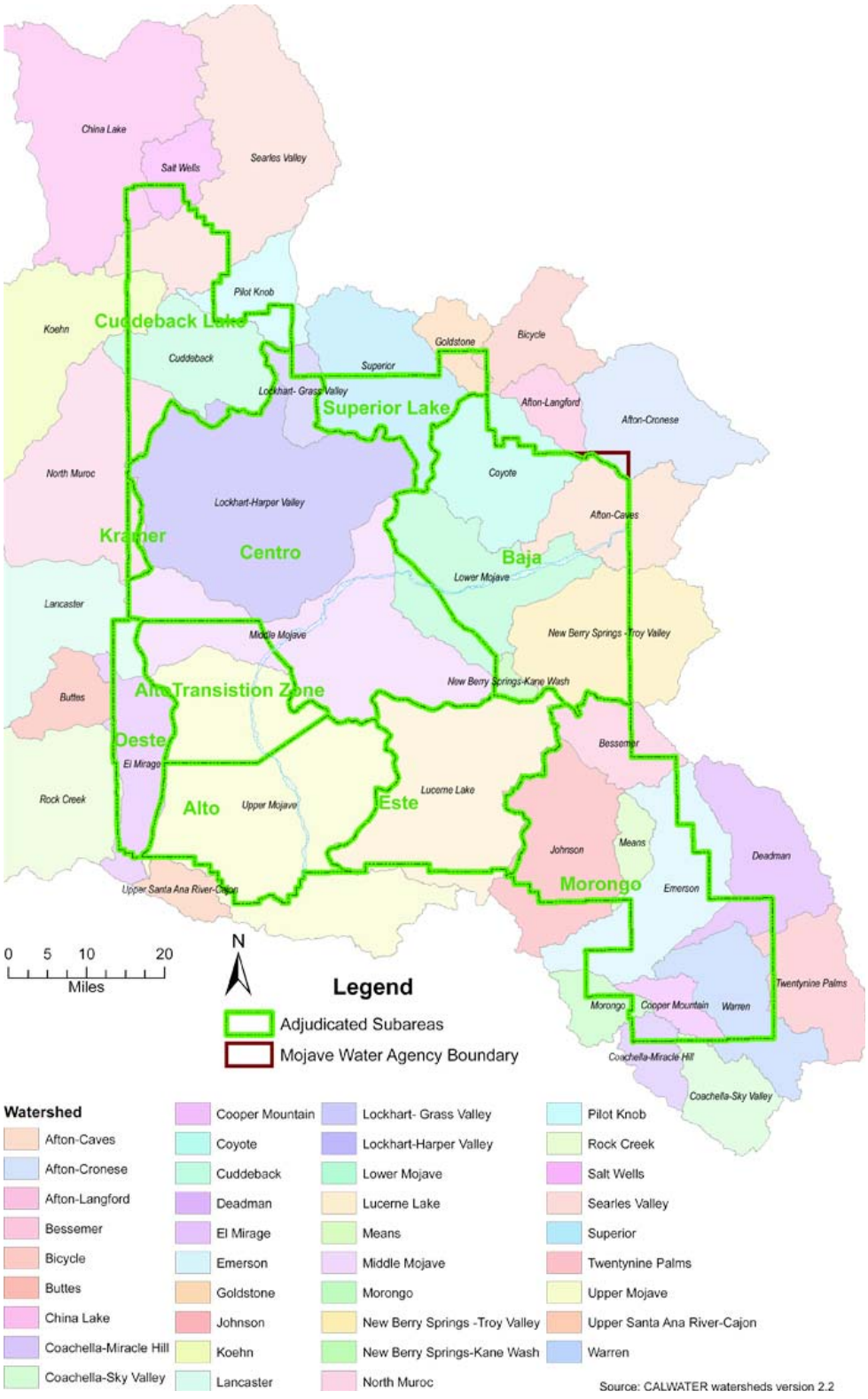
The creation of the Mojave Water Agency (MWA) was made possible through an enabling act prepared by attorney William J. Johnstone and the Mojave-Antelope Water Agency Committee. The passage of the Water Act authorized the state to issue nearly $2 billion in bonds. Property owners within the MWA service area were obligated to pay their fair share of the costs of constructing the California Aqueduct. To meet fiscal requirements from the 1960 state-wide bond, the MWA began assessing property owners a tax referred to as Debt One.

In the late 1960's, recognizing worsening overdraft, Agency leaders first began to discuss a pipeline project to bring SWP water directly to the Mojave River Basin. Nearly 30 years later, design work began on the Mojave River Pipeline project, which would become a key element of the Agency's Regional Water Management Plan. Construction began in December 1992 and water began to flow through its approximately 71-mile length in January of 1995. The pipeline has continued to serve nearly 60,000 people and 455 square miles the High Desert, including the communities of Yucca Valley, Joshua Tree, Landers and Johnson Valley.

4.2.1.3.2 *State Water Project*

The MWA is entitled to 75,800 acre-feet per year (AFY) of SWP water. This includes the addition of 25,000 AFY of entitlement that was purchased from the Berrenda-Mesa Water District in 1998. Imported SWP water has historically been supplied to the MWA through the Mojave Basin and Morongo Basin pipelines and releases to Silverwood Lake.

Exhibit 4-1 Mojave Water Basin Subareas



4.2.2 SIGNIFICANCE DETERMINATION CRITERIA

The CEQA Guidelines establish that a significant impact would be expected to occur if the proposed Project substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level. The Project analysis also needs to demonstrate adequate long term water supplies are available in order to determine less than significant impacts. The Project proposes to produce all water needed for operational activities from an onsite well. The following analysis supports the conclusion that the proposed Project would result in a less than significant impact to the water supply of the underlying aquifer.

4.2.2.1 PRODUCTION

The following table (Table 4-10) shows the projected monthly volumes of groundwater proposed to be produced for beneficial use by the facility's well during a twelve-month period.

TABLE 4-10 PROPOSED GROUNDWATER VOLUME

Month	Gallons	AF
Jan	30,000	0.09
Feb	30,000	0.09
Mar	30,000	0.09
Apr	30,000	0.09
May	30,000	0.09
Jun	30,000	0.09
Jul	30,000	0.09
Aug	30,000	0.09
Sep	30,000	0.09
Oct	30,000	0.09
Nov	30,000	0.09
Dec	30,000	0.09
Total	**360,000**	**1.08**

4.2.2.2 CAPACITY

The proposed groundwater well will be withdrawing water with a 15 gpm pump. The storage tank capacity of 30,000 gallons has been designed to meet potential fire flow requirements. Based upon data provided by the MWA's engineer, the aquifer beneath the Hawes Composting Facility is capable of producing in excess of 1,000 gallons per minute with little to no impact on the aquifer. The 15 gpm water pump will have less than a 1% impact of the predicted drawdown of the aquifer. Drawdown is the amount of time it takes to refill the space created in a well column from the aquifer. The 15 gpm pump will have no impact on the aquifer.

Total Potential: 21,600.00 gpd 7,884,000 GPY 0.066 AFD 24.20 AFY

4.2.2.3 CONSUMPTIVE USE

The 1,000-gallon per day to be used by Nursery Products is significantly less than the amount permitted by the Mojave Basin Judgment.

Total Use: 1,000.00 gpd 365,000 GPY 0.003 AFD 1.08 AFY

4.2.3 SOURCE SUPPLY / LEGAL RIGHTS

The proposed Project will produce groundwater for overlying use from the Mojave Groundwater Basin via an onsite well.

By California Superior Court Order, the Hawes Composting Facility is permitted to produce up to 3,258,290 gallons per year (GPY) of water on SE ¼ Section 36 TP 10N R 5W EX MNL Reservation of Record 160 acres; APN: 0492-021-24-0000. The proposed Project will produce 365,000 gallons per year, significantly below the legally allowable levels and therefore is exempt from the requirement to hold water rights, or to pay replenishment assessments.

The Court Appointed Basin Engineer has determined there is more than sufficient aquifer capacity, at approximately 300' below the ground elevation at the Project site, to produce good quality water, capable of providing a sustainable water supply for over one hundred years, free of a replenishment water assessment imposed by the Mojave Basin Watermaster.

If, though not anticipated, the Project water usage exceeds 3,258,290 GPY, it can intervene into the Mojave Basin Judgment as a producer of groundwater in excess of 3,258,290 GPY, and purchase a water right equal to any total production shortfall.

The Project has the legal right to produce all of its water supply needs from the Mojave Basin Aquifer at levels exempt from the requirement to own water rights or to pay replenishment assessments. Based on the amount of water available to the Project and the amount of water the Project wells will produce annually, the extraction of this volume of groundwater would not interfere with groundwater recharge and a lowering of the local groundwater table is not expected. The analysis demonstrates that adequate water supply is available for the Project. Therefore, impacts associated with potable water supply are less than significant.

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SECTION 5.0 - ALTERNATIVES ANALYSIS

CEQA requires that the County consider alternatives that can attain most of the basic objectives of the Project and would avoid or substantially reduce significant environmental effects of the Project. Alternatives to be considered in this manner should be reasonable and feasible; however the County is not required to evaluate every imaginable alternative to the Project. The DEIR reviewed the system-wide alternatives that the County considered, followed by a series of project specific alternatives. In the DEIR all of these alternatives were rejected. On April 11, 2008 the Court issued its Statement of Decision in response to the Petitioners challenge of the DEIR (Court 2008). According to the Court's Decision, the County's analysis of the alternatives was deemed adequate; however, the Court also found that the administrative record was not sufficient to support the conclusion that an enclosed facility was infeasible. The Court further questioned the analysis of infrastructure availability. This analysis is in fulfillment of the Court's direction for additional analysis of the economic feasibility of the enclosed facility alternative and infrastructure availability. The economic feasibility assessment is summarized in this section and included in full as Appendix D.

5.1 PERTINENT BACKGROUND INFORMATION

5.1.1 VOC EMISSIONS ASSOCIATED WITH COMPOSTING

The enclosed facility was evaluated in the DEIR as an alternative to the Nursery Products Hawes Composting Facility. The alternative has potential to mitigate the one significant impact in the DEIR: volatile organic compound (VOC) emissions. The DEIR concluded that an enclosed facility did not reduce the VOC emissions to less than significant level. The following briefly describes VOC emissions associated with the composting process. Air emissions from composting activities are discussed in detail in Section 4.3 of the DEIR.

VOCs are produced during the anaerobic (in the absence of oxygen) decomposition of organic material. Windrow composting produces VOC emissions when areas within the core of the windrow become anaerobic as the decomposition process depletes the available oxygen at these locations. A balance needs to be achieved whereby the windrow is turned often enough to oxygenate the core of the windrow, but not so often that the temperature within the windrow core drops too low and becomes detrimental to the composting process. If this balance is achieved the emissions of VOCs are reduced to the lowest extent possible, but cannot be completely eliminated.

Air District Regulations

The Mojave Desert Air Quality Management District (MDAQMD) has jurisdiction in the Project area and, on October 27, 2008, adopted Rule 1133 to regulate emissions of VOC and ammonia from numerous co-composting facilities. The rule covers the Project and requires the use of the best management practices (BMPs) listed in Rule 1133. The MDAQMD found that these BMPs have been proven to significantly reduce VOCs and ammonia emissions from composting activities. The following summarizes the BMPs for composting operations as required by MDAQMD Rule 1133:

- Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles;
- Establish initial carbon to nitrogen ratio of not less than 20:1 in active piles;
- Maintain moisture content between 40 percent to 70 percent in active and curing piles;

- Maintain pH below 8.0 in active and curing piles;
- Adequately mix incoming feedstock so that moisture and nutrients are maintained in proper proportions in all parts of the composting piles.
- Maintain daily records of materials receipt, discharge, and operational activities sufficient to verify the above.

The proposed Project will be subject to Rule 1133. The MDAQMD has the authority to enforce the rule which the MDAQMD determined was appropriate for all of the co-composting facilities.

5.1.2 GREENHOUSE GAS EMISSIONS ASSOCIATED WITH COMPOST FACILITY

Exhaust emissions from the use of haul trucks to deliver feedstock to the composting facility and off-road equipment such as front end loaders, windrow turners and tractors at the facility, are the other primary sources of GHG emissions associated with the composting process. GHG emissions within the exhaust include carbon dioxide, methane and nitrous oxide. The GHG emissions from these aspects of the proposed Project were analyzed in the GHG analysis of this Draft SEIR and are discussed in detail in Section 3.

5.2 ENCLOSED FACILITY ALTERNATIVE

In the enclosed composting facility alternative all of the composting processes are completed within a building that houses the feedstock loading area, windrows, negative air system, and product loading areas. Biofilters may be housed outdoors as is the case at the Inland Empire Regional Composting Facility (IERCF).

The analysis of the enclosed facility alternative variations used information obtained on the existing enclosed facilities in Rancho Cucamonga and Calabasas, California. These two facilities are the only operating enclosed facilities in the western United States at this time. Both the Rancho Cucamonga and Calabasas facilities are of a smaller capacity than the proposed Project therefore costs were scaled to fit the size of the proposed facility.

The Inland Empire Regional Composting Facility and Las Virgenes Composting Facility (LV) are both owned and operated as part of public utilities. As such, the costs of the construction and of operations are borne by public agencies. In addition, these entities have instituted the composting operations as a means of biosolids management and disposal associated with wastewater treatment plants. The IERCF is controlled by the Inland Empire Regional Composting Authority (IERCA), a joint venture by the Inland Empire Utility Agency and the Los Angeles Sanitation District. The Las Virgenes and IERCF facilities were enclosed for a variety of reasons.

The proposed Project would be owned and operated as a private entity without the benefit of joint venture or public utility funding. The purpose of the facility is to manage the composting of biosolids and green waste in a manner that is not only beneficial to the environment and is cost-effective.

The LV facility has incorporated a biosolids dewatering process into the wastewater treatment plant operations, which results in greater operational costs. Dewatered biosolids as is the feedstock for both the IERCF and the proposed Project are provided by truck. In comparison, dewatered biosolids are delivered by truck to both the IERCF and the proposed Project. In this analysis, the proposed construction and operation costs for an enclosed facility are provided in ranges based on both the LV and IERCF facilities. The IERCF cost for the construction and operational technology as well as the operating processes are more recent.

5.2.1 SCOPE OF ANALYSIS

This economic and technologic feasibility analysis focuses on two variations of the enclosed facility alternative and compares them to the proposed Project which is an open air facility as proposed and described in the Project Description in Section 2. These variations are:

- Conventional Power Variation: An enclosed facility powered by conventional electric hookup, with negative draft air system to biofilter, and
- Solar Power Variation: An enclosed facility powered by a photovoltaic solar system with negative draft air system to biofilter.

An enclosed facility is typically housed in a metal shell warehouse style building large enough to accommodate the entire operations including the feedstock loading area, windrows, the negative air system, and product loading areas. Approximately 18 employees are needed to run the facility. Because the entire enclosed facility is under negative draft, pulling all of the air within the building through a bio-filter, powerful fans are required. This negative air system consumes up to 127 megawatt hours of power per day. For the Hawes Facility, the electric power needed for the enclosed facility requires upgrades to the electric grid in the Project area. In particular, a 13.8 kilovolt (kv) electric power line will need to be extended approximately 6 miles, from the existing Coolwater-Kramer Junction power line near Lockhart, to accommodate the facility along with a set of power transformers at the site.

An enclosed facility with negative draft air system to biofilters was chosen for analysis because it may provide emissions control capable of reducing VOC emission impacts. Because the enclosed facility requires significantly more electricity than the proposed Project, indirect emissions from the consumption of electricity have been calculated and may actually exceed the emissions captured by the biofilter using the negative draft air system. Therefore, a photovoltaic solar powered enclosed facility was also evaluated.

The photovoltaic solar powered enclosed facility has all the same characteristics of the conventionally powered enclosed facility described above except that the power would be generated onsite. A much larger photovoltaic power system than what is needed for the proposed Project is required. In effect, the photovoltaic solar powered enclosed facility will require a solar generating station with a solar field of up to 216 acres, a control room, set of transformers, and significant improvements to the existing electrical grid. In addition to the 18 employees required to run the enclosed composting facility, this alternative variation will require approximately 4 employees during the daytime and 3 employees during the evening and nighttime shifts (10 employees total) to run the photovoltaic solar powered generating station. Evening and nighttime employees are needed to provide facility shutdown, startup, and maintenance when the equipment is offline. The improvements to the electrical system include approximately 6 miles of 13.8 kv power line, which is identical to the conventionally powered enclosed facility. The power lines and transformers are needed to both accommodate power generation when the solar generating station is online and provide power to the enclosed composting facility when solar power is not available.

The analysis of the enclosed conventional power facility with negative air systems to biofilter provides a cost analysis of building and operating the enclosed facility, improving the electrical grid. The indirect emissions of GHGs and VOC resulting from electric consumption have been calculated. The cost of providing photovoltaic power to the enclosed facility, (and thereby avoiding the GHG or VOCs emissions from electricity production), includes a cost analysis of building and operating both the enclosed facility and the solar generating station and improving the electrical grid. The cost and total net emissions (both direct and indirect) for the Project as proposed and the two variations of the enclosed facility were evaluated.

5.3 IMPACT ANALYSIS

The alternative analysis supplements the economic and technological analysis of the enclosed facility in the DEIR and evaluates the additional variation, the solar powered enclosed facility. These alternative variations are compared to the proposed Project to both evaluate the potential emissions reductions and the financial feasibility of the enclosed facility. Since this analysis is performed within the context of CEQA, the evaluation includes the determination of whether or not each of the enclosed facility alternatives reduces significant impacts associated with the proposed Project.

5.3.1 PROPOSED PROJECT

The proposed Project would provide open air windrow composting. The proposed Project as evaluated in the DEIR included significant mitigation measures. Detailed facility and photovoltaic cost estimates for the proposed Project are provided in Appendix D and summarized in Table 5-1. Equipment operations and maintenance costs are based upon the off-road mobile equipment list provided in Appendix D. Labor costs assume 8 full time employees. Miscellaneous maintenance includes maintaining the perimeter fence and grounds. The capital costs are annualized over 15 years as the minimum economic life of the Project.

TABLE 5-1: COSTS ASSOCIATED WITH THE PROPOSED PROJECT

Cost Categories	Costs (2008 U.S. dollars)
Capital Costs	
Facility Costs	$6,190,607.00
Photovoltaic Solar and Back-up Generator	$155,859.50
Total Capital Costs	$6,346,466.50
Operations and Maintenance Costs (Annualized)	
Solar and Back-up Generator	$20,000.00
Equipment Operations (fuel and maintenance)	$300,100.00
Labor	$776,084.80
Additional Operational Costs	$0.00
Total O&M	$1,096,184.80
Annualized Capital & O&M Costs	
Total O&M	$1,096,184.80
Annualized Capital Costs	$570,808.18
Total: Annualized Capital & O&M Costs	**$1,666,992.98**
Detailed cost estimate is provided in Appendix D.	

Potential emission reductions associated with the enclosed alternative variations were evaluated based upon how much the alternative changes emissions as compared to the proposed Project. Emissions are shown in Table 5-2. Vehicle transport of waste materials to the site is identical for the Project and the enclosed facility. Therefore, to focus on differences in emissions between the

Project and the enclosed facility and to be consistent with the analysis in the DEIR, this analysis only compares onsite emissions associated with the Project and the enclosed facility alternative variations.

TABLE 5-2: PROPOSED PROJECT ONSITE EMISSIONS SUMMARY

Emission Type	Emissions (tpy)	MDAQMD Significance Thresholds	Significant Impact?
VOC Emissions	357.70	25	Significant[1]
GHG Emissions	624.73[2]	>30% BAU[3]	Not Significant[4]

[1] This is the significance determination that was made in the DEIR.

[2] GHG emission totals exclude truck transport emissions which are identical for the Project and each of the enclosed facility alternatives.

[3] BAU = business as usual, which is defined as standard building and operating practices.

[4] This is the significance determination that was made in the GHG emissions analysis in Draft SEIR section 4.1.

5.3.2 CONVENTIONAL POWER ENCLOSED FACILITY

The costs associated with an enclosed facility using a conventional power source are shown in Table 5-3. As shown in Table 5-1, the total annualized cost of the proposed Project is slightly more than $1.6 million. Total annualized costs for the conventional power variation of the enclosed facility alternative range from $21.3 million to $172.8 million. This enclosed facility alternative requires an initial capital investment of between $162.5 million and $1,246.6 million and will compost approximately 400,000 tpy, the same as the proposed Project. Labor costs assume 18 full time employees are needed to operate the conventional power enclosed facility. Miscellaneous maintenance includes painting the building and trim as well as maintaining the grounds. The capital costs are annualized over 15 years as the minimum economic life of the Project.

TABLE 5-3: COSTS ASSOCIATED WITH THE CONVENTIONAL POWER ENCLOSED FACILITY ALTERNATIVE

Cost Categories	Based on LV[1] (2008 U.S. dollars)	Based on IEUA[2] (2008 U.S. dollars)
Capital Costs		
Facility Costs	$1,225,585,754.45	$136,781,948.99
Electric Utility Upgrades	$21,000,000.00	$21,000,000.00
Enclosed Storage Facility	-	$4,738,000.00
Total Capital Costs	$1,246,585,754.45	$162,519,948.99
Operations and Maintenance Costs (Annualized)		
Electricity	$6,043,111.53	$2,530,666.67
Equipment Operations (fuel and maintenance)	$8,355,688.85	$400,133.33
Labor	$3,063,378.86	$1,746,190.80
Additional Operational Costs	$42,768,191.19	$2,048,400.00
Total O&M	$60,230,370.42	$6,725,390.80
Annualized Capital & O&M Costs		
Total O&M	$60,230,370.42	$6,725,390.80
Annualized Capital Costs	$112,119,294.46	$14,617,223.04
Total: Annualized Capital & O&M Costs	**$172,349,664.88**	**$21,342,613.84**

1 Costs for the enclosed Nursery Products Facility are based on the known costs for the Las Virgenes facility and scaled based on the percent difference between the biosolids intake of the Nursery Products facility and the Las Virgenes Facility.

2 Costs for the enclosed Nursery Products Facility are based on the known and assumed IEUA facility and scaled based on the percent difference between the biosolids production of the Nursery Products facility and the IEUA facility.

Detailed cost estimates are provided in Appendix D

Table 5-4 summarizes the emissions associated with the conventional power enclosed facility. The emissions of VOCs decrease as compared to the proposed Project. GHG emissions are increased. The primary source of GHG emissions in the conventional power enclosed facility is from electric power generation associated with the power consumption of the facility. Even with an enclosed facility the VOC emissions remain a significant environmental impact. The GHG emissions associated with the conventional power enclosed facility would constitute a new significant environmental impact that does not occur with the proposed Project.

TABLE 5-4: ENCLOSED FACILITY ALTERNATIVE ONSITE EMISSIONS SUMMARY

Emission Type	Emissions[1]		MDAQMD Significance Thresholds	Significant Impact?
	LV	IEUA		
Pre-Process VOC Emissions (tpy)	357.7	357.7		
VOC Capture Efficiency[2]	95%	95%		
VOC Destruction Efficiency[2]	85%	85%		
Net VOC Emissions from Process (tpy)	69.42	69.42		
VOC Emissions from Electrical Use (tpy)	0.78	0.78		
Total VOC Emissions (tpy)	70.2	70.2	25 tpy	Significant Impact[3]
VOC Reductions (tpy)	287.5	287.5		
Pre-Process GHG Emissions (tpy)	624.73[4]	624.73[4]		
GHG Capture Efficiency	60%	60%		
GHG Destruction Efficiency	48%	48%		
Net GHG Emissions from Process (tpy)	444.81	444.81		
GHG Emissions from Electrical Use (tpy)	20,453.56	8,565.31		
Total GHG Emissions (tpy)	20,898.37	9,010.12	>30% BAU[5]	Significant Impact[6]
GHG Reductions (tpy)	Increase	Increase		

[1] Emissions determined based on power estimations from Las Virgenes (LV) and Inland Empire Regional Composting Facility (IEUA) facilities to show the possible range of emissions based on the range of estimated electrical use.

[2] VOC and Ammonia capture and destruction efficiency rates of the biofilters quantified in the Staff Report Proposed Adoption of Rule 1133 (MDAQMD 2008) were used in the analysis.

[3] This is the significance determination that was made in the Draft EIR.

[4] GHG emission totals exclude truck transport emissions which are identical for the Project and each of the enclosed facility alternatives.

[5] BAU = business as usual, which is defined as standard building and operating practices.

[6] This significance determination that was made based upon the substantial increase in GHG emissions as compared with both BAU and the proposed Project. (Appendix D)

5.3.3 SOLAR POWER ENCLOSED FACILITY

Given the large increase in GHG emissions when considering the electricity generation needed for an enclosed facility, a variation that uses photovoltaic solar energy for electricity generation was analyzed. Labor costs assume 28 full time employees are needed to operate the solar power facility. Miscellaneous maintenance includes painting the building and trim and maintaining the grounds, as well as upkeep and maintenance for the associated solar generation facility. The total cost of constructing and operating the enclosed facility with photovoltaic solar will be greater than the conventional power enclosed facility by a total of between $5 million and $11 million per year when annualized over 15 years (Table 5-5). The initial capital needed to build the facility would be increased by $229.7 million to $1,411.7 million (an increase of over 141 percent compared to the

conventional powered enclosed facility shown in Table 5-3, and over 3,618 percent over the proposed Project). The solar alternative enclosed facility will need electricity supply to operate steadily when solar power is not available. This alternative requires a connection to the electric grid and will at times require full or near full electric loads supplied by Southern California Edison. In the analysis, the benefit of supplying power back to the electric grid during times when the facility is at lower electric demands is taken into account in the operations and maintenance costs. Table 5-5 summarizes the costs of this alternative.

TABLE 5-5: COSTS ASSOCIATED WITH THE SOLAR POWERED ENCLOSED FACILITY

Cost Categories	Based on LV[1] (2008 U.S. dollars)	Based on IEUA[2] (2008 U.S. dollars)
Capital Costs		
Facility Costs	$1,225,585,754.45	$136,781,948.99
Photovoltaic Solar and Back-up Generator[3]	$160,366,466.23	$67,156,475.38
Electric Utility Upgrades	$21,000,000.00	$21,000,000.00
Enclosed Storage Facility	'-	$4,738,000.00
Total Capital Costs	$1,406,952,220.68	$229,676,424.37
Operations and Maintenance Costs (Annualized)		
Solar and Back-up Generator	$500,000.00	$500,000.00
Equipment Operations (fuel and maintenance)	$8,355,688.85	$400,133.33
Labor	$4,765,256.00	$2,716,296.80
Additional Operational Costs	$42,768,191.19	$2,048,400.00
Total O&M	$56,389,136.04	$5,664,830.13
Annualized Capital & O&M Costs		
Total O&M	$56,389,136.04	$5,664,830.13
Annualized Capital Costs	$126,542,830.90	$20,657,350.34
Total: Annualized Capital & O&M Costs	**$182,931,966.93**	**$26,322,180.47**

[1] Costs for the enclosed Nursery Products Facility are based on the known costs for the Las Virgenes facility and scaled based on the percent difference between the biosolids intake of the Nursery Products facility and the Las Virgenes Facility.

[2] Costs for the enclosed Nursery Products Facility are based on the known and assumed IEUA facility and scaled based on the percent difference between the biosolids production of the Nursery Products facility and the IEUA facility.

[3] Costs for solar generation do not include the cost of land needed to accommodate the solar field.

Detailed cost estimates are provided in Appendix D

Table 5-6 summarizes the emissions reductions that are afforded by providing photovoltaic power to the enclosed facility alternative. While the emissions of both VOCs and GHGs decreased as compared to the Project, the CEQA significance determination has not changed from that of the proposed Project. VOC emissions remain significant for both the proposed Project and the solar powered enclosed facility alternative.

TABLE 5-6: SOLAR POWERED ENCLOSED FACILITY ONSITE EMISSIONS SUMMARY

Emission Type	Emissions[1]		MDAQMD Significance Thresholds	Significant Impact?
	LV	IEUA		
Pre-Process VOC Emissions (tpy)	357.7	357.7		
VOC Capture Efficiency[2]	95%	95%		
VOC Destruction Efficiency[2]	85%	85%		
Net VOC Emissions from Process (tpy)	69.42	69.42		
VOC Emissions from Electrical Use (tpy)	0.78	0.78		
Total VOC Emissions (tpy)	70.2	70.2	25 tpy	Significant Impact[3]
VOC Reductions (tpy)	287.5	287.5		
Pre-Process GHG Emissions (tpy)	624.73[4]	624.73[4]		
GHG Capture Efficiency	60%	60%		
GHG Destruction Efficiency	48%	48%		
Net GHG Emissions from Process (tpy)	444.81	444.81		
GHG Emissions from Electrical Use (tpy)	--	--		
Total GHG Emissions (tpy)	444.18	444.81	>30% BAU[5]	Not Significant[6]
GHG Reductions (tpy)	211.58	211.58		

[1] Emissions determined based on power estimations from Las Virgenes (LV) and Inland Empire Regional Composting Facility (IEUA) facilities to show the possible range of emissions based on the range of estimated electrical use.

[2] VOC and Ammonia capture and destruction efficiency rates of the biofilters quantified in the Staff Report Proposed Adoption of Rule 1133 (MDAQMD 2008) were used in the analysis.

[3] This is the significance determination that was made in the DEIR.

[4] GHG emission totals exclude truck transport emissions which are identical for the Project and each of the enclosed facility alternatives.

[5] BAU = business as usual, which is defined as standard building and operating practices.

[6] This significance determination that was made based upon the substantial increase in GHG emissions as compared with both BAU and the proposed Project. (Appendix D).

5.3.4 TECHNOLOGY AND INFRASTRUCTURE

The enclosed facility is typically housed in a metal shell warehouse style building large enough to accommodate the entire operations including the feedstock loading area, windrows, the negative air system, and product loading areas. Because the entire enclosed facility is under negative draft, pulling all of the air within the building through a biofilter, powerful fans are required. This consumes significant quantities of electrical power. Based upon the operations at the LV and IERCF enclosed composting facilities, it is estimated that the energy needed to accommodate an operational capacity of 400,000 tpy within an enclosed facility would require between 53 and 128 megawatts per day of power (an average of 2 to 5 megawatts per hour). To accommodate this

level of power consumption, electric utility upgrades would need to be made to the electric distribution system near the Hawes site.

Under existing conditions the nearest power source is a 4 kilovolt (kv) electric transmissions line that runs parallel to and within the right-of-way of State Highway 58 approximately 0.2 miles from the Project site. This electric utility line does not have the capacity to carry the load of an enclosed composting facility of this size. The minimum line capacity needed to accommodate an enclosed facility is calculated at 13.8 kv. A minimum line size of 13.8kv would be needed to connect an adequate power source to the proposed Project site. The nearest power source of that size is the Southern California Edison (SCE) Coolwater-Kramer Junction 500kv Transmission Line approximately 6 miles north of the proposed Project site where the power line intersects with Harper Lake Road near the unincorporated community of Lockhart and the Harper Lake Thermal Solar Facility.

Connecting the proposed Project site with sufficient electrical power to accommodate an enclosed facility will require construction of a substation at or near the Coolwater-Kramer Junction Transmission line to connect a 13.8kv line, construction of 6 miles of 13.8kv power lines to extend power to the proposed Project site, and the installation of onsite transformer banks to connect the proposed Project to the existing power grid.

According to SCE, this level of infrastructure would take approximately three years to complete the authorization process and construct the substation and power line necessary to accommodate the increased load requirements of an enclosed facility, if the expansion of infrastructure was fully funded. Because the power line would serve only the Project, the Project would be required to pay the entire cost of the installation. This would add approximately $21,000,000 to the capital expenditure of each of the alternative variations, not including the cost of delay.

5.3.5 PRIVATE FINANCE OPTIONS

The only similar enclosed composting facilities currently in operation (the IERCF and Las Virgenes facilities) are owned and operated by publicly funded agencies that provide regional wastewater treatment and subsidize the enclosed composting facilities in order to recycle biosolids waste from the wastewater treatment. Because the Hawes facility will be privately owned, the construction and operational costs will not be subsidized. In order to assess the availability of funding, several lenders were approached with respect to securing loans for the capital investment required to construct both of the alternative variations. Inquiries were answered by three lenders: Citibank, Bank of America, and Desert Community Bank.

According to Citibank, securing a loan of the magnitude required to finance either of the enclosed facility variations will require a debt service coverage ratio (DSCR) of at least 1.15. A debt service coverage ratio is the amount of cash flow available to meet annual interest and principal payments on a debt. A DSCR of less than one indicates a negative cash flow; for example, a DSCR of 0.80 means net operating income covers 80% of the annual debt payments. The calculations of annual debt used in this report were determined for the proposed Project and both alternative versions based on the annualized capital and O&M costs. The calculations do not include the interest of the loan. The reason interest was not included in the analysis is because it is a variable dependent upon the lending institution's assessment of the calculated risk of the applicant and the perceived value. For this evaluation, excluding interest is considered a conservative analysis since inclusion of interest in the annualized debt will only increase the amount of debt and decrease the DSCR.

Net operating income was determined by the revenue generated from accepting biosolids and the revenue generated from the sale of compost. Revenue from biosolids was generated using both the current market price of $15/ton and at 100% over current market price ($30/ton). Revenue

from the sale of compost assumes that 120,000 tons of compost is sold annually at prices varying between the Las Virgenes, IERCF, and national retail prices of $0.00, $2.00, and $18.27 per ton respectively (LV 2009, IEUA 2009, WasteAge 2000). Based on the variation in selling price of compost, net operating income ranges from $3,000,000 to $5,192,400 annually for current market price of biosolids and $$6,240,000 to $8,192,400 annually with an increase of 100% over the current market price of biosolids.

Based on the annualized expenditures and the current market price of biosolids, the DSCR for the proposed Project, would fall between 3.37 and 5.83. The DSCR for the conventional power variation would be between 0.02 and 0.24; and the DSCR for the solar power variation would be between 0.02 and 0.20. Therefore, the most conservative DSCR for the proposed Project (3.37) is above the 1.15 threshold and meets the Citibank criteria for a loan. However, the least conservative DSCR for the enclosed facility using conventional power (0.24) and the solar variation of the enclosed facility (0.20) do not meet the criteria for securing a loan. The DSCR for both enclosed facility variations indicates that expenses would significantly exceed revenue. Even if the market rate were to increase by 100%, the DSCR for the conventional power and solar enclosed facility variations could at best be increased to 0.38 and 0.31 respectively. The DSCR for these variations shows that the alternative variations would only be able to cover 38% and 31% of their annual debt payments respectively. Citibank requires that prospective borrowers be able to net at least 115% of their annual debt payments, therefore both of these alternative variations would be rejected by Citibank for approval.

According to Bank of America (B of A), securing a loan will require the prospective borrower to have assets that are worth at least as much as the loan amount requested. In addition, B of A requires a DSCR of 1.0 at a minimum. As shown above, both of alternative variations show a negative cash flow and as B of A requires that prospective borrowers show a net operating income at least equal to their annual debt payment; therefore B of A would not approve a loan for either of these variations, regardless of the value of company assets.

The Desert Community Bank only handles financing for up to approximately $20 million and therefore would not have the ability to finance either of the enclosed variations of the Project. However, after disclosing the expected DSCR for the Project variations, the representative stated that no lending institution or private investor would support the undertaking.

A general consensus by all lending institutions was that given the amount of capital to be financed, the loan would need to be syndicated. This means that several different lenders would provide various portions of the loan, thereby requiring the backing of several separate lenders. With a debt service ratio showing negative cash flow, there is little possibility of convincing one lender, let alone several, to back this undertaking.

The California Integrated Waste Management Board (CIWMB) was also contacted to inquire about the availability of federal grant money or loans for the Project. The CIWMB responded to the request indicating that there were no available grants for composting facilities (CIWMB 2009), and the DSCR would not be adequate to warrant loan consideration.

5.4 ECONOMIC FEASIBILITY OF THE ENCLOSED FACILITY

The analysis of the enclosed facility alternative used information obtained on the existing enclosed facilities operated by the Inland Empire Utilities Agency in Rancho Cucamonga and the Las Virgenes Municipal Water District (LVMWD) located in Calabasas, California.

The IEUA facility cost $98,830,880 to construct in 2007; operates at approximately $6,000,000 per year (IEUA 2007); and has a capacity of 200,000 tons of combined biosolids and amendments per year. Approximately 75 percent (150,000 tpy) of the composted material is

biosolids. Processing biosolids into compost at the IEUA facility costs approximately $132 per ton of biosolids received when operating at capacity.

The capital cost for the construction of the LV enclosed composting facility was $45 million in 1994. The LV facility has an annual operating budget of $4,248,753 (LVMWD, 2009). The LV facility composts one load of biosolids per day (6 days/week) or 10,670 tons of biosolids per year. Processing biosolids into compost at the LV facility costs approximately $949 per ton of biosolids received.

The proposed Project will have an operational capacity of 400,000 tons of combined biosolids and green waste per year. As shown previously, a conventionally powered enclosed facility of this size with a conventional power source would require between $162.5 million and $1,246.6 million to build and between $6.7 million and $60.2 million to operate. Processing biosolids into compost for a conventionally powered enclosed facility at the Project site is estimated to cost between $107 and $862 per ton of biosolids received. Similarly, the solar powered variation would require between $229.7million and $1,407.0 million to build and $5.7 million to $56.4 million to operate (based on the IEUA and LV facilities and estimated solar costs). Processing biosolids into compost with this variation would cost between $132 and $915 per ton of biosolids received.

The average fee charged to wastewater treatment plants to dispose of biosolids at privately owned open air windrow facilities in Kern County and Arizona is approximately $15 per ton. The currently operating enclosed facilities are subsidized by public agencies to process the biosolids and do not profit from composting. In order to be profitable, these publicly owned facilities would need to increase their average fee by between 878% and 6,329%.

Similarly, an enclosed facility of the capacity of the proposed Project would require the average disposal fee to be increased by between 711% and 5,745% for the conventional and 877% and 6,098% for the solar variation. The disposal fees for biosolids composting are not anticipated to increase sufficiently for an enclosed facility to be profitable. As discussed previously, there are no grants available to subsidize the construction or operational costs and no lenders would provide the required financial backing to support the construction and operation of a privately owned enclosed facility. The enclosed facility alternative would operate at an annual loss, rendering this alternative economically infeasible.

The costs of the enclosed facility alternative and solar powered enclosed facility alternative are significantly higher than the costs associated with the proposed Project. The solar powered enclosed facility will require 90 to 216 acres adjacent to the composting facility to accommodate the solar field. This acreage of land is not available adjacent to the site. Although the VOC emissions from both enclosed facilities are reduced, they are not reduced below the significance threshold therefore the CEQA significance determination with respect to VOCs remains identical to the proposed Project. In addition, with the conventional power variation, a new significant impact is encountered with the increased generation of GHG emissions. Both enclosed facility variations are rejected because they do not reduce the significant impact (VOC emissions) associated with the proposed Project to less than significant levels, but significantly increase the cost of implementing the Project. As proposed, the Project fulfills the County's responsibility to "mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so", as this alternative cannot mitigate to less than significant or avoid the VOC emissions. Therefore, the enclosed facility alternative is considered environmentally and economically infeasible because it is incapable of being accomplished in a successful manner taking into account economic and environmental factors.

SECTION 6.0 - DOCUMENT PREPARATION, AGENCIES AND PERSONS CONSULTED, & WORKS CITED

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