

Proposed Amendments Rule 2301 Emission Reduction Credit Banking

(District Project CEQA # 20090452)

Draft Environmental Impact Report

August 8, 2011

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TABLE OF CONTENTS

| CHAPTER 1 – EXECUTIVE SUMMARY | 4 |
|---|------------|
| CHAPTER 2 – PROJECT DESCRIPTIONProject Description | 5 |
| Project Location, Land Use and Zoning | 6 |
| Authority Decision to Prepare and EIR and Scope of EIR | 7 |
| Intended uses of the EIR | |
| Process Used in Developing Draft Rule Amendments | |
| Discussion of Draft Rule Amendments | |
| Implementation of Draft Rule Amendments | 14 |
| CHAPTER 3 – ENVIRONMENTAL SETTING | 15 |
| Introduction | |
| Global Warming and Climate Change | |
| Greenhouse Gases | 16 |
| Legislation Relative to Addressing GHG Impacts | |
| AB 32 Scoping Plan | |
| District Policy for Addressing GHG Impacts | 24 |
| CHAPTER 4 - ENVIRONMENTAL IMPACTS | 26 |
| Introduction | |
| Reasonably Foreseeable Direct Environmental Impacts | 26 |
| Reasonable Foreseeable Indirect Environmental Impacts | |
| Significant Environmental Impacts | |
| Cumulative Impacts on Global Climate Change | 28 |
| | |
| CHAPTER 5 – PROJECT ALTERNATIVES | |
| Introduction | |
| Description of Project Alternatives | 31 |
| CHAPTER 6 – OTHER CEQA TOPICS | 33 |
| Areas of Controversy | |
| Growth Inducing Impacts | |
| Environmental Effects Found Not to be Significant | |
| CUADTED 7 DECEDENCES | |
| CHAPTER 7 – REFERENCES | |
| List of EIR Preparers | |
| List of EIR ReviewersReferences Cited | |
| Neierences Citeu | აყ |
| APPENDIX A - Notice of Preparation/Initial Study | 4 0 |



Chapter 1- Executive Summary

This rulemaking project consists of adopting amendments to District Rule 2301 (Emission Reduction Credit Banking) to allow voluntary banking of greenhouse gas (GHG) emission reductions. The draft amendments would provide a regulatory mechanism for sources to preserve voluntarily GHG emission reductions; provide a regulatory mechanism for the surrender of said GHG emission reductions to offset or mitigate proposed GHG emission increases; and would establish eligibility standards and administrative practices to assure that banked reductions are surplus of required reductions and are voluntary. The draft amendments neither impose conditions requiring installation of pollution control equipment nor require facilities to bank GHG emission reductions. The draft amendments do not define eligible uses of GHG reductions that are banked under this rule.

The District finds that there is no substantial evidence, in light of the whole record before the District, that the project could have a significant effect on the environment, including a cumulatively significant impact on global climate change.

Through the public participation process the District identified the following project specific areas of controversy:

- Use of banked GHG emissions which are not "additional" to any other regulatory requirement.
- Establishment of the baseline period.
- Permanence of banked GHG reductions
- Potential displacement of emissions to other locations "Leakage"

These areas of controversy are addressed in Chapter 6 of this document.

A Notice of Preparation (NOP) and Initial Study (IS) for the proposed project was circulated for public comment from February 24, 2010 to March 26, 2010 (SCH # 2010022066). The IS demonstrates that the project would not have a significant adverse impact on the environment. GHG emissions and their impact on global climate change is a known subject of scientific and political debate. Recognizing the diversity of views received during an earlier rule development process for Rule 2301, the District decided to prepare an Environmental Impact Report (EIR) to minimize potential delays in implementation of this project. The scope of the EIR is limited to addressing potential impacts implementation would have on global climate change. In response to the NOP/IS, the District received no comments regarding its determination of environmental significance or the proposed scope of the EIR.

There are no known project specific environmental issues to be resolved.



Chapter 2 - Project Description

2.1. Project Description

This rulemaking project consists of adopting amendments to District Rule 2301 (Emission Reduction Credit Banking) to allow voluntary banking of greenhouse gas (GHG) emission reductions. The draft amendments would provide a regulatory mechanism for sources to preserve voluntarily GHG emission reductions; provide a regulatory mechanism for the surrender of said GHG emission reductions to offset or mitigate proposed GHG emission increases; and would establish eligibility standards and administrative practices to assure that banked reductions are surplus of required reductions and are voluntary. The draft amendments neither impose conditions requiring installation of pollution control equipment nor require facilities to bank GHG emission reductions. The draft amendments do not define eligible uses of GHG reductions that are banked under this rule.

2.2. Project Objectives

The objectives of the proposed project are to establish a District administered mechanism to:

- Recognize high quality GHG emission reductions generated within the San Joaquin Valley Air Basin
- Provide a mechanism for the trading of banked GHG emission reductions
- Promote the early reductions of GHGs and their associated criteria and toxic pollutants in the District
- Via the District's extensive experience in banking criteria pollutant emissions, provide a measure of certainty and quality of banked GHG emission reductions lacking in some other GHG registries
- Provide a mechanism for persons to purchase and retire banked GHG emission reductions for societal benefit
- Provide a mechanism for persons to purchase and retire banked GHG emission reductions for California Environmental Quality Act (CEQA) mitigation purposes, within the constraints of the District's CEQA/GHG policy and guidance.
- Allow banked protocol-based GHG emission reductions to be used for compliance offsets in the California Air Resource Board (CARB) cap-andtrade program, provided the CARB cap-and-trade regulation includes such provisions and CARB approves such a use.

2.3. Project Location, Land Use and Zoning

This project is an amendment to existing District Rule 2301 (Emission Reduction Credit Banking), which applies to all transactions involving the storage, transfer, or use of emission reduction credits of affected pollutants within the boundaries of the San Joaquin Valley Unified Air Pollution Control District (see Appendix A, Map of District boundaries). Land use and zoning parameters are not applicable to this project.

2.4. Authority

This project is an amendment to existing District Rule 2301 (Emission Reduction Credit Banking). There are no public agencies that have discretionary authority over the proposed project, other than the San Joaquin Valley Air Pollution Control District. As such, the District is the Lead Agency for this project.

The San Joaquin Valley Air Pollution Control District (District) is the local agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the Basin. The District operates monitoring stations in the San Joaquin Valley air basin (SJVAB), develops and enforces rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning (AQMP) documents, and conducts source testing and inspections. The District AQMP includes control measures and strategies to be implemented to attain state and federal ambient air quality standards in the SJVAB. The District then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

On August 21, 2008 the San Joaquin Valley Air Pollution Control District's Governing Board adopted the Climate Change Action Plan (CCAP). One of the items that the CCAP authorized was the development of a mechanism, through a public process, to allow facilities to preserve greenhouse gas emission reductions that occurred in the District.

These draft amendments to Rule 2301 are implementing this mandate of the District's Governing Board. In general, the SJVAPCD's legal authority to adopt rules is based in the California Health and Safety Code Sections 39002, 40000, and 40001.

Separately, California CEQA guidance allows for lead agencies to develop programs to address the cumulative impacts of projects, provided such a program itself is subject to a CEQA review. The draft amendments to Rule 2301 could be part of a program developed by a lead agency to address the cumulative impacts of projects GHG emissions under CEQA, and in fact the District is proposing these changes as an important part of the District's efforts to address such situations.

2.5. Decision to Prepare an EIR and Scope of EIR

2.5.1. Introduction

At the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, establishing a performance standard, or establishing a treatment requirement, all air pollution control districts and air quality management districts, as defined in Section 39025 of the Health and Safety Code, must perform an environmental analysis of the reasonably foreseeable methods by which compliance with that rule or regulation will be achieved (CCR §15187(a)). An EIR is prepared by the agency at the time of adoption of a rule or regulation satisfies CCR §15187 requirements provided that the document contains the following information:

- An analysis of reasonably foreseeable environmental impacts of the methods of compliance;
- An analysis of reasonably foreseeable feasible mitigation measures relating to those impacts; and
- An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation, which would avoid or eliminate the identified impacts.

Rule 2301 is a voluntary baking rule that provides a regulatory mechanism for sources to store emission reduction credits (ERCs) for later use as offsets where allowed by District, state, and federal rules and regulations. The rule also provides a regulatory mechanism for sources to transfer ERCs to other sources for use as offsets as allowed by Rule 2201 (New and Modified Stationary Source Review Rule), or state and federal rules and regulations. The rule defines eligibility standards, quantitative procedures and administrative practices to ensure that ERCs are real, permanent, quantifiable, surplus, and enforceable. As such, the rule neither mandates specific methods of generating emission reduction credits, nor mandates specific uses of banked emission reduction credits. Accordingly, the most the District can analyze for purposes of CCR §15187(a) is the impacts, if any, of implementing rule provisions that establishes form, structure, and rigor to the currently existing ad hoc process of identifying potential GHG emission reduction credits and their use as mitigation under CEQA.

2.5.2. Scope of EIR

A Notice of Preparation (NOP) and Initial Study (IS) for the proposed project was circulated for public comment from February 24, 2010 to March 26, 2010 (SCH # 2010022066). No public comments were received. The IS demonstrates that implementing the project would not have a significant adverse impact on the environment. The reader is referred to the NOP/IS for discussion of



environmental topics not considered in this EIR, and the rationale for exclusion of each environmental topic. The NOP/IS can be found in Appendix A.

GHG emissions and their impact on global climate change is a known subject of scientific and political debate. Recognizing the diversity of views received during the rule development process the District decided to prepare an Environmental Impact Report (EIR) to minimize potential delays in implementation of this project. The scope of the EIR is limited to addressing potential impacts implementation would have on global climate change.

2.6. Intended Uses of the EIR

The EIR is an informational document that is intended to inform decision-makers, Responsible or Trustee agencies, and the general public of potential environmental effects of the proposed project. Furthermore, the Final EIR is intended to be a decision-making tool that provides full disclosure of the environmental consequences associated with implementing the proposed project. To the extent that local public agencies, such as cities, county planning commissions, etc., are responsible for making land use and planning decisions related to the mitigation of project specific GHG emission impacts, they could rely on the EIR during their decision-making process.

2.7. Process Used in Developing Draft Rule Amendments

To investigate the various issues concerning the development of a mechanism to bank GHG emission reductions, the District formed a diverse technical workgroup consisting of District staff, land use agency representatives, industry representatives, agricultural representatives. environmental representatives, and other interested parties. The District asked these stakeholders to participate in this process to gather ideas and issues from as many and as varied perspectives as possible, and to allow the District to develop a program that had benefits for Valley residents and businesses. This workgroup met several times in public meetings during late 2008 and early 2009, and engaged in a robust and frank discussion of pros and cons of establishing a carbon exchange. For a summary of the stakeholder contributions during this process the reader is referred to Appendix A of the September 7, 2011, Final Staff Report for Rule 2301 (Emission Reduction Credit Banking), incorporated herein by reference.

The workgroup investigated several areas of interest regarding a GHG emission reduction banking program, including:

 The differences between the CARB cap-and-trade regulation and a GHG emission reduction banking program. Succinctly, the CARB cap-and-trade regulation is a method to reduce actual GHG emissions by operating under a declining GHG cap, whereas GHG emission reduction banking is a method to



preserve GHG emission reductions that are in excess of any GHG emission reduction requirement, including reductions required by the CARB cap-and-trade regulation;

- Potential uses of banked GHG emission reductions. Banked GHG emission reductions could possibly be used to provide mitigation in the CEQA process, as a means to comply with a GHG cap-and-trade program, or other purposes;
- A review of other GHG emission reduction registration programs currently in existence was undertaken, including the Chicago Climate Exchange, New York Climate Exchange, Northeast Climate Exchange, Climate Action Reserve, and SCAQMD's SoCal Climate Solutions Exchange;
- Required elements of a District-administered GHG emission reduction banking program were discussed, including the establishment of criteria for GHG emission reduction banking, the use of CARB protocols, and the concept of additionality to quantify some GHG emission reductions. It was identified that some of the processes the District currently has in place for criteria pollutant emission reduction banking could be applied to GHG emission reduction banking;
- The advantages and disadvantages of development of a GHG emission reduction banking program; and
- Alternatives to the development of a District administered GHG emission reduction banking program were discussed, including the District's possible role in the Climate Action Reserve as a GHG emission reduction project verifier and/or providing technical assistance to project proponents quantify and mitigate their projects GHG emissions as part of the CEQA process.

A more detailed discussion of the above topics and workgroup members' various perspectives and conclusions are documented in the *Report to the APCO Regarding the Development of the San Joaquin Valley Carbon Exchange*, dated March 16, 2009, incorporated herein by reference.

While there was no consensus among all of the technical workgroup members, District staff's analysis of the information gathered during this public process led to their recommendation to the APCO to develop a mechanism to allow the banking of GHG emission reductions. District staff believes that by developing a program that allows the issuance of banked GHG emission reductions for those projects that are not addressed by a CARB approved protocol, and those projects that are addressed by such protocols, the concerns of the technical workgroup will be satisfactorily addressed and the advantages of such a program can be realized to the benefit of Valley businesses and residents.

2.8. Discussion of Draft Rule Amendments

The draft amendments to Rule 2301, Emission Reduction Credit Banking, incorporate a method to bank voluntary GHG emission reductions. While the CCAP indicated that such a system would be contained in a rule called the San Joaquin Valley Carbon Exchange, staff proposes that these provisions be



incorporated into Rule 2301. A separate rule allowing the banking of GHG emission reductions is not required.

The goals of the draft amendments to Rule 2301 are to provide a mechanism to preserve voluntary high quality greenhouse gas (GHG) emission reductions.

The draft rule will allow the use of banked GHG emission reductions for any purpose and will not impose any restrictions on their use. The main use that is anticipated for banked GHG emission reductions is to be surrendered as a method to mitigate a project's GHG emissions as part of the CEQA process.

The potential use of banked GHG emission under the CARB cap-and-trade regulation will be subject to the requirements of that regulation. As proposed, District banked GHG emission reductions are not allowed for use as compliance offsets in the CARB cap-and-trade regulation. The CARB cap-and-trade regulation is subject to change in the future.

The draft amendments to Rule 2301 will allow for GHG emission reductions that fall into two different categories to be banked with the District, as discussed below.

2.8.1. Non-protocol GHG Emission Reductions

In quantifying this type of GHG emission reduction the District would use the criteria in Rule 2301, i.e. that the emission reductions be real, enforceable, permanent, surplus, and quantifiable. The District has a tremendous amount of experience in using these criteria and validated techniques to quantify criteria pollutant emissions reductions, and would simply be expanding this rule to extend the same type of time-tested analyses to quantifying and validating GHG emissions reductions.

The District anticipates that the most probable use of banked ERCs quantified without CARB approved protocols would be retirement to mitigate project related GHG emissions during the CEQA process. Under CEQA, the Lead Agency for a particular project has discretionary authority to determine what mitigation measures are appropriate and feasible. When serving as the Lead Agency in the CEQA process, the District would allow retirement of banked GHG ERCs that were quantified without CARB approved protocols as a method to mitigate a project's GHG emission impacts. When serving as a responsible or commenting agency in the CEQA process, the District would support the Lead Agency's use of this type of GHG mitigation, provided the Lead Agency is following the District's guidance on addressing GHG emissions under CEQA.

GHG emission reductions achieved by a facility to comply with the CARB capand-trade regulation are required by the regulation, i.e. the facility is relying on the reduction to satisfy, at least in part, the requirements of the CARB cap-and-



trade regulation. As such, these reductions are not surplus and cannot be banked.

Excluding GHG emission reductions achieved in compliance with the CARB capand-trade regulation ensures that the reductions made to comply with the capand-trade regulation are not double counted. Thus, individual project GHG emission increases at capped sources cannot result in an overall GHG increase, and in fact will result in an overall decrease in GHG emissions.

The CARB cap-and-trade regulation sets a statewide limit on the emissions from sources responsible for 80 percent of California's greenhouse gas emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest-cost options to reduce emissions. The cap-and-trade program also works in concert with other measures, such as standards for cleaner vehicles, low-carbon fuels, renewable electricity and energy efficiency, and complements and supports California's existing efforts to reduce smog-forming and toxic air pollutants." Companies are not given a specific limit on their greenhouse gas emissions but must supply a sufficient number of allowances (each covering the equivalent of one ton of carbon dioxide) to cover their annual emissions. Each year, the total number of allowances issued in the state drops, requiring companies to find the most costeffective and efficient approaches to reducing their emissions. By the end of the program in 2020 there will be a 15 percent reduction in greenhouse gas emissions compared to today, reaching the same level of emissions as the state experienced in 1990, as required under AB 32.

The CARB cap-and-trade regulation ensures that there is an overall decrease in GHG emissions from capped sources. As such, any project at a capped source that results in an increase in GHG emissions will be fully mitigated through implementation of the CARB cap-and-trade regulation. The CARB cap-and-trade regulation in itself ensures that there is an overall decrease in GHG emissions from capped sources regardless of any individual project that would by itself increase GHG emissions. Thus, during the CEQA process, individual projects at facilities subject to the CARB cap-and-trade regulation would be determined to have a less than significant cumulative impact on global climate change.

Separately, GHG emission reductions that occur as a collateral benefit of an action taken by a facility that is not required by a GHG regulation are surplus GHG emission reductions. As such, quantifiable GHG emission reductions are not specifically required by a GHG regulation could be banked.

As discussed above, the main anticipated use of banked GHG reductions is expected to be the generation and retirement of such emission reductions to provide GHG mitigation as part of the CEQA process. Pursuant to the District's CEQA policy, when the District is the lead agency one option for a project to be



deemed to have a less than cumulatively significant impact on global climate change is to provide GHG mitigation equal to 29% of the project's GHG emission increase, compared to the baseline case. This quantity of mitigation is independent of other actions taken by the facility (or other facilities from which the banked GHG emission reductions are acquired) that result in a GHG emission reduction. As such banked GHG emission reductions would represent an actual reduction in GHG emissions and retirement of such ERCs would be appropriate mitigation under the District's GHG CEQA policy and guidance.

By providing a method for facilities to generate banked GHG emission reductions from a wide variety of emission reduction projects and allowing the transfer and retirement of such ERCs, the District will provide a mechanism to assist facilities to adequately address their project's GHG emissions in the CEQA process. Emission reductions would not be required to be additional, i.e. GHG emission reductions that occur as a collateral benefit of another requirement may qualify for banking, provided they are surplus of existing GHG reduction regulations and requirements.

It is expected that many different types of GHG emission reduction projects would qualify for banking using this approach, and because the District's GHG CEQA policy and guidance allow the use of a majority of such reductions, such reductions would be able to be used to mitigate GHG emissions increases under CEQA, provided the lead agency is using the District's GHG CEQA guidance.

2.8.2. Protocol-based GHG Emission Reduction Credits

In addition to the types of projects described above, the District would be able to bank GHG emission reductions that rely on a CARB approved GHG emission reduction project protocol. CARB approved GHG emission reduction project protocols include detailed procedures on how to quantify GHG emission reductions for specific project types and specific criteria to ensure that the emission reductions are additional.

Emission reductions quantified using such protocols (known as compliance offsets) can be used to a limited degree by facilities to comply with the AB32 capand-trade regulations as adopted on Dec 16, 2010 if the reductions are registered with a qualified third party offset program. Furthermore, to be interchangeable with other emission reduction registries, e.g. Climate Action Reserve or the Chicago Climate Exchange, GHG emission reductions would likely have to be quantified pursuant to a CARB approved emission reduction project protocol.

As specified by CARB, for an emission reduction to be additional it must not be due to (either directly or indirectly) a routine replacement of equipment or due (either directly or indirectly) to any regulatory requirement, including any requirement of AB32 or any local, State, or Federal rule requirement. The



requirement that GHG emission reductions be additional means that the actions that generate the emission reduction go beyond any type of requirement that would have the effect (even if not the target of the requirement) of reducing GHG emissions and is due primarily with the intent of generating GHG emission reductions. The requirement that emission reductions be additional is generally more stringent than the Rule 2301 requirement that emission reductions be surplus, i.e. in excess of any current or proposed regulatory requirement that targets that specific pollutant.

As of Dec 16, 2010, there are four currently approved CARB GHG emission reduction project protocols: ozone depleting substances projects, livestock projects, urban forests projects, and U.S. forest projects.

The CARB cap-and-trade regulation allows the use of GHG compliance offsets registered with CARB or with qualified third party offset programs as a means of compliance. California Code of Regulations Article 5, Subarticle 14, section 95990 of the regulation specifies criteria that third party offset programs must meet. One of these criteria is that "the program's primary business is operating an offset project registry for voluntary or regulatory purposes". While a District run program does not meet this criterion, the regulation may be amended in the future to allow District's to operate a qualified third party offset program. This rule will position the District to respond quickly when such a change is made.

In general, the development and CARB approval process for GHG emission reduction project protocols (i.e. approved by incorporation into the cap-and-trade regulation) is generally a very involved and time consuming process. Additional protocols are currently being developed by the Climate Action Reserve and the California Air Pollution Control Officers' Association that may be submitted for CARB incorporation into the regulation in the future.

If Valley businesses or other local entities determine that there is a need for a new CARB approved GHG emission reduction project protocol (to allow such emission reductions to be used for compliance in the CARB cap-and-trade regulation compliance), under this rule the District could develop such a protocol and submit it to CARB for their approval. Due to the District's extensive experience with criteria pollutant emission reduction banking and it's proactive approach to providing Valley businesses and residents with assistance in meeting California's climate change issues, we believe that the District could develop such protocols that would address Valley business and residents concerns in a timely and efficient manner.

GHG emission reductions that are additional and quantified using CARB approved GHG emission reduction project protocols are also intended to be interchangeable with GHG emission reductions in other registries.



Finally, we should note that reductions banked under the non-protocol requirements of the rule would be eligible for re-examination and potential rebanking after a protocol is developed for that type of reduction, to the extent allowed by the approved protocol.

2.9. Implementation of Draft Rule Amendments

Applications to bank GHG emission reductions will take the same form as applications that are currently used for the more traditional criteria pollutant emission reductions. Such applications will be subject to the existing fee structure in Rule 3060 (Emission Reduction Credit Banking Fee). This rule requires that for Emission Reduction Credits (ERCs) to be issued for a project, that a filing fee and an analysis fee be paid for the issuance of an ERC. Currently, these fees are as follows: a filing fee of \$759, and an analysis fee of \$90/hour (the \$759 is a deposit towards the hourly processing fees, and is also the minimum fee for analyzing an ERC banking application). Subsequent transactions for a particular ERC are only subject to a lesser filing fee of \$71 per certificate.

The District currently has a computerized system in place to issue, transfer, and track the use of ERCs for affected pollutants. Such ERCs are issued in an amount (lbs) per calendar quarter. All valid ERCs are included in an ERC registry that is available on the District's website.

This existing system, with appropriate modifications, will be used to issue, transfer, retire, and track the use of GHG ERCs issued as CO2 equivalents. The computerized system will be revised to reflect that GHG ERCs are issued on annual amounts (not quarterly) and in units of metric tons (1,000 kg) per year.

In addition, GHG ERCs will be clearly conditioned to reflect the CARB-approved protocol upon which they are based. Likewise, ERCs that are not based on a protocol will be clearly indicated. These separate categories of ERCs will be tracked and reported separately on the District website, so that buyers and sellers of such credits will have a clear indication of the availability of various types. In addition, the District will track, and will display on the District Website, purchase prices of all transactions.

For a detailed discussion of the draft rule amendments and District implementation of the project, the reader is referred to the Final Staff Report Rule 2301 (Emission Reduction Credit Banking), September 7, 2011 and Draft Rule 2301 (Emission Reduction Credit Banking), September 7, 2011.



Chapter 3 – Environmental Setting

3.1. Introduction

CCR §15125 requires that an EIR include a description of the environment within the vicinity of a proposed project as it exists at the time the NOP/IS is published, or if no NOP/IS is published, at the time the environmental analyses commences from both a local and regional perspective. To provide context for the analysis of the project's cumulative impact on global climate change, this chapter presents an overview of the scientific, statutory and regulatory framework behind determining environmental significance of project specific GHG emissions.

3.2. Global Warming and Climate Change

Briefly stated, global climate change (GCC) is the cumulative change in the average weather of the earth that may be measured by changes in temperature, precipitation, storms, or wind. Global Climate Change is now generally accepted by the scientific community to be occurring and caused by greenhouse gases (GHG). Greenhouse gases are gases that trap heat in the atmosphere. The scientific and political communities in the State of California have collectively concluded that a significant and growing scientific body of evidence supports the need for regulating GHG emissions. Compilations of data and analyses, such as the 2007 report from the Intergovernmental Panel on Climate Change (IPCC), have provided a generally accepted scientific basis for implementing climate change policy.

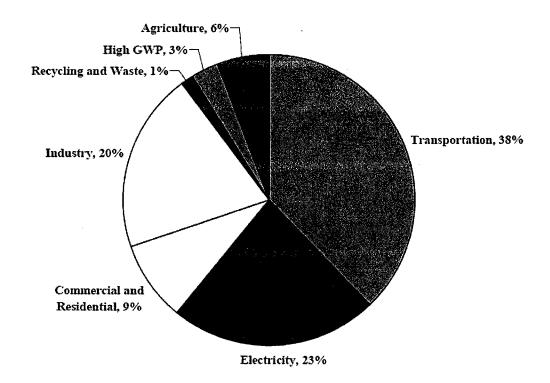
In the last few years information and data have been compiled that demonstrate increases in average global air and ocean temperatures are occurring (AEP 2007). According to the IPCC Report, global temperatures are expected to rise approximately 0.2 degree Celsius per decade for the next couple of decades under a variety of scenarios (IPPC 2007). Further, global temperatures are expected to continue to increase for centuries as a result of human activities due to the time scales associated with climate processes and feedbacks, even if GHG concentrations are stabilized. As a result, based on the current understanding of climate-carbon feedback, model studies show that substantial GHG emission reductions are necessary to avoid substantial increases in global air and ocean temperatures.

As a result of human activities, such as electricity production, vehicle use, etc., GHGs have been accumulating in the earth's atmosphere at a faster rate than has occurred historically, i.e., prior to the Industrial Age starting approximately 150 years ago (AEP 2007).



Figure 1 shows that transportation is the largest source of GHG in California, contributing 38 percent of the State's total GHG emissions for the 2002-2004 time period. Average GHG emissions, expressed in million metric tons Carbon Dioxide Equivalent (MMTCO2E), are up from 35 percent in 1990. Electricity generation and importation is the second largest source, contributing over 25 percent of the State's GHG emissions (CARB 2008). Additional information is available from the Air Resources Board (www.arb.ca.gov).

Figure 1: California's Greenhouse Gas Emissions by Sector (Gross Emissions: 469 MMT CO2E)



Source: CARB, 2008

3.3. Greenhouse Gases

Some greenhouse gases such as water vapor occur naturally and are emitted to the atmosphere through natural processes as well as through human activities. The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide. GHGs can include:

<u>Water Vapor</u>: Although not considered a pollutant, water vapor is the most important, abundant, and variable GHG. In the atmosphere, it maintains a climate necessary for life. The main source of water vapor is evaporation from the ocean (approximately 85 percent). Other sources include sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves.



Ozone: Unlike other GHG, ozone is relatively short- lived and, therefore, is not global in nature. It is difficult to make an accurate determination of the contribution of ozone precursors (nitrogen oxides and volatile organic compounds) to global climate change (AEP 2007).

<u>Aerosols</u>: Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel-containing sulfur is burned. Black carbon (or soot) is emitted during bio mass burning or incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

<u>Chlorofluorocarbons</u>: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH4 or ethane with chlorine and/or fluorine atoms. CFCs are nonflammable, nontoxic, insoluble, and chemically uncreative in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as cleaning solvents, refrigerants, and aerosol propellants. They destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987 (AEP 2007).

<u>Carbon dioxide</u>: Carbon dioxide (CO2) is an odorless, colorless gas, which has both natural and anthropogenic sources. Natural sources include the following: respiration of bacteria, plants, animals, and fungus, evaporation from oceans, volcanic out gassing, and decomposition of dead organic matter. Anthropogenic sources of carbon dioxide are from burning coal, oil, natural gas, and wood. Concentrations of CO2 were 379 parts per million (ppm) in 2005, which is an increase of 1.4 ppm per year since 1960 (AEP 2007).

Methane: Methane (CH4) is a flammable gas and is the main component of natural gas. When one molecule of CH4 is burned in the presence of oxygen, one molecule of carbon dioxide and two molecules of water are released. There are no direct ill health effects from CH4. A natural source of CH4 is from the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH4, which is extracted for fuel. Other sources are from cattle, fermentation of manure, and landfills.

<u>Nitrous oxide:</u> Nitrous oxide (N2O), also known as laughing gas, is a colorless greenhouse gas. Higher concentrations of N2O can cause euphoria, dizziness, and slight hallucinations. N2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (nitric acid production, nylon production, fossil fuel-fired power plants, and vehicle emissions) also contribute to its atmospheric load. It is used in racecars, rocket engines, and as an aerosol spray propellant.

<u>Fluorinated Gases:</u> Gases that are synthetic, powerful GHG that are emitted from a variety of industrial processes.



<u>Hydrofluorocarbons</u>: Hydrofluorocarbons (HFCs) are synthetic man-made chemicals that are used as a substitute for CFCs for automobile air conditioners and refrigerants.

<u>Perfluorocarbons</u>: Perfluorocarbons (PFCs) have stable molecular structures and do not break down though the chemical processes in the lower atmosphere. High-energy ultraviolet rays, roughly 60 lulometers above the earth's surface are able to destroy the compounds. PFCs have long lifetimes, ranging between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. Concentrations of tetrafluoromethane in the atmosphere are over 70 parts per trillion (ppt) (AEP 2007). The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

<u>Sulfur hexafluoride:</u> Sulfur hexafluoride (SF6) is an inorganic, colorless, odorless, nontoxic, nonflammable gas. Concentrations in the 1990s were roughly 4 ppt (AEP 2007). SF6 is used for insulation in electric power transmission and distribution equipment, in semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.

Under Assembly Bill 32 (AB 32) GHGs are defined as carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

The global warming potential (GWP) of the various GHGs is assigned as a measure of their relative average global radiative forcing effect, the potential of a gas or aerosol to trap heat in the atmosphere. Individual GHG species have varying GWP and atmospheric lifetimes. The carbon dioxide equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a single metric. The reference gas for GWP is carbon dioxide with a GWP of one and GWP weighted emissions are measured in terms of CO2 equivalents (CO2E) (EPA 2008). For example, methane has a GWP of 21; methane has a 21 times greater global warming effect than carbon dioxide on a weight basis (EPA 2008). Several GWPs of other GHGs are shown in Table 1 below:



Table 1: Global Warming Potential of GHGs

| Gas | Atmospheric Lifetime | GWP |
|-----------------------------|----------------------|--------|
| Carbon dioxide (CO2) | 50 – 200 | 1 |
| Methane (CH4) | 12 <u>+</u> 3 | 21 |
| Nitrous oxide (N2O) | 120 | 310 |
| HFC-23 (Hydrofluorocarbons) | 264 | 11,700 |
| HFC-32 | 5.6 | 650 |
| HFC-125 | 32.6 | 2,800 |
| HFC-134a | 14.6 | 1,300 |
| HFC-143a | 48.3 | 3,800 |
| HFC-152a | 1.5 | 140 |
| HFC-227ea | 36.5 | 2,900 |
| HFC-236fa | 209 | 6,300 |
| HFC-4310mee | 17.1 | 1,300 |
| CF4 (Perfluorocarbons) | 50,000 | 6,500 |
| C2F6 | 10,000 | 9,200 |
| C4F10 | 2,600 | 7,000 |
| C6F14 | 3,200 | 7,400 |
| Sulfer hexafluoride (SF6) | 3,200 | 23,900 |

Source: U.S. EPA (http://www.epa.gov/)



3.4. Legislation Relative to Addressing GHG Impacts

3.4.1. **Executive Order S-3-05**

In response to the increasing body of evidence that GHGs will continue to affect global climate, Governor Schwarzenegger issued executive order (EO S-3-05) in June 2005, which established several greenhouse gas emission reduction targets for California. GHG emissions are to be reduced to 2000 emission levels by 2010; to 1990 emission levels by 2020 (a 29% reduction from Business-as-Usual emissions levels projected for 2020) (CARB 2008)); and to 80% below 1990 levels by 2050.

3.4.2. Assembly Bill 32 (AB 32) - The California Global Warming **Solutions Act of 2006**

On September 27, 2006, Governor Schwarzenegger signed Assembly Bill AB 32. By requiring in law a reduction of GHG emissions to 1990 levels by 2020, California set the stage for its transition to a sustainable, clean energy future. CARB is the lead agency for implementing AB 32, which set major milestones for establishing the overall program. More specifically, AB 32 includes the following requirements for the California Air Resources Board (CARB):

- Identify the statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020 (HSC section 38550). In December 2007, the Board approved the 2020 emission limit of 427 million metric tons of carbon dioxide equivalent (MMTCO2E) of GHGs.
- Adopt a regulation requiring the mandatory reporting of GHG emissions (HSC section 38530). In December 2007, the Board adopted a regulation requiring the largest industrial sources to report and verify their GHG emissions.
- Identify and adopt regulations for Discrete Early Actions that could be enforceable on or before January 1, 2010, (HSC section 38560.5). Beginning in 2007, the Board identified and approved nine Discrete Early Action measures including regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources.
- Develop a "Scoping Plan" that outlines the State's strategy to achieve the 2020 GHG emissions limit. A Scoping Plan sets forth those strategies that, at the time of the adoption of the Plan, CARB believes would be best to pursue. Adoption of a Scoping Plan does not, however, mean that CARB is giving final approval to every strategy contained in that Plan. A substantial number of the strategies contained in an approved Scoping Plan will require their own regulatory processes, at the end of which CARB may choose a course that is different from that set forth in a Scoping Plan. Furthermore, adoption of a Scoping Plan is not a condition precedent for the adoption of greenhouse gas reduction measures CARB may pursue under other provisions of AB 32.



- Convene an Environmental Justice Advisory Committee (EJAC) to advise the Board in developing the Scoping Plan and any other pertinent matter in implementing AB 32 (HSC section 38591). The EJAC met numerous times, providing comments on the proposed development of the Scoping Plan, and submitted its comments and recommendations on the 2008 draft Scoping Plan.
- Appoint an Economic and Technology Advancement Advisory Committee (ETAAC) to provide recommendations for technologies, research and GHG emission reduction measures (HSC section 38591). After a year-long public process, the ETAAC submitted a report of their recommendations to the Board in February 2008. The ETAAC also reviewed and provided comments on the 2008 draft Scoping Plan.
- On or before January 1, 2011, adopt greenhouse emission limits and emission reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse emissions limit, to become operative beginning on January 1, 2012 (HSC section 38562).

3.4.3. Senate Bill 97 (SB 97) - CEQA: Greenhouse Gas Emissions

In August 2007, Governor Schwarzenegger signed into law Senate Bill (SB) 97 – CEQA: Greenhouse Gas Emissions. SB 97 requires the Office of Planning and Research, by July 1, 2009, to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency would be required to certify and adopt those guidelines by January 1, 2010. The Office of Planning and Research would be required to periodically update the guidelines to incorporate new information or criteria established by CARB pursuant to the California Global Warming Solutions Act of 2006. SB 97 also identifies a limited number of types of projects that would be exempt under CEQA from analyzing GHG emissions. Finally, the legislation will repealed on January 1, 2010. For further information. http://opr.ca.gov/index.php?a=cega/index.html

In April 2009, the Governor's Office of Planning and Research (OPR) proposed several amendments to the CEQA Guidelines to address analysis and mitigation of potential effects of greenhouse gas emissions. Among the proposed amendments are provisions recognizing lead agency discretion to adopt quantitative or qualitative thresholds of significance. On February 16, 2010, the Office of Administrative Law approved the amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The amendments became effective on March 18, 2010. Specific amendments are presented below:

- A new subdivision emphasizes that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of CEQA requirements for cumulative impacts analysis;
- A new subdivision was added to assist lead agencies in determining the significance of project related greenhouse gas emissions (CCR §15064.4.). In addition to quantification of GHG emissions, this section provides for the consideration of several other qualitative factors that may be used in the determination of significance. Per the amendments, a lead agency has discretion to determine whether to:
 - Use a model or methodology to quantify greenhouse gas emissions resulting from a project, or
 - To rely on a qualitative analysis, or
 - To apply performance based standards

3.4.4. SB 375 (Steinberg) Transportation, Land Use, and the California Environmental Quality Act (CEQA)

On September 30, 2008, Governor Schwarzenegger signed into law SB 375 (Steinberg). SB 375 focuses on housing and transportation planning decisions to reduce fossil fuel consumption and conserve farmlands and habitat. This legislation is important to achieving AB 32 goals because greenhouse gas emissions associated with land use, which includes transportation, are the single largest sector of emissions in California. Further, SB 375 provides a path for better planning by providing incentives to locate housing developments closer to where people work and go to school, allowing them to reduce vehicle miles traveled every year. Finally, SB 375 provides certain exemptions under CEQA law for projects that are proposed consistent with local plans developed under SB 375. The bill is available here: http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_0351-0400/sb_375_bill_20080930_chaptered.html

3.5. AB 32 Scoping Plan

3.5.1. Introduction

A "scoping plan" is required by one provision of AB 32 (Health and Safety Code (HSC) section 38561). The Scoping Plan outlines the State's strategy to reduce its GHG emissions to 1990 levels by 2020. CARB is the State Agency responsible for preparation of the Scoping Plan. In 2008, CARB, consistent with its legislative mandate prepared a Scoping plan for consideration by its Board, which was adopted on May 11, 2009. CARB's adoption of GHG reduction measures is authorized under a separate provision (HSC section 38562). Thus, consideration of CARB's objectives in adopting the AB 32 Scoping Plan is important when determining significance of project related GHG emissions on global climate change.



3.5.2. AB 32 Scoping Plan Objectives

CARB derived the following objectives from the requirements of AB 32 for the Scoping Plan (HSC section 38561) and for the adoption of emission reduction measures by regulation (HSC section 38562), including market-based regulations (HSC section 38570):

- Establish regulations to meet the 2020 goal to establish regulations that implement reduction strategies covering the state's GHG emissions in furtherance of California's mandate to reduce GHG emissions to 1990 levels by 2020;
- Reduce fossil fuel use to reduce California's reliance on fossil fuels and diversify energy sources while maintaining electric system reliability;
- Link with partners to link, where feasible, with other Western Climate Initiative (WCI) partner programs to create a regional market system;
- Design an enforceable, amendable program to design a program that is enforceable and that is capable of being monitored and verified;
- Ensure emission reductions to pursue emissions reductions that are real, permanent, quantifiable, verifiable and enforceable;
- Achieve technologically feasible and cost-effective reductions to achieve the
 maximum technologically feasible and cost-effective reductions in GHG
 emissions in the aggregate from sources or categories of sources under the
 cap, in furtherance of achieving the statewide GHG emissions limit (HSC
 section 38562, subd. (a) and (c);
- Avoid disproportionate impacts to ensure, to the extent feasible, that
 activities undertaken to comply with the regulations do not disproportionately
 impact low-income communities (HSC section 38562, subd. (b)(2));
- Credit early action to ensure, to the extent feasible, that entities that have voluntarily reduced their GHG emissions prior to the implementation of regulations receive appropriate credit for early voluntary actions (HSC section 38562, subd. (b)(3));
- Complement existing air standards to ensure, to the extent feasible, that
 activities undertaken pursuant to the regulations complement, and do not
 interfere with, efforts to achieve and maintain national and California Air
 Quality Attainment Standards and to reduce toxic air contaminant (TAC)
 emissions (HSC, section 38562, subd. (b)(4));
- Consider a broad range of public benefits to consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health (HSC section 38562, subd. (b)(6));
- Minimize administrative burden to minimize, to the extent feasible, the administrative burden of implementing and complying with the regulation (HSC section 38562, subd. (b)(7));

- Minimize leakage to minimize, to the extent feasible, leakage of emissions to states and countries without a mandatory GHG emission cap (HSC section 38562, subd. (b)(8));
- Weigh relative emissions to consider, to the extent feasible, the contribution of each source or category of sources to statewide emissions of GHGs (HSC section 38562, subd. (b)(9));
- Achieve real emission reductions in market-based strategies to ensure that GHG emission reductions achieved through any market-based compliance mechanisms are real, permanent, quantifiable, verifiable and enforceable by the Board (HSC section 38562, subd. (d)(1));
- Achieve reductions over existing regulation using market-based strategies to ensure that the reductions from any market-based compliance mechanisms are in addition to any GHG emissions reductions otherwise required by law or regulation, and any other GHG emissions reduction that would otherwise occur (HSC section 38562, subd. (d)(2));
- Complement direct measures to ensure, if applicable, that the GHG emissions reduction from a market-based compliance mechanism occurs over the same time period and is equivalent in amount to any direct emissions reduction required pursuant to AB 32 (HSC section 38562, subd. (d)(3));
- Consider emissions impacts to consider, to the extent feasible, the potential for direct, indirect, and cumulative emissions impacts from a market-based compliance mechanism, including localized impacts in communities that are already adversely impacted by air pollution (HSC section 38570, subd. (b)(1));
- Prevent increases in other pollutant emissions to design, to the extent feasible, any market-based compliance mechanism to prevent any increase in the emissions of criteria air pollutants or toxic air contaminants (TACs) (HSC section 38570, subd. (b)(2));
- Maximize co-benefits to maximize, to the extent feasible, additional environmental and economic benefits for California, as appropriate (HSC section 38570, subd. (b)(3)); and
- Avoid duplication to ensure that electricity and natural gas providers are not required to meet duplicative or inconsistent regulatory requirements HSC sections 38501(g) and 38561(a)).

3.6. District Policy for Addressing GHG Impacts

On December 17, 2009, the District's Governing Board adopted the District policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. In support of this policy, District staff prepared a staff report: Addressing Greenhouse Gas Emissions under the California Environmental Quality Act. The report evaluates different approaches for assessing significance of GHG emission impacts. As presented in the report, District staff reviewed the relevant scientific information and concluded that the existing science is inadequate to support quantification of the extent to which project specific GHG emissions would impact global climatic features such as



average air temperature, average annual rainfall, or average annual snow pack. In other words, the District was not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. This is readily understood when one considers that global climatic change is the result of the sum total of GHG emissions, both manmade and natural that occurred in the past; that is occurring now; and will occur in the future.

In the absence of scientific evidence supporting establishment of a numerical threshold, the District Policy applies performance based standards to assess project specific GHG emission impacts on global climate change. The determination of significance is founded on the principal that projects whose GHG emissions have been reduced or mitigated consistent with the California Global Warming Solutions Act of 2006, commonly referred to as "AB 32", should be considered to have a less than cumulatively significant impact on global climate change.

The policy relies on the use of performance based standards, otherwise known as Best Performance Standards (BPS), to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact.

For a detailed discussion of the District's establishment of thresholds of significance for GHG emissions, and the District's application of said thresholds, the reader is referred to the District document: Final Staff Report Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act, December 17, 2009, and the District policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency, incorporated herein by reference.



Chapter 4 – Environmental Impacts

4.1. Introduction

At the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, establishing a performance standard, or establishing a treatment requirement, all air pollution control districts and air quality management districts, must perform an environmental analysis of the reasonably foreseeable methods by which compliance with that rule or regulation will be achieved (CCR §15187(a)). The environmental analysis shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and specific sites. The agency may utilize numerical ranges and averages where specific data is not available, but is not required to, nor should it, engage in speculation or conjecture. However, the Lead Agency is not required to conduct a project level analysis (CCR §15187 et seq.). An impact is considered significant under CEQA (PRC §21068) when a substantial, or potentially substantial, adverse change in the environment occurs.

Rule 2301 is a voluntary baking rule that provides a regulatory mechanism for sources to store emission reduction credits (ERCs) for later use as offsets where allowed by District, state, and federal rules and regulations. The rule also provides a regulatory mechanism for sources to transfer ERCs to other sources for use as offsets as allowed by Rule 2201 (New and Modified Stationary Source Review Rule), or state and federal rules and regulations. The rule defines eligibility standards, quantitative procedures and administrative practices to ensure that ERCs are real, permanent, quantifiable, surplus, and enforceable. As such, the rule neither mandates specific methods of generating emission reduction credits, nor mandates specific uses of banked emission reduction credits. Accordingly, the most the District can analyze for purposes of CCR §15187(a) is the impacts, if any, of implementing rule provisions that establishes form, structure, and rigor to the existing ad hoc process of identifying potential GHG emission reduction credits and their use as mitigation under CEQA.

4.2. Reasonably Foreseeable Direct Environmental Impacts

As presented above, draft amendments to District Rule 2301 (Emission Reduction Credit Banking) neither impose conditions requiring installation of pollution control equipment, nor require facilities to bank GHG emission reductions, nor do they require such banked reductions be used in any way. Thus, the District finds that implementation of the project would not impose conditions directly resulting in a physical change in the environment.



4.3. Reasonably Foreseeable Indirect Environmental Impacts

Implementation of the proposed rule amendments could foreseeably result in projects undertaken for the purpose of generating GHG emission reduction credits and the use of banked GHG emission reduction credits as mitigation of project specific impacts under CEQA. However, given the wide variety of potential emission reduction projects that could be voluntarily undertaken and the diversity of potential voluntary uses of banked GHG emission reduction credits, characterization of potential indirect environmental impacts is too speculative for analysis. At the project level, the District presumes that the environmental review process, as required by CEQA, is sufficient to ensure that project specific environmental impacts will be fully disclosed to the public and mitigated to the extent required. From a global climate change perspective, implementation of GHG emission reduction projects would be consistent with California's efforts to reduce state wide GHG emissions to 1990 levels by 2020 and intrinsically would have a positive impact on global climate change.

It is reasonably foreseeable that banked GHG emission reductions would be retired for the purpose of mitigating project specific impacts as part of the California Environmental Quality Act (CEQA) environmental review process. As presented in this EIR, the proposed project would be implemented consistent with the regulatory framework currently allowed for criteria pollutant emissions under District 2201 (New and Modified Stationary Source Review Rule). The District has extensive experience in implementing an emissions reduction credit banking system, including establishing eligibility standards, quantitative procedures and administrative practices. As such, implementing the proposed amendments to District Rule 2301 would establish form, structure, and rigor to the existing ad hoc process of securing GHG emission reduction credits and ensuring their permanence and enforceability. Furthermore, use of locally generated GHG emission reduction credits as mitigation, versus carbon credits potentially generated outside the state of California, supports the state's efforts to reduce state wide GHG emissions to 1990 levels by 2020 and adds veracity to mitigating project specific impacts on global climate change. Thus, the District finds that there is no substantial evidence, in light of the whole record before the District, that implementing the proposed rule development project would indirectly have an adverse environmental impact.

4.4. Significant Environmental Impacts

The District finds that there is no substantial evidence, in light of the whole record before the District, that implementation of the project could have a significant effect on the environment. The reader is referred to the NOP/IS for a more thorough discussion and rationale supporting the determination that the project would have a less than significant environmental impact. The NOP/IS can be found in Appendix A.



4.5. Cumulative Impacts on Global Climate Change

CEQA Guidelines §15130(a) requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects "(CCR §15065(a)(3)).

The challenge in assessing the significance of GHG emissions is complicated by the fact that project specific GHG emissions occur at a micro-scale relative to global emissions. Thus, project specific impacts need to be evaluated in terms of whether or not the project could result in a cumulatively considerable incremental contribution to global climatic change, which is macro-scale impact. Furthermore, the mere existence of significant cumulative impacts caused by other projects does not constitute substantial evidence that a proposed project's incremental effects are cumulatively significant (CCR §15064(h)(4). It is in this environment of scientific uncertainty that CEQA lead agencies are expected to determine whether a project's GHG emissions will have a significant impact on the environment.

On February 16, 2010, the California Office of Administrative Law approved amendments to the California Code of Regulations, emphasizing that the effects of GHG are cumulative impacts and should be analyzed in the cumulative impacts analysis. To assist lead agencies in determining the significance of project related greenhouse gas emissions a new subdivision was added to the CEQA Guidelines; Section 15064.4 (Determining The Significance of Impacts From Greenhouse Gas). This section provides that when assessing cumulative significance of project specific GHG emissions on global climate change, a lead agency should consider, among other factors, the extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting. In addition to quantification of GHG emissions, this section provides for the consideration of several other qualitative factors that may be used in the determination of significance. Per the amendments, a lead agency has discretion to determine whether to:

- Use a model or methodology to quantify greenhouse gas emissions resulting from a project, or
- To rely on a qualitative analysis, or
- To apply performance based standards

This rulemaking project would adopt amendments to District Rule 2301 (Emission Reduction Credit Banking) to allow voluntary banking of greenhouse gas (GHG) emission reductions and the use of banked GHG emission reductions as mitigation under CEQA. The draft amendments would provide a regulatory mechanism for sources to voluntarily preserve GHG emission reductions; provide



a regulatory mechanism for use of said GHG emission reductions to offset or mitigate GHG emission increases, as currently allowed for criteria pollutant emissions under District 2201 (New and Modified Stationary Source Review Rule); and would establish eligibility standards, quantitative procedures and administrative practices. The draft amendments neither impose conditions requiring installation of pollution control equipment, nor require facilities to bank GHG emission reductions, nor do they require such reductions to be used in any way. Quantification of potential changes in GHG emissions, either increases or decreases, that may result due to implementation of the project requires a degree of speculation and conjecture that is inappropriate and discouraged under CEQA (CCR §15187(d)).

From a qualitative perspective, providing a mechanism to preserve voluntary high quality greenhouse gas (GHG) emission reductions and the use of banked GHG emission reductions to off-set project specific GHG emissions is clearly consistent with the following AB 32 Scoping Plan objectives:

- Credit early action to ensure, to the extent feasible, that entities that have voluntarily reduced their GHG emissions prior to the implementation of regulations receive appropriate credit for early voluntary actions (HSC section 38562, subd. (b)(3));
- Complement existing air standards to ensure, to the extent feasible, that
 activities undertaken pursuant to the regulations complement, and do not
 interfere with, efforts to achieve and maintain national and California Air
 Quality Attainment Standards and to reduce toxic air contaminant (TAC)
 emissions (HSC, section 38562, subd. (b)(4));
- Minimize leakage to minimize, to the extent feasible, leakage of emissions to states and countries without a mandatory GHG emission cap (HSC section 38562, subd. (b)(8));
- Achieve real emission reductions in market-based strategies to ensure that GHG emission reductions achieved through any market-based compliance mechanisms are real, permanent, quantifiable, verifiable and enforceable by the Board (HSC section 38562, subd. (d)(1));
- Achieve reductions over existing regulation using market-based strategies

 to ensure that the reductions from any market-based compliance
 mechanisms are in addition to any GHG emissions reductions otherwise
 required by law or regulation, and any other GHG emissions reduction that
 would otherwise occur (HSC section 38562, subd. (d)(2));
- Complement direct measures to ensure, if applicable, that the GHG emissions reduction from a market-based compliance mechanism occurs over the same time period and is equivalent in amount to any direct emissions reduction required pursuant to AB 32 (HSC section 38562, subd. (d)(3));

The District has adopted the Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The foundation for determining significance under the policy is that projects reducing



GHG emissions consistent with AB 32 objectives should be determined to have a less than cumulatively significant impact on global climate change. As identified above, District implementation of the project would achieve many key AB 32 objectives. The District finds that there is no substantial evidence, in light of the whole record before the District, that the project could have a cumulatively significant impact on global climate change.



Chapter 5 – Project Alternatives

5.1. Introduction

This chapter identifies and compares the relative merits of a range of reasonable alternatives to the proposed project as required by the CEQA Guidelines section 15126.6. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (PR Code §21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (CCR §15126.6(b)).

As previous presented the District finds that there is no substantial evidence, in light of the whole record before the District, that the project could have a cumulatively significant impact on global climate change. Thus, project alternatives are evaluated for their ability to achieve the following District objectives:

- Allow facilities within the San Joaquin Valley to bank GHG emission reductions that can be retired to provide mitigation for CEQA;
- Provide a mechanism for the trading of banked GHG emission reductions;
- Promote the early reductions of GHGs and their associated criteria and toxic pollutants in the District;
- Provide a measure of certainty for banked GHG emission reductions lacking in some other GHG registries due to the District's extensive experience in banking criteria pollutant emissions;
- Provide a mechanism for persons to purchase and retire banked GHG emission reductions for societal benefit; and
- Bank protocol-based GHG emission reductions for use as compliance offsets in the California Air Resource Board (CARB) cap-and-trade program, provided the CARB cap-and-trade regulation includes such provisions.

5.2. Description of Project Alternatives

5.2.1. Alternative 1 – No Project Alternative

CEQA Guidelines § 15126.6 (e) requires evaluation of a "No Project Alternative." Section 15126.6(c) also states that among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (1) failure to meet most of the basic project objectives; (2) infeasibility; or (3) inability to avoid significant environmental impacts. The District rejects the "No project" alternative because it fails to meet the most basic project objectives, as identified above.



5.2.2. Alternative 2 – Adopt a Separate GHG Banking Rule

Development and implementation of a separate GHG banking program would be a duplication of the existing District Emission Reduction Credit banking program. The District rejects alternative two because it unnecessarily increases the cost of implementation, without providing any public benefits.

5.2.3. Alternatives Rejected as Infeasible

Based on the analysis in this EIR, no feasible alternatives were identified that would achieve the objectives of the proposed project.



Chapter 6 – Other CEQA Topics

6.1. Areas of Controversy

6.1.1. Introduction

In accordance with CCR §15123(b)(2), the areas of controversy known to the lead agency, including issues raised by agencies and the public, shall be identified in the CEQA document. GHG emissions and their impact on global climate change is a known subject of scientific and political debate. For a detailed discussion of the scientific and political issues, the reader is referred to the District document: Final Staff Report Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act, December 17, 2009, incorporated herein by reference.

To investigate the various issues concerning the development of a mechanism to bank GHG emission reductions, the District formed a diverse technical workgroup consisting of District staff, land use agency representatives, industry representatives. agricultural representatives. environmental representatives, and other interested parties. The District asked these stakeholders to participate in this process to gather ideas and issues from as many and as varied perspectives as possible, and to allow the District to develop a program that had benefits for Valley residents and businesses. This workgroup met several times in public meetings during late 2008 and early 2009, and engaged in a robust and frank discussion of pros and cons of establishing a carbon exchange. A detailed discussion of the various perspectives and conclusions are documented in the Report to the APCO Regarding the Development of the San Joaquin Valley Carbon Exchange, dated March 16, 2009, incorporated herein by reference. Specific areas of controversy identified during the public participation are:

- Use of banked GHG emissions which are not "additional" to any other regulatory requirement.
- Establishment of the baseline period.
- Permanence of banked GHG reductions
- Potential displacement of emissions to other locations "Leakage"

6.1.2. Specific Comments and Responses

Although no comments were received on the NOP/IS, during the initial rule development process, conducted in 2009, comments were received from the following special interest groups: Earthjustice, the Center for Biological Diversity and the Center on Race, Poverty and the Environment. These comments were



considered by the District when developing the proposed rule amendments. Comments and District responses are presented below.

Comment 1: Rule 2301 allows sources to bank ERCs that are not "additional" to any other requirement required by law or any greenhouse gas reduction that would otherwise occur. This lack of "additionality" conflicts with proposed CEQA Guidelines; conflicts with AB 32 (health and safety Code 38562(d)(3)); conflicts with a GAO Report; conflicts with the Voluntary Carbon Standard Program; and conflicts with the Kyoto Protocol.

District Response: There are two methods of banking allowed by proposed Rule 2301. The first relies on the criteria authorized by state-approved banking protocols. These reductions would be required to be "additional" according to the state definitions, and all of the required criteria, including additionality, would be built into the protocol itself – if projects meet the protocol, they are additional and can be banked. It is important for these credits to be additional, because they are intended to be used in programs that require additional reductions, notably the State's future cap and trade program and potentially in the context of other state and federal regulations.

The second method of GHG reduction banking is designed specifically for use as CEQA mitigation, in the context of our GHG CEQA significance threshold proposal. There is no requirement that such CEQA mitigation be "additional", although the District does specifically forbid the banking of any reductions that would be required by GHG reduction regulations or requirements as such reductions would not be considered surplus. The Commenter appears concerned about the District allowing GHG reductions to be banked if they are "incidental" to non-GHG reduction requirements. However, the District would not allow the banking of any reductions that are required by AB 32, whether or not the requirement is specifically for GHG emissions reductions.

The Commenter seems confused as to the basis of the District's proposed CEQA significance threshold, but understanding this is critical to understanding the questioned portions of the District's amendments to Rule 2301. The basis of the District's significance threshold is the AB 32 scoping plan. As the District discusses in its staff report, there is no science upon which to base a numeric project-by-project significance threshold, and therefore the District turned to the state's own ambitious GHG reduction goals, as specified in the AB 32 scoping plan, to establish the significance level of GHG emissions. As the District also discusses in the CCAP staff report, the AB 32 reduction target is a 29% reduction from a hypothetical Business as Usual (BAU) level of emissions that is based on the 2002-2004 California baseline emissions which is then grown to 2020 levels, considering growth in emissions and not considering controls on existing or new emissions.



Because AB 32 sets a GHG reduction goal that includes growth in emissions, it is an ideal target to use to establish a CEQA significance threshold, and the District has done so. The second method of banking GHG reductions is therefore designed around the use of the resulting reductions as mitigation towards meeting this AB 32-based CEQA significance threshold. Therefore, provided the reductions are surplus of (or additional to - it means the same thing in this context) the requirements of AB32, they are valid for CEQA mitigation under our significance proposal.

Contrary to the Commenter's contention, the use of the term "surplus" rather than the term "additional" is not in conflict with the CEQA Guidelines. First of all the guidelines are merely clarifying that additional reductions <u>may</u> be used as mitigation. Second, as discussed above, in the context of our CEQA significance threshold all allowed reductions are surplus of all AB 32 requirements (direct or indirect requirements) and therefore <u>are</u> additional to all reduction requirements relevant to our GHG CEQA significance threshold. There is no difference in the application of the terms. This concept is exactly analogous to the banking system established for criteria pollutants. A plan is established to meet the criteria pollutant standard and the only reductions that are allowed to be banked are those that are surplus of the plan's requirements, and these reductions are then available for use as CEQA mitigation.

Similarly, the District's "surplus" requirement does not conflict with the referenced section of AB 32, which specifically addresses GHG reductions required as a result of implementing AB 32. First, it should be noted that the cited section of AB32 applies only to regulations adopted by CARB. Regardless, reductions that are not surplus of AB 32 requirements are not bankable under the District's program, so the District sees no conflict between its rule and this section.

In addition, the District's use of the term "surplus" does not conflict with the Government Accountability Office ("GAO") Report that the Commenter cites. First, it should be noted that the GAO Report does not constitute "evidence" that the District's approach may have a significant effect on the environment. It is simply a "report to congressional requestors" that outlines the scope of the current U.S. carbon offset market. It expressly states that the GAO is not recommending any action. It simply states that there exists a broad array of offset programs and that Congress may want to consider adopting standardized quality assurance mechanisms. The report is neither intended as guidance nor as a binding position taken by Congress or any other branch of the federal government.

With regard to "additionality", it appears that the Commenter has taken statements in the GAO Report out of context. While the report does acknowledge that stake holders and studies claim that additionality is fundamental to the credibility of offsets, it also states that other stakeholders claim that "additionality is not a critical factor at this early stage in the development of carbon markets

and that the key goal should be to keep transaction costs and barriers to entry low to create financial incentives for reducing emissions." GAO Report at pp. 25-26. The Report further points out that "several stakeholders said that there is no correct technique for determining additionality;" that "[d]etermining additionality is inherently uncertain because, it may not be possible to know what would have happened in the future had the projects not been undertaken;" and that "applying a single test [to determine whether projects are additional] is too simplistic." See id. p. 26.

Thus, it appears that if the GAO Report stands for any proposition, it is that there is no consensus on the question of "additionality" and whether it is a critical component to an offset program. The Report is does not constitute evidence that District Rule 2301 as currently proposed may have a significant impact on the environment.

Further, the Commenter's citation to the Voluntary Carbon Standard ("VCS") program does not indicate that the District's definition of "surplus" may result in adverse environmental effects. First, the Commenter has provided no evidence that the VCS program is the "leading standard" governing the trading of carbon credits on the private market as the Commenter claims. In addition, although the VCS program appears to be one possible approach to an offset program, its existence does not indicate that the District's approach will have a significant impact on the environment. Indeed, the VCS program appears to take the "additionality" concept to one extreme; an extreme that conflicts with many of the concerns raised in the GAO Report also cited by the Commenter. The VCS does not address other approaches to offset programs, such as the District's approach, nor does it state that other possible approaches may have adverse environmental effects. It does not address CEQA at all. In short, the VCS program provides no evidence that the proposed Rule 2301 will have any adverse effect on the environment.

Finally, the Commenter's citation to the Kyoto Protocol as evidence that the District's definition of "surplus" will result in adverse environmental effects is without merit. Like the other sources cited by the Commenter, the Kyoto Protocol does not address CEQA or the implications of using offset programs for purposes of CEQA. In addition, the United States has not even ratified the Kyoto Protocol.

In short, the District disagrees that any evidence demonstrates that proposed Rule 2301 will have an adverse effect on the environment. Further, it appears that the Commenter's concerns relate not to the banking of ERCs, which the proposed Rule 2301 authorizes, but with the use of ERCs as mitigation for individual CEQA projects. The Commenter will have an opportunity to raise concerns regarding the use of any banked ERCs in a particular instance during the comment period for individual CEQA projects, and to attempt to do so now would involve significant and uniformed speculation.

Comment 2: Rule 2301 would allow emitters to choose any consecutive 24 month period during the previous 60 months as their baseline emissions whether or not that 24 month period is representative of actual or foreseeable greenhouse gas emissions.

District Response: The Commenter seems concerned that this baseline period for banking GHG reduction was different than that specified for criteria (affected) pollutants elsewhere in the same rule, but the criteria pollutant baseline period calculation is established by federal new source review permitting program requirements, and is not applicable to GHG reductions.

The Commenter also appears concerned that this different baseline period would allow "gaming" such that emissions reduction would be somehow illegally maximized. However, the District's proposal won't allow any illegal reductions to be banked. The entire baseline period considered by our rule must be after the baseline period of the AB 32 scoping plan (2002-2004) and therefore any reductions that meet the five banking criteria of Rule 2301 (real, surplus, permanent, quantifiable, enforceable) would be appropriate to be banked. In other words, all reductions allowed to be banked by our rule are completely consistent with the AB 32-based nature of our GHG CEQA significance threshold.

Comment 3: Rule 2301 does not ensure permanence of reductions because it does not prevent ERCs resulting from a short-term project from being used for a long term project and because the reductions are not ensured by District permits.

District Response: The District disagrees that Rule 2301 does not assure the permanence of reductions. On the contrary, all reductions banked for CEQA purposes are <u>required</u> to be permanent for the life of the credit – that is one of the five basic criteria that must be met before a credit can be issued. If we are to issue a short-term credit, its useful life will be clearly identified on the credit, and it would not be valid for use as full mitigation of a longer-term project. Similarly, we disagree that the permanence of credits that we issue is somehow threatened by the use of contracts to enforce the credits. In the rare case where we are forbidden by state law to use a permit to enforce a reduction, we can allow the use of a contract. However, if the contract cannot be constructed to assure the enforceability (and the permanence, etc.) of the reduction, the credit cannot be issued under the language of our rule.

Comment 4: Rule 2301 does not prevent leakage (displacement of emissions to other locations).

District Response: GHG reductions must be permanent before they can be banked, as discussed above. If the emissions sources are being removed from



the San Joaquin Valley, but are known to being moved to another location outside the District where they will continue to emit, they are not permanent, and credit cannot be issued under the rule.

6.2. Growth-inducing Impacts of the Proposed Project

CEQA defines growth-inducing impacts as those impacts of a proposed project that "could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects, which would remove obstacles to population growth" (CCR §15126.2(d)).

The proposed project would be implemented consistent with the regulatory framework currently allowed for criteria pollutant emissions under District 2201 (New and Modified Stationary Source Review Rule). The District has extensive experience in implementing an emissions reduction credit banking system, including establishing eligibility standards, quantitative procedures and administrative practices. As such, implementing the proposed amendments to District Rule 2301 would establish form, structure, and rigor to the existing ad hoc process of securing GHG emission reduction credits and ensuring their permanence and enforceability. Furthermore, use of locally generated GHG emission reduction credits as mitigation, versus carbon credits potentially generated outside the state of California, supports the state's efforts to reduce state wide GHG emissions to 1990 levels by 2020 and adds veracity to mitigating project specific impacts on global climate change. Thus, the District finds that there is no substantial evidence, in light of the whole record before the District, that implementing the proposed rule development project would either directly or indirectly have a growth inducing impact.

6.3. Environmental Effects Found Not to be Significant

The environmental effects of the Project are identified and discussed in detail in the preceding chapters of this EIR and in the Initial Study. In summary, the District finds that there is no substantial evidence, in light of the whole record before the District, that the project could have a significant effect on the environmental or could have a cumulatively significant impact on global climate change.



Chapter 7 – References

List of Environmental Impact Report Preparers

Dave Warner – Director of Permit Services
Arnaud Marjollet – Manager of Permit Services
Daniel Barber, Ph.D. – Supervising Air Quality Specialist

List of Environmental Impact Report Reviewers

Leonard Scandura - Manager of Permit Services Catherine Redmond – District Council

References Cited

Report to the APCO Regarding the Development of the San Joaquin Valley Carbon Exchange, March 16, 2009

Final Staff Report Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act, December 17, 2009

District policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency, December 17, 2009

Notice of Preparation (NOP) and Initial Study (IS) (SCH # 2010022066), February 24, 2010

Final Staff Report for Rule 2301 (Emission Reduction Credit Banking), September 7, 2011

Draft Rule 2301 (Emission Reduction Credit Banking), September 7, 2011

California Global Warming Solutions Act of 2006 (AB32) (http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf)

AB32 Scoping Plan (http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm)

Appendix A

Initial Study and Notice of Preparation and
Determination of Scope of
Environmental Impact Report for
Draft Amendments to Rule 2301
(Emissions Reduction Credit Banking)





Initial Study and Notice of Preparation and Determination of Scope of Environmental Impact Report

Date:

February 23, 2010

To:

Distribution List (See Attachment)

From:

SJVUAPCD Permit Services Department - CEQA Division

Subject:

Notice of Preparation and Determination of Scope

Draft Amendments to Rule 2301 (Emissions Reduction Credit Banking)

District CEQA No: C20090452

Respond By: March 24, 2010

This rulemaking project will adopt amendments to Rule 2301 (Emission Reduction Credit Banking). The project will seek to incorporate provisions into the rule that allow the banking of voluntary greenhouse gas (GHG) emission reductions. The proposed amendments are purely voluntary, and are designed to allow Valley businesses who choose to voluntarily reduce greenhouse gas emissions the ability to preserve such emission reductions for later use, including the trading and retirement of such emission reductions.

District staff prepared an Initial Study for the proposed project, which demonstrates that the project would not have a significant adverse impact on the environment. Thus, the District finds that there is no substantial evidence, in light of the whole record before the District, that the project could have a significant effect on the environment. However, out of abundance of caution and in an effort to avoid delay in implementation of this important rule, District staff will prepare an Environmental Impact Report (EIR) for the project. The scope of the EIR will be limited to addressing cumulative significance on global climate change.

We are soliciting your agency's views and recommendations on the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. The project description, location, and initial assessment of potential environmental effects are presented in the attached Initial Study.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region 4800 Enterprise Way Modesto, CA 95356-8718 Tel: (209) 557-6475

Central Region (Main Office) 1990 E. Gettysburg Avenue Fresno, CA 93726-0244

Fresno, CA 93726-0244 Tel: (559) 230-6000 FAX: (559) 230-6061 Southern Region 34946 Flyover Court Bakersfield, CA 93308-9725 Tel: 661-392-5500 FAX: 661-392-5585 Because of the time limits mandated by State Law, your response must be sent at the earliest possible date, but not later than 30-days after receipt of this notice. Comments identifying potential impacts should be as specific as possible and should be based on supporting data. Comments should emphasize the impacts within your agency's area of expertise and/or jurisdictional responsibilities. If you have questions, please contact David McDonough by telephone at (559) 230-5920 or by e-mail at david mcdonough@valleyair.org.

Please submit your comments to:

San Joaquin Valley APCD ISR / CEQA Department. Attn: David McDonough, AQS 1990 East Gettysburg Avenue Fresno, CA 93726-0244

CEQA Distribution List

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Draft Amendments Rule 2301

(District Project # CEQA 20090452)

Initial Study

February 2010

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT GOVERNING BOARD 2010

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AIR POLLUTION CONTROL OFFICER

SEYED SADREDIN

A. PROJECT BACKGROUND INFORMATION

1. Project Title:

Proposed Draft Amendments to Rule 2301 (Emission Reduction Credit Banking)

2. Lead Agency Name and Address:

San Joaquin Valley Unified Air Pollution Control District 1990 E. Gettysburg Avenue Fresno CA 93726-0244

3. Contact Person:

CEQA:

David McDonough

(559) 230-5920

Permit Services:

Leonard Scandura

(661) 392-5601

4. Project Location:

Facilities subject to Rule 2301 are those located within the boundaries of the San Joaquin Valley Unified Air Pollution Control District (See Exhibit 1, Map of District Boundaries).

5. Project Sponsor's Name and Address:

San Joaquin Valley Unified Air Pollution Control District 1990 E. Gettysburg Avenue Fresno CA 93726-0244

6. Assessor's Parcel Number:

Not applicable to this project.

7. General Plan Designation/Zoning:

Not applicable to this project.

Exhibit 1
San Joaquin Valley Unified Air Pollution Control District Boundaries



8. Project Description:

The purpose of this rule project is to amend Rule 2301 (Emission Reduction Credit Banking). The goals of the draft amendments to Rule 2301 are to provide a mechanism to preserve voluntary high quality greenhouse gas emission reductions. Unlike most District rules, the draft amendments to Rule 2301 do not create any new requirements for regulated sources – they are voluntary in nature. The draft amendments are designed to assist Valley residents and businesses who choose, or are required by some third party or regulatory requirement, to mitigate GHG emissions. The draft amendments would allow facilities to preserve GHG emission reductions and allow for the trading and retirement of such emission reductions. The draft amendments do not require that facilities bank GHG emission reductions, nor do they require that such reductions be used in any way, such as to mitigate emissions increases.

9. Other Agencies Whose Approvals Are Required and Permits Needed:

This project is a rule development project and does not require permits from any agency. The United States Environmental Protection Agency must approve the rule for inclusion into California's State Implementation Plan.

10. Name of Person Who Prepared Initial Study:

David McDonough Air Quality Specialist

B. FINDINGS

District staff has prepared a Draft Staff Report for the proposed rule, incorporated herein by reference, which demonstrates that the proposed amendments to the rule would not have an adverse impact on air quality. Pursuant to CEQA Guidelines §15063(a), District staff prepared an Initial Study for the proposed project that demonstrates that the project would not have a significant adverse impact on the environment. Thus, the District finds that there is no substantial evidence, in light of the whole record before the District, that the project could have a significant effect on the environment. However, out of abundance of caution and in an effort to avoid delay in implementation of this important rule, District staff will prepare an Environmental Impact Report (EIR) for the project. The scope of the EIR will be limited to addressing cumulative significance on global climate change. Upon approval of the proposed rule amendments by the District's Governing Board, District staff will file a Notice of Determination with each County Clerk within the boundaries of the District, CEQA Guidelines §15075(d).

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

| involvi | nvironmental factors checked below would be potentially affected by the proposed project, ing at least one impact that is a "Potentially Significant Impact" or "Potentially Significant Unless ted", as indicated by the checklist on the following pages. |
|---------------|--|
| | Aesthetics |
| D. <u>D</u> I | ETERMINATION |
| | by that this project was independently reviewed and analyzed and that this document reflects the endent judgment of the District. |
| | I find that the proposed project is exempt from CEQA requirements under Public Resource Code 15061 (b)(3), and a Notice of Exemption has been prepared. |
| \boxtimes | I find that the proposed project COULD NOT have a significant effect on the environment, however an Environmental Impact Report will be prepared. |
| | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| Signa | I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed ture: |
| Printe | d name: David Warner |

ENVIRONMENTAL IMPACT CHECKLIST

| I. AESTHETICS Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|---|------------------------------------|--------------|
| a) Affect a scenic vista or scenic highway? | · | | | Х |
| b) Have a demonstrable negative aesthetic effect? | | | | X |
| c) Create light or glare? | | | | Х |
| Discussion: The proposed project is a rule development that would affect aesthetics, as identified above (a-c). Mitigation: None Reference: Proposed Rule 2301 and supporting staff | | ne project does | s not impose re | quirements |
| II. AGRICULTURE RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | | | | X |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | X |
| c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | · | | | х |
| Discussion: The proposed project is a rule developm affecting agricultural resources, as identified above (a Mitigation: None Reference: Proposed Rule 2301 and supporting staff | -c). | | s not impose re | quirements |
| Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
| Would the project: a) Conflict with or obstruct implementation of | | | | |

| | IR QUALITY Continued) | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|-----|--|--------------------------------------|---|------------------------------------|--------------|
| b) | Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | | | | X |
| (C) | Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | | | | x |
| d) | Expose sensitive receptors to substantial pollutant concentrations? | | | | X |
| e) | Create objectionable odors affecting a substantial number of people? | | | | x |

Discussion: The purpose of this rule project is to amend Rule 2301 (Emission Reduction Credit Banking). The goals of the draft amendments to Rule 2301 are to provide a mechanism to preserve voluntary high quality greenhouse gas emission reductions. Unlike most District rules, the draft amendments to Rule 2301 do not create any new requirements for regulated sources – they are voluntary in nature. The draft amendments are designed to assist Valley residents and businesses who choose, or are required by some third party or regulatory requirement, to mitigate GHG emissions. The draft amendments would allow facilities to preserve GHG emission reductions and allow for the trading and retirement of such emission reductions. The draft amendments do not require that facilities bank GHG emission reductions, nor do they require that such reductions be used in any way, such as to mitigate emissions increases. District staff has prepared a Draft Staff Report for the proposed rule, incorporated herein by reference, which demonstrates that the proposed amendments to the rule would not have an adverse impact on air quality. Therefore, District staff finds that there is no substantial evidence, in light of the whole record before the District, that the project could have a significant effect on air quality as identified above (a-e).

Mitigation: None

| IV. BIOLOGICAL RESOURCES Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|---|------------------------------------|--------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | | | X |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | | | | × |

| | OLOGICAL RESOURCES Continued) | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|----|---|--------------------------------------|---|------------------------------------|--------------|
| c) | Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | | x |
| d) | Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | | | | x |
| e) | Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | | х |
| f) | Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | | | | × |

affecting biological resources, as identified above (a-f).

Mitigation: None

Reference: Proposed Rule 2301 and supporting staff report.

| V. CU | LTURAL RESOURCES buld the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|-------|--|--------------------------------------|---|------------------------------------|--------------|
| a) | Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5? | | | | x |
| b) | Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5? | | | | x |
| c) | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | | X |

| V. CULTURAL RESOURCES (Continued) | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|---|------------------------------------|--------------|
| d) Disturb any human remains, including those interred outside of formal cemeteries? | | | | X |

Discussion: The proposed project is a rule development project. The project does not impose requirements affecting cultural resources, as identified above (a-d).

Mitigation: None

| 2 2 3 3 | | | | | |
|---------|--|--------------------------------------|---|------------------------------------|--------------|
| | EOLOGY/SOILS /ould the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
| a) | Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | X |
| | i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | | X |
| | ii) Strong seismic ground shaking? | | | | х |
| | iii) Seismic-related ground failure, including liquefaction? | | | | х |
| | iv) Landslides? | | | | Х |
| b) | Result in substantial soil erosion or the loss of topsoil? | | | | x |
| c) | Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | | | | x |
| d) | Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | | | × |

| VI. GEOLOGY/SOILS (Continued) | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|---|------------------------------------|--------------|
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | | | | x |

Discussion: The proposed project is a rule development project. The project does not impose requirements affecting geology/soils, as identified above (a-e).

Mitigation: None

Reference: Proposed Rule 2301 and supporting staff report.

| | REENHOUSE GAS EMISSIONS /ould the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|----|---|--------------------------------------|---|------------------------------------|--------------|
| a) | Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | | | | X |
| b) | Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? | | | | х |

Discussion: Global Climate Change (GCC), which is now generally accepted by the scientific community to be caused by Greenhouse Gases (GHG), is a widely discussed scientific, economic, and political issue in the United States. Briefly stated, GCC is the cumulative change in the average weather of the earth that may be measured by changes in temperature, precipitation, storms, and wind. GHG are gases that trap heat in the atmosphere. Some greenhouse gases such as water vapor occur naturally and are emitted to the atmosphere through natural processes as well as through human activities, such as electricity production, vehicle use, etc. The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide.

District staff concludes that implementation of the proposed rule amendments would not impose conditions resulting in an increase in greenhouse gas emissions. District staff finds that there is no substantial evidence, in light of the whole record before the District, that implementation of the proposed rule would have a cumulatively significant effect on global climatic change. Therefore, District staff concludes that the project does not impose requirements significantly affecting greenhouse gas emissions as identified above (a-b).

Mitigation: None

| | HAZARDS & HAZARDOUS MATERIALS Vould the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|---------|---|--------------------------------------|---|------------------------------------|--------------|
| a) | Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | | | X |
| b) | Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | | | X |
| c) | Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | | X |
| d) | Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | | | · | X |
| e) | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | | | | X |
| f) | For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | | | | x |
| g) | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | X |
| h) | Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | | х |
| affecti | ssion: The proposed project is a rule develoring hazards and hazardous materials, as identification: None | | | oes not impose | requirements |
| | ence: Proposed Rule 2301 and supporting staff | report. | | | |
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| V | POROLOGY/WATER QUALITY Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|-------------------|--|--------------------------------------|---|------------------------------------|--------------|
| a) Î | Violate any water quality standards or waste discharge requirements? | | | | X |
| b) | Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | | x |
| c) | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site? | | | | x |
| d) | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | | | | x |
| e) | Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | | | | x |
| f) | Otherwise substantially degrade water quality? | | | | х |
| g) | Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | · | | X |
| h) | Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | · | | | х |
| i) | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | | | x |
| affecti Mitiga | ssion: The proposed project is a rule developing agricultural resources, as identified above (antion: None ence: Proposed Rule 2301 and supporting staff | i-i). | The project d | oes not impose | requiremen |

| X. LAND USE/PLANNING Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|---|------------------------------------|---------------|
| a) Physically divide an established community? | | | | x |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? c) Conflict with any applicable habitat | | | | X |
| conservation plan or natural community conservation plan? | | | | X |
| Reference: Proposed Rule 2301 and supporting staff XI. MINERAL RESOURCES Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless | Less Than Significant Impact | No Impact |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | Mitigated | | х |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | | х |
| Discussion: The proposed project is a rule developed affecting mineral resources, as identified above (a-b). Mitigation: None | | The project d | oes not impose | e requirement |
| Reference: Proposed Rule 2301 and supporting staff | героп. | | | |
| XII. NOISE Would the project result in: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | | | X |

| XII. N | <u>OISE</u> Continued) | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|--------|--|--------------------------------------|---|------------------------------------|--------------|
| b) | Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | | X |
| c) | A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | Х |
| d) | A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | X |
| e) | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | | x |
| f) | For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | | X |

Discussion: The proposed project is a rule development project. The project does not impose requirements affecting noise, as identified above (a-f).

Mitigation: None

Reference: Proposed Rule 2301 and supporting staff report.

| XIII. P | OPULATION/HOUSING ould the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|---------|--|--------------------------------------|---|------------------------------------|--------------|
| a) | Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | | | | x |
| b) | Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | · | | | × |
| c) | Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | | X |

Discussion: The proposed project is a rule development project. The project does not impose requirements affecting population/housing, as identified above (a-c).

Mitigation: None

| XIV. PUBLIC SERVICES Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|---|------------------------------------|--------------|
| a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities; the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | x |
| Fire protection? | | | | × |
| Police protection? | | | | Х |
| Schools? | | | | Х |
| Parks? | | | | X |
| Other public facilities? | | | | X |
| b) Cumulatively exceed official regional or local population projections? | | | | Х |
| c) Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)? | | | | х |
| d) Displace existing housing, especially affordable housing? | | | | х |

Discussion: The proposed project is a rule development project. The project does not impose requirements affecting public services, as identified above (a-d).

Mitigation: None

| XV. RECREATION Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|---|------------------------------------|--------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | | | x |

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| (Continued) | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|---|------------------------------------|--------------|
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | | x |

affecting recreation, as identified above (a-b).

Mitigation: None

Reference: Proposed Rule 4602 and supporting staff report.

| | Suppose the suppose of the suppose o | | Potentially | | |
|----|--|--------------------------------------|--|------------------------------------|--------------|
| | RANSPORTATION/TRAFFIC Vould the project: | Potentially Significant Impact | Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
| a) | Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | | | | x |
| b) | Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | | | | x |
| c) | Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | | х |
| d) | Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | · | х |
| e) | Result in inadequate emergency access? | | | | Х |
| f) | Result in inadequate parking capacity? | | | | Х |
| g) | Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | | | | х |

Discussion: The proposed project is a rule development project. The project does not impose requirements affecting transportation/traffic, as identified above (a-g).

Mitigation: None

| VII. UTILITIES/SERVICE SYSTEMS Would the project: | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|---|------------------------------------|--------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | · | | | X |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | x |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | x |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | | | x |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | | x |
| Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | | X |
| g) Comply with federal, state, and local statutes | | | | X |

Mitigation: None
Reference: Proposed Rule 2301 and supporting staff report.

| XVIII. | MANDATORY FINDINGS OF SIGNIFICANCE | Potentially Significant Impact | Potentially Significant Impact Unless Mitigated | Less Than Significant Impact | No impact |
|--------|---|--------------------------------------|---|------------------------------------|--------------|
| a) | Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | | | x |
| b) | Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively Considerable" means that the incremental effects of a 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)? | | | | × |
| c) | Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? | | | | X . |

outlined above are anticipated as a result of this project.

Mitigation: None
Reference: Proposed Rule 2301 and supporting staff report.