SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Draft Staff Report

Proposed Amended Rule 1309.1 – Priority Reserve

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EXECUTIVE SUMMARY

While new electrical generating facilities (EGFs) have steadily been coming on-line since 2001, the prospect of electrical power shortages in Southern California and the South Coast Air Basin (Basin) in particular continues. Factors contributing to potential shortages in the Basin include increasing power demand, the retirement of some older EGFs and limitations of the power grid system in allowing the transfer of power from northern California to southern California. Siting of approximately 2,700 megawatts (MW) of new electrical power generation has been proposed in the Basin. All these proposed projects will be required to minimize their emissions by installing Best Available Control Technology (BACT) and offset all of their remaining emissions by securing emission reduction credits (ERCs). With the exception of the essential public services and certain other operations that have access to the AQMD's Priority Reserve, most other operations, including power plants, procure their offset credits from the open market. However, there continues to be a shortage of ERCs, specifically SOx, PM10 and CO in the open market.

To address these shortages in the open market and respond to the region's demand for additional power, staff proposed and the AQMD Governing Board adopted amendments on September 8, 2006 to provide a limited window of time for EGFs to purchase credits from the Priority Reserve, provided they demonstrate that the required offsets are not reasonably available in the open market and meet other eligibility criteria and requirements.

To provide the public residing in more polluted areas with added protection and incentivize the siting of the new power plants in less polluted areas, in adopting the amendments to Rule 1309.1, the Board directed staff to develop additional requirements for EGF projects proposing to locate in the more polluted areas within the District.

In response to the Board directive, staff has developed several proposed amendment options for Board consideration. The proposed amendments include options that set additional criteria, including higher mitigation fees, for those EGF projects locating in more polluted areas and are seeking access to Priority Reserve and for some options, amendments that would prohibit EGFs locating in the most polluted areas from accessing the Priority Reserve. The Board may adopt any of the several options.

BACKGROUND

The California Energy Commission (CEC) permits all power projects rated at or above 50 megawatts. State regulations give sole permitting authority including local land use

and environmental regulations to the CEC. In addition, the Public Resources Code provides a statutory exemption from CEQA for EGF projects that will be subject to an EIR or Negative Declaration or other documents prepared pursuant to a certified regulatory program by the CEC. The CEC process for certification of proposed power projects includes such documentation. The CEC does require that all power projects meet all air quality regulations. For the AQMD, the main regulation affecting the permitting of power projects is New Source Review (Regulations XIII and XX). NSR requires that all projects satisfy Best Available Control Technology (BACT), modeling, offset, and public notice requirements. One potentially problematic area for power projects in the Basin has been and continues to be obtaining adequate offsets.

In accordance with State and federal laws, all emission increases from specified new and modified facilities must be offset. Under District rules most facilities with a potential to emit of greater than 4 tons per year of SOx or PM10 or 10 tons per year of CO are required to provide external offsets. External offsets are almost always in the form of ERCs. ERCs are created through the shutdown or over-control of processes. ERCs are only granted for that portion of emissions which exceed current AQMD BACT standards and are not otherwise required by rule, regulation, law, approved Air Quality Management Plan Control Measure, or the State Implementation Plan. Emission increases from all other sources that do not provide external offsets are offset through the AQMD's NSR account that also includes the Priority Reserve. The ERC generation procedures coupled with the fact that stationary sources that do not provide external offsets are relatively small contributors to the Basin's SOx, CO, and PM-10 inventory, have been limiting factors in generating significant amounts of ERCs.

In 2005, despite new EGF projects, California once again experienced some Stage 2 shortages (power reserves down to 5%) and the CEC outlook for the foreseeable future is that demand for electrical power will continue to increase. The increase in demand is due to several factors including increased consumption and retirement of older EGFs. There are also limits on the amount of electrical power that can be imported into the Southern California region from Northern California and Arizona due to bottlenecks in transmission lines. New EGFs are needed in the local region. In September, the Board adopted amendments to once again provide new EGFs access to the Priority Reserve where these proposed projects either do not have or cannot secure the needed offsets on the open market. The currently proposed options seek to fulfill the Board's directive to return with amendments to address the issue of criteria on powerplants locating in the most polluted areas.

PROPOSED AMENDMENTS TO RULE 1309.1 – PRIORITY RESERVE

Rule 1309.1 provides access to the Priority Reserve for certain critical EGF projects that meet specific requirements and that cannot secure the needed offsets on the open market. The proposed amendments apply to In-Basin EGF projects for which a complete initial application for certification to the CEC or a complete application for a permit to construct was filed in calendar years 2005, 2006, 2007 or 2008.

In response to the Governing Board direction to establish air quality criteria as a condition to purchase credits and to encourage the siting of the new power plants in lesser polluted areas, staff has developed several options for consideration that limit or set additional requirements for EGF projects to access the Priority Reserve if they are to be located in areas with historically high or moderately high ambient concentrations of PM2.5. In addition, two of the proposed options also limit or set additional requirements for EGFs located in areas with the highest cancer risk in the AQMD.

All the proposed amendment options subdivide the Basin into three zones (Zone 1, Zone 2 and Zone 3) based on the average PM2.5 concentration observed for years 2003 through 2005. These zones correspond to health-based exposure levels and are used as the criteria for both eligibility to access the Priority Reserve and the mitigation fee pricing of Priority Reserve credits. Zone 1 includes those areas with concentrations of less than 18 micrograms per cubic meter ($\mu g/m^3$); Zone 2 includes those areas with concentrations between 18 and 20 $\mu g/m^3$, and Zone 3 includes those areas with a concentration of greater than 20 $\mu g/m^3$. These zones are determined based on the procedures described in the District's Guidance Document for Rule 1309.1 PM2.5 Concentration and Zoning Determinations and is included as Attachment 1 of this report. A map of the AQMD with the three zones depicted is attached as Figure 1. Zone 1 represents approximately eighty percent of the surface area of the South Coast Air Quality Basin of the AQMD, Zone 2 approximately fifteen percent and Zone 3 approximately five percent.

PM2.5 emissions are considered the emissions with greatest localized health impacts from new power plants. Fine particles in the PM2.5 fraction have the ability, because of their size, to penetrate and deposit deep in the lungs. Elevated concentrations of PM2.5 are associated with adverse health impacts. Increased mortality, reduction in lung function, and increased hospitalizations are among some of the adverse health impacts associated with exposure to elevated concentration of PM2.5. Most of the Basin is currently in non-attainment with regards to the annual and 24-hour federal ambient air quality standards of 15 $\mu g/m^3$ and 35 $\mu g/m^3$, respectively. The Basin has until 2015 to demonstrate attainment with the annual PM2.5 standard. EGFs are large point sources of PM2.5 emissions and these additional limitations and requirements are consistent with the AQMD efforts to achieve air quality goals.

During the public outreach for this rule development, staff received comments recommending additional criteria beyond just PM2.5 to be used to determine eligibility for EGF projects to access the Priority Reserve. In two of the alternatives, eligibility or requirements are also based upon whether or not the project is located in a Cancer Risk Area (CRA) identified in the Multiple Air Toxics Exposure Study (MATES) II as an area in the 95th percentile of risk. Although power plants generally have low emissions of toxic air contaminants, recent health studies indicate a correlation of instances of PM2.5 exposure and lung cancer. A map of the AQMD depicting these areas is attached as Figure 2 for EGF projects to access the Priority Reserve.

It should be noted as well that all of the alternative proposals where Priority Reserve access is authorized in Zone 2 or Zone 3 include requirements for cancer risk, chronic and acute hazard index and cancer burden that are more stringent than those required in other District rules. The cancer risk is one in a million or less, the chronic and acute hazard indices are 0.5 and the cancer burden is 0.1 compared to ten in a million if TBACT used, 1.0 hazard indices and 0.5 cancer burden in Rule 1401. Although EGF projects are not expected to be significant sources of toxic emissions these additional requirements were added to address concerns expressed by the environmental community for more health protective standards for EGF projects seeking Priority Reserve credits if they chose to locate in the less polluted areas. For any given project, District staff will determine the exact Zone in which that project is located by use of UTM coordinates.

Following are the options staff developed for Board consideration:

A) Option A, would allow In-Basin EGFs in Zone 1, Zone 2 and Zone 3 to purchase PM10, SOx or CO credits from the Priority Reserve based on annual average PM2.5 concentration as shown in Figure 1.

   Furthermore, In-Basin EGFs located in areas shown in Figure 1 with an average PM2.5 concentration in years 2003 through 2005 of 18µg/m3 or greater (Zone 2 or Zone 3) must also meet the following criteria in order to be eligible to receive credits from the Priority Reserve:

   (a) Demonstrate that the cancer risk from the EGF is less than one in one million; and

   (b) Demonstrate that the non-cancer risk (acute and chronic) Hazard Index from the EGF is less than or equal to 0.5; and

   (c) Demonstrate that the cancer burden from the EGF is less than or equal to 0.1.

   In addition to meeting the above additional criteria, an EGF project proposed to be located in Zone 2 or Zone 3 shall pay a premium for accessing credits from the Priority Reserve. This premium is to serve as an incentive for prospective projects

to locate in lesser polluted areas of the Basin. All mitigation fees will be used to fund additional air quality improvement projects in the area as close as possible to the project and at least one third of the fees will be used for renewable energy projects. An EGF located in Zone 2 will pay mitigation fees that are fifty percent more than those for projects in Zone 1 or $75,626, $22,625 and $18,000 per pound per day of PM10, SOx and CO, respectively. Whereas, an EGF located in Zone 3 will pay mitigation fees that are twice that of projects in Zone 1, or $100,834, $30,166 and $24,000 per pound per day of PM10, SOx and CO, respectively.

B) Option B, is Option A plus the addition of the CRA or "Cancer Risk Area, i.e. the areas in the Basin experiencing the top 5% of cancer risk from airborne toxics. Projects in the CRA are subject to the same requirements as those in Zone 3 including mitigation fees at a premium of double the Zone 1 fees. This increased premium is intended to further offset pollutant impacts in the most polluted areas and to further incentivize projects to not locate in Zone 3 or the CRA.

C) Option C, is Option A except that EGFs in Zone 3 are not authorized access to the Priority Reserve and must obtain their offset credits in the open market.

D) Option D, is Option B except that EGFs in Zone 3 or a CRA are not authorized access to the Priority Reserve and must obtain credits in the open market.

E) Option E, is Option C (projects not allowed access in Zone 3, which is based on PM2.5 levels) except that it will allow municipal EGF located in Zone 3 that receive 30% or more of their power, by December 31, 2012, from renewable sources to purchase credits from the Priority Reserve subject to meeting all other provisions of Option C. For the purposes of this rule option a municipal EGF is defined as an EGF that is wholly owned and operated by the municipality. Prior to issuance of Priority Reserve credits the municipality must receive approval in writing from the Executive Officer of the measures that guarantee compliance with the 30% renewable energy provision by the required date.

F) Option F, is Option C (projects not allowed access in Zone 3, which is based on PM2.5 levels) except that it will allow a Peaking Unit with a rating of not more than 100 MW located in Zone 3 to purchase credits from the Priority Reserve subject to meeting all other applicable provisions of the rule option including subclauses (b)(5)(A)(ii)(I), (b)(5)(A)(ii)(II), and (b)(5)(A)(ii)(III), and paying twice the mitigation fee of subparagraph (g)(1)(B). For the purposes of this rule option a peaking unit is limited by permit condition to operate no more than two thousand (2,000) hours in any calendar year. Pursuant to District Rule 118, the Executive Officer may issue an executive order that modifies the limitation in the hours of

operation, provided a state power emergency that asks for additional power generation in Zone 3 is declared by the Governor.

The tables below highlight the differences in the options. The first table shows eligibility of a project to access the Priority Reserve based on the project location under the provisions of the various options. The second table shows the mitigation fees for such project based on location for the options. In addition to the mitigation fees, each option that authorizes access to the Priority Reserve in Zone 2 or Zone 3 or the CRA is also subject to the more stringent requirements for cancer risk, chronic and acute hazard index and cancer burden.

Table 1

Eligibility to Purchase SCAQMD Priority Reserve Offset Credits
Based on EGF Project Location and Option Type

	EGF Project Location					
Options	PM2.5 Zone 1 Only	PM2.5 Zone 2 Only	PM2.5 Zone 3 Only	Cancer Risk Area, 95 Percentile in all Zones	Municipal EGF in Zone 3	Peaking Unit in Zone 3
A	Yes	Yes	Yes	N/A	N/A	N/A
B	Yes	Yes	Yes	Yes[1]	N/A	N/A
C	Yes	Yes	No	N/A	N/A	N/A
D	Yes	Yes	No	No	N/A	N/A
E	Yes	Yes	No	N/A	Yes[2]	N/A
F	Yes	Yes	No	N/A	N/A	Yes[3]

Footnote:
1- Priority Reserve Mitigation Fee based on PM 2.5 Zone 3 offset credit rate (double the Zone 1 mitigation fee rate).
2- Provided the municipal utility utilizes 30% or more of renewable energy power generation projects.
3- Peaking unit is limited by permit condition to operate no more than two thousand (2,000) hours in any calendar year.

Table 2
Priority Reserve Mitigation Fees
($ per lbs/day by pollutant type)
Based on EGF Project Location and Option Type

	EGF Project Location					
Option	PM 2.5 Zone 1 Only	PM 2.5 Zone 2 Only	PM 2.5 Zone 3	Cancer Risk Area; 95th Percentile in all Zone's	Municipal EGF in Zone 3	Peaking Unit in Zone 3
A	PM10 $50,417 SOx $15,083 CO $12,000	PM10 $75,626 SOx $22,625 CO $18,000	PM10 $100,843 SOx $15,083 CO $12,000	Not Applicable	Not Applicable	Not Applicable
B	PM10 $50,417 SOx $15,083 CO $12,000	PM10 $75,626 SOx $22,625 CO $18,000	PM10 $100,843 SOx $15,083 CO $12,000	PM10 $100,843 SOx $15,083 CO $12,000	Not Applicable	Not Applicable
C	PM10 $50,417 SOx $15,083 CO $12,000	PM10 $75,626 SOx $22,625 CO $18,000	No Access	Not Applicable	Not Applicable	Not Applicable
D	PM10 $50,417 SOx $15,083 CO $12,000	PM10 $75,626 SOx $22,625 CO $18,000	No Access	No Access	Not Applicable	Not Applicable
E	PM10 $50,417 SOx $15,083 CO $12,000	PM10 $75,626 SOx $22,625 CO $18,000	No Access	Not Applicable	PM10 $100,843 SOx $15,083 CO $12,000	Not Applicable
F	PM10 $50,417 SOx $15,083 CO $12,000	PM10 $75,626 SOx $22,625 CO $18,000	No Access	Not Applicable	Not Applicable	PM10 $100,843 SOx $15,083 CO $12,000

Footnote:

a. For In-Basin EGF applications filed in 2005 and beyond

CEQA ANALYSIS

The SCAQMD has reviewed the proposed project pursuant to CEQA Guidelines §15002(k)(1) and §15061(b)(1), and determined the project is exempt by statute pursuant to the California Public Resources Code (PRC) §21080(b)(6) and state CEQA Guidelines §15271(a). Under PRC §21080(b)(6), the State Legislature directed that actions undertaken by a public agency relating to any thermal power plant facility that will be the subject of an environmental impact report, negative declaration, or other document prepared pursuant to PRC §21080.5, by the State Energy Resources Conservation and Development Commission (known as California Energy Commission or CEC) is not subject to CEQA if the CEC or CEQA document includes the environmental impacts, if any, of the actions described in PRC §21080(b)(6). The CEC licensing process includes a CEQA document that will fully analyze the environmental impacts of powerplants affected by this Rule.

CURRENT ESTIMATED DEMAND FOR OFFSETS

To date, since 2005 there are five EGF projects that have submitted permit applications to the AQMD and are undergoing the CEC licensing process. Those five projects, their proposed size, offset requirements, assuming all credits are to be withdrawn from the Priority Reserve and the Zone in the staff proposals of each project location are shown in Table 3. Staff has received input from a number of potential project proponents regarding future potential projects, primarily proposed to be located in Zone 3. However, no detail on these proposed projects or applications to the AQMD or CEC have been submitted and they have not been included in Table 3. Staff has determined that there are currently sufficient credits in the Priority Reserve and the District's NSR account to fund the projects listed in Table 3 and an additional number of similar projects. The current balance and projected balances through the end of 2007 for PM10, SOx and CO are shown in Table 4. Note that the projected balances include adjustments to credit balances as projected pursuant to Rule 1315(d).

TABLE 3

CURRENT ESTIMATED DEMAND FOR OFFSETS

		Estimated Offsets to be Withdrawn from Priority Reserve				
In Basin Electric Generating Facility (EGF)	**Project Capacity** (MW)	**PM10** (lbs/day)	**SOx** (lbs/day)	**CO** (lbs/day)	**NOx** (lbs/day)	**Zone** (1, 2 or 3)
City of Vernon	914	857	91	720	---	2*
Sun Valley	500	463	46	124		1
Walnut Creek	500	463	46	124		2
BP Carson/Edison Mission Group	500	717	73	1,641		1
AES Highgrove	300	298	30	744		3
TOTAL	2,714	2,798	286	3,353	---	

* Within Cancer Risk Area of Option C and Option D

TABLE 4

CURRENT AND PROJECTED DISTRICT NSR BALANCES FOR PM10, SOx AND CO* (TONS PER DAY)

DESCRIPTION	PM10	SOx**	CO
August 2004 Starting Balance	**10.51**	**11.24**	**10.20**
Projected January 2006 Starting Balance	**11.93**	**2.62**	**11.59**
Projected January 2007 Starting Balance	**12.92**	**2.74**	**11.94**
Projected December 2007 Ending Balance	**13.91**	**2.85**	**12.29**

* From February 2, 2007 letter to the AQMD Board entitled "Status Report on Regulation XIII New Source Review".

** Projections include adjustments pursuant to Rule 1315(d)

SOCIO-ECONOMIC IMPACTS

There are six options presented in the proposed amendments to Rule 1309.1 to provide additional flexibility for the Governing Board. These options establish various criteria as conditions to access the Priority Reserve and encourage the siting of new electrical generating facilities (EGFs) in less polluted areas within the District. The socioeconomic analysis examines the impacts of these options.

Affected Facilities

The proposed amendments to Rule 1309.1 will affect five identified in-Basin EGFs that might access the Priority Reserve that have submitted applications. These facilities belong to the industry of Fossil Fuel Electric Power Generation [North American Industrial Classification System (NAICS) 221112]. None of the EGFs affected by the proposed amendments would be considered small businesses. Additional projects that have not yet submitted applications may be affected.

Compliance Cost

EGFs have to obtain offsets either through the Priority Reserve or the third-party ERC market. Compared to the existing rule, there will be no additional cost to obtain offsets from the third-party market as a result of the proposed amendments. Additional compliance costs would not be incurred by two out of the five facilities identified above since these facilities are located in Zone 1, which charges the same mitigation fees as the existing rule.

Under the proposed amendments the industry of fossil fuel electric power generation (NAICS 221112) would pay a range of additional costs from $12.8 million for Option D to $90.4 million for Option B in 2007 to purchase the required offsets from the Priority Reserve, as shown in Table 5. Furthermore, the facilities that are not given access to the Priority Reserve (because of zone 3 location or cancer risk) would have to go to the third-party market to purchase the requisite offsets. It is too speculative to project whether the offset prices in the third-party market would be higher than the proposed mitigation fees.

Table 5– Estimated Impact of the Proposed Amendments

Compliance Option	2007 Additional Fees ($M)	# EGFs Denied Access to Priority Reserve
Option A	$63.8	0
Option B	90.4	0
Option C	39.4	1
Option D	12.8	2
Option E	63.8	0
Option F	$39.4	1

PAR 1309.1 is a voluntary program; facilities eligible to access the Priority Reserve do not have to purchase offsets from AQMD if such purchase does not make the proposed projects financially viable. However, if a facility chooses and is qualified to participate in the Priority Reserve, it would mean that the mitigation fees are a viable option to the proposed projects and are cheaper than the ERC prices in the third-party ERC market.

Rule Adoption Relative to the Cost-Effectiveness Schedule

On October 14, 1994, the Governing Board adopted a resolution that requires staff to address whether rules being proposed for adoption are considered in the order of cost-effectiveness. The 2003 Air Quality Management Plan (AQMP) ranked, in the order of cost-effectiveness, all of the proposed control measures for which costs were quantified. It is generally recommended that the most cost-effective actions be taken first. Since Rule 1309.1 is not part of the 2003 AQMP, cost-effectiveness is not applicable.

AQMP AND LEGAL MANDATES

The California Health and Safety Code requires the AQMD to adopt an Air Quality Management Plan (AQMP) to meet state and federal ambient air quality standards in the South Coast Air Basin. In addition, the California Health and Safety Code requires that the AQMD adopt rules and regulations that carry out the objectives of the AQMP. While Proposed Amended Rule 1309.1 is not a control measure included in the AQMP, its requirements are consistent with the AQMP objectives. Since this proposal is not an AQMP control measure, cost and cost effectiveness are not applicable. This proposal does not impose a new emission limit or standard, make an existing emission limit or standard more stringent, or impose new or more stringent monitoring, reporting or recordkeeping requirements, and therefore, is not subject to the comparative analysis provisions of California Health & Safety Code Section 40727.2.

RESOURCE IMPACTS

The proposed amendments are not anticipated to have a significant impact on staff resources.

DRAFT FINDINGS

Before adopting, amending or repealing a rule, the AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference, as defined in Health and Safety Code Section 40727. The draft findings are as follows:

Necessity – The AQMD Governing Board has determined that a need exists to amend Rule 1309.1 – Priority Reserve to limit or restrict electrical generating facilities from accessing credits from the Priority Reserve if they are located in heavily polluted areas.

Authority – The AQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Sections 40000, 40001, 40440, 42300 (permit system), and 40702 of the California Health and Safety Code.

Clarity – The AQMD Governing Board has determined that Rule 1309.1 – Priority Reserve, as proposed to be amended, is written or displayed so that its meaning can be easily understood by the persons directly affected.

Consistency – The AQMD Governing Board has determined that Rule 1309.1 – Priority Reserve, as proposed to be amended, is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.

Non-Duplication – The AQMD Governing Board has determined that Rule 1309.1 – Priority Reserve, as proposed to be amended, does not impose the same requirements as any existing state or federal regulation and is necessary and proper to execute the power and duties granted to, and imposed upon, the District.

Reference – The AQMD Governing Board, in amending the rule, references the following statutes which the AQMD hereby implements, interprets, or makes specific: Health and Safety Code Sections 42300, 40920.5, and CAA §§ 171, 172 and 182.

COMMENTS AND RESPONSE TO COMMENTS

The public outreach process for this rulemaking included a public workshop at AQMD Headquarters on December 12, 2006, a public meeting in the city of Grand Terrace on January 3, 2007, a public meeting in Huntington Park on January 11, 2007 and numerous meetings with individuals and groups from the community, industry and other public agencies. In addition, a number of written comments were received prior to the close of comments for the workshops. The comments received from a number of the commentors were similar and have been summarized in the following comments and responses.

Comment: Municipal utilities are captive to their service territories. The staff proposal would preclude municipalities from constructing or modifying in Zone 3.

Response: Although staff workshopped only one proposal, several options have been prepared for Board consideration. Several of the options allow for construction or expansion of municipal utilities in Zone 3. Staff recognizes the special needs of municipal utilities and has crafted options for the Board to address their special circumstances.

Comment: The period to buy credits should be extended. Municipal utilities need to expand based upon directives from other public agencies.

Response: Rule 1309.1 was amended to allow EGFs access to the Priority Reserve for a limited time period to encourage the early siting and construction of power plants to address the near term energy shortage. When this matter was considered during adoption of the September 8, 2006 amendments the Board included direction in the adopting resolution for staff to monitor the progress of EGF siting and recommend an adjustment to the sunset date, if warranted. Staff has determined there are sufficient credits available to site the projects identified in the staff report as well as a number of both new municipal projects and private projects.

Comment: Small projects (<100 Mw) and peaking units should be treated differently than large power generating facilities proposed for the region.

Response: Rule 1309.1 was crafted to address access to the Priority Reserve for all EGFs, both large and small, base load and peaker. The amendments are designed to address and mitigate localized impacts from EGFs, particularly in those areas in the AQMD that are heavily polluted.

Comment: Expand Zone 3 to include Zone 2 and not allow EGFs access to the Priority Reserve in the expanded Zone 2 area.

Response: The proposals have been developed to address the most impacted areas. Those projects in less impacted areas, such as Zone 2, are subject to more stringent toxic standards and required to pay a higher mitigation fees, all of which will be used to fund air quality projects in the area impacted by the EGF project. Among the options prepared for Board consideration is a proposal that would, in effect, expand those areas within the AQMD where EGFs are not authorized access to the Priority Reserve based on cancer risk as well as proposals to allow access in all areas of the AQMD. In another of those proposals, EGFs located in Zone 3 or in the Cancer Risk Area under one option would be subject to significantly higher mitigation fees than in Zone 2.

Comment: Additional criteria in addition to PM 2.5 or Zone 3 should be developed to limit exposure.

Response: Staff has developed additional criteria and options that consider the cancer risk as a means of determining access to the Priority Reserve of the cost of credits.

Comment: The Vernon project is oversized and it's impacts are regional.

Response: The size and siting of EGFs is the purview of the CEC and not the AQMD. Rule 1309.1 only allows EGFs access to the Priority Reserve for emission credits to mitigate their emission impacts when those credits are not available in the open market. The purpose of the amendment is to incentivize EGFs seeking Priority Reserve credits to locate in the less polluted areas of the AQMD. Before any new EGF can be built or modified, existing rules and regulations require that the project demonstrate that it will not have a significant impact on air quality or toxics. In addition, projects located in Zone 2 must meet additional criteria for toxics including hazard index and cancer burden, and pay higher mitigation fees to be used for air quality improvement projects in the area near the new EGF. Finally, under two of the options, this project would either pay higher mitigation fees or be precluded from access to the Priority Reserve because it is located in the Cancer Risk Area.

Comment: The proposed mitigation fee generates millions of dollars. The SCAQMD is trading dollars for health.

Response: *The monies generated from the purchase of priority reserve credits do not go into the SCAQMD general fund. The money will be used to fund air quality improvement projects that would otherwise not occur. All mitigation fees are to be spent in the vicinity of the proposed project and at least one-third are to be used for renewable energy projects.*

Comment: Opening the Priority Reserve to EGFs undermines the building of renewable and alternative energy projects.

Response: *The proposal is designed to facilitate the siting of new EGFs in a narrow time window to address the near term energy shortage. Staff has not restricted the type of project that can access the Priority Reserve. Staff has committed to spending at least 1/3 of the monies for alternative and renewable energy projects.*

Comment: The criteria for EGFs is already very stringent and no new criteria are needed.

Response: *The AQMD Governing Board directed staff to address areas with higher pollution and to provide incentives for projects to locate in cleaner areas. The option to purchase credits from the Priority Reserve is coupled with more stringent mitigation fees and air quality impact criteria in Zones 2 and 3, and the CRA.*

Comment: Amendment will result in the development of smaller less efficient projects beneath the CEC & AQMD NSR thresholds. Amend 1304 to prevent this.

Response: *Staff shares the concern that the shortage of credits in the open market will result in the construction of projects below offset thresholds that meet BACT and other AQMD rule requirements but nevertheless result in more emissions per megawatt produced than some of the larger more efficient power plants. The emissions from projects that are below Regulation XIII offset thresholds are mitigated by credits from the District's NSR account. Proliferation of these smaller units more rapidly consume available credits without the associated air quality improvement projects in the impacted areas nor the resultant additional emission reductions to replenish the credits in the District's NSR account. Staff has and will continue to monitor the impact of permitting of all sources that are below the Regulation XIII offset significance thresholds and recommend adjustments to those levels if appropriate.*

Comment: Language should be added to the rule that specified the priority of air quality improvement projects that mitigation funds are used for each EGF project and that prioritization should include a preference to local mitigation where feasible.

Response: In adopting the amendments to Rule 1309.1 – Priority Reserve on September 8, 2006 the Board through the adopting resolution directed staff to use all mitigation funds in the areas as close to the new EGF as possible and that at least one-third of those fees be used for renewable projects. Although the recommended priorities are in agreement in concept with the Board's directive, some of the detail could contradict Board direction and the rigid structure of such rule language could delay implementation of some air quality projects, and to make any warranted adjustments to the priorities would require the lengthy and costly rule amendment process. For these reasons past practice has been for the Board resolution to give direction to the Executive Officer rather than imposing requirements on the Executive Officer in the rule.

Comment: Requirements on the AQMD should be included in the rule:

1. Publish a list of potential air quality improvement measures or projects, subject to a public hearing; and
2. Within 30 days of commencement of operation of each EGF project receiving Priority Reserve credit publish a report, subject to a public comment period, that accounts for the allocation and status of each air quality improvement project and funding for all EGF projects.

Response: These requirements would be duplicative and unnecessarily administratively burdensome. In implementing the provisions of Rule 1309.1 as amended in 2002 and air quality improvement programs associated with other District rules and programs the AQMD has conducted an open and public process that seeks input from all interested parties and as new measures are identified, they are also added to the list of potential air quality improvement projects. Furthermore, the Board, through a public process approves the funding of each project, first through approval of the requests for proposals and ultimately through the award of each contract. The permitting process that includes a public comment period, prior to issuance of the permit provides a full accounting of all AQMD actions taken for a specific EGF.

Comment: The proposed amendments are contradictory to sensitive Zone legislation embodied in California Health and Safety Code Section 40410.5 and may not be consistent with the intent of SB288.

Response: *The proposed amendments to Rule 1309.1 simply establish the requirements for an EFG to have access to credits from the Priority Reserve. It makes no changes whatsoever to the permitting process that Section 40410.5 applies to, including the permitting process for any project that uses credits from the Priority Reserve. The directive by the Board to use all mitigation fees from an EGF project in the area as near the project as possible seems to be fully supportive of the intent of the Sensitive Zone legislation. Section 40410.5 only applies to projects within the Sensitive Zone. The District has adopted the Zone requirements of Rule 1303 to complete with this law. Under Rule 1303, projects in the Sensitive Zone may obtain offsets from either Zone 1or Zone 2 identified in the map attached to Rule 1303. Therefore, credits from anywhere in the Basin satisfy this statute. Accordingly, credits from the Priority Reserve satisfy this requirement. Since there is no change in permitting or Rule 1303 requirements as a result of this amendment, and the District's NSR Rules are not being made less stringent, SB288 is not implemented.*

Comment: What is the basis the AQMD uses for concluding there is a looming power crisis and how does this support the need for amending Rule 1309.1 – Priority Reserve to allow access to emission credits by EGFs.

Response: *Reports from the California Energy Commission (CEC) on projected demand and testimony from CEC staff including that presented at the public hearing to amend Rule 1309.1 on September 8, 2006 clearly indicate there is a supply shortfall in the South Coast Air Basin that will peak in the summers of 2009 and 2010 if additional energy resources do not become available. In addition, current and projected transmission capability from outside the Basin is not sufficient. Therefore, to overcome the projected supply shortage for the next few years additional generation capacity is necessary in the Basin. To build additional generating capacity emission offsets are required to mitigate the emission impacts of the new power generation units to comply with local, state and federal New Source Review requirements. The AQMD, as the implementing agency for New Source Review requires all emission offset credits to be used or traded in this jurisdiction to be registered with AQMD. Based upon the review of the credit registry, there are not sufficient emission credits available in the private market to mitigate the emissions from new power plants. Therefore, the Board, in amending Rule 1309.1 on September 8, 2006 authorized qualifying EGFs for a limited period under certain conditions to purchase credits from the AQMD emission offset account. This proposal, based on a Board directive, is to further restrict or limit the access to AQMD credit by EGFs locating in the most polluted areas of the Basin.*

Comment: Notwithstanding staffs arguments of a statutory exemption from CEQA, it is or opinion that a CEQA analysis is required for an amendment to Rule 1309.1.

Response: Staff disagrees and this is the subject of pending litigation regarding the September 8, 2006 amendment to Rule 1309.1.

Comment: EGFs should be forced to identify and purchase emission credits on the open market or not proceed. Prices may increase to the point that credits may come onto the market that otherwise would not be available and it would require EGFs to do a better job of cost benefit analysis while maintaining no net increase in emissions.

Response: Although the AQMD would prefer that EGFs acquire all offsets from the private market, that is not currently achievable if the near-term energy supply needs of the Basin are to be met. To balance the air quality and near term energy needs Rule 1309.1 was amended to allow EGFs a limited window of opportunity to purchase credits from the AQMD to the extent they could not acquire them on the open market. This allows these necessary projects to go through and ensures their emissions are mitigated to provide an air quality benefit.

Comment: The new power plant proposed for the City of Vernon far exceeds the needs of the Vernon Community and it intends to make money for the City by selling the power elsewhere at the expense of the residents of the downwind communities by exposing them to increased emissions. The AQMD should not facilitate this money making project by allowing access to the Priority Reserve.

Response: The size and siting of power plants is the authority of the CEC, not the AQMD. That said, permitting by the AQMD requires that any power plant project use Best Available Control Technology (BACT), that any increase in emissions of criteria air contaminants will not create a localized adverse air quality impact, that any emissions of toxic air contaminants meet very strict standards and limitations and that all net emission increases of criteria air contaminants are offset to provide a net air quality benefit. Further, all mitigation fees collected from the purchase of Priority Reserve credits will be used for projects to further improve air quality in the communities near the power plant project.

Comment: Our City has a large toxic emission exposure and additional toxic emissions are unacceptable. AQMD staff has indicated the proposed Vernon power plant is not a large source of toxic emissions but it will emit a large amount of harmful PM2.5 that will impact our community. Rule 1309.1 should

prohibit use of the Priority Reserve by the Proposed Vernon power plant.

Response: *As indicated in the previous response AQMD permitting requirements and limitations required that increases in criteria contaminants such as PM10 not cause a localized significant adverse air quality impact and that net emission increases be offset to provide a net air quality benefit. However, one of the options for Board consideration would prohibit power plants locating in the top 5% of the Basin with respect to cancer risk from accessing the Priority Reserve. This would affect the Vernon project.*

Comment: U.S. EPA has designated Los Angeles County a non-attainment area for the national ambient air quality standards. Rule 1309.1 should preclude the permitting of EGFs in any area where the area of impact is a non-attainment area.

Response: *New Source Review (NSR) is a program that was established to allow the construction or expansion of stationary sources in areas designated as non-attainment provided the construction or expansion of the source will meet certain criteria. There are both state and federal NSR criteria that must be met at a minimum. NSR in the AQMD is embodied in the requirements of Regulation XIII that goes beyond the minimum state and federal requirements and have been approved by both CARB and U.S. EPA. Regulation XIII requires that all new or modified stationary sources that increase criteria air contaminant emissions be build to BACT, that for emission increases above four tons per year of VOC, SOx, NOx, and PM10 and twenty-nine tons per year CO, must not cause or make significantly worse an ambient air quality standard at any receptor location in the AQMD and that all emission increases above the four and twenty-nine ton per year thresholds are offset to provide a net air quality benefit. Rule 1309.1 is one of the rules within Regulation XIII that simply establishes which sources are eligible under what circumstances to use offsets from the AQMD to provide the required air quality benefit. The proposed amendments to Rules 1309.1 are to establish additional criteria for EGFs to be located in the more polluted areas of the AQMD when they are authorized access to Priority Reserve credits. The proposed amendments do not designate which sources can or cannot construct or expand in non-attainment areas.*

Comment: EGFs can offset their emissions from anywhere in the AQMD and increase emissions in our area and reducing emissions elsewhere in the AQMD resulting in an environmental injustice in our community. EGFs should not be allowed to access the Priority Reserve if located in heavily polluted areas, such as Huntington Park.

Response: *As indicated in the above response stationary sources including EGFs must demonstrate as a condition for receiving a Permit to Construct and Operate from the AQMD that they will not cause or make worse a violation of an ambient air quality standard at any location in the AQMD, including those areas most heavily polluted. The requirements for the location of where offsets must be obtained for any project are included in Rule 1303, not 1309.1. Rule 1309.1 and any of the proposed amendment options do not supersede the requirements under Rule 1303. Nevertheless, one of the options would preclude projects in Cancer Risk Areas from access of Priority Reserve credits.*

Comment: The staff proposal divides the AQMD into 3 zones. That proposal does not allow EGFs to access Priority Reserve credits in Zone 3. Since pollutant levels in Zone 2 resemble Zone 3, Priority Reserve credits should not be authorized for EGFs in Zone 2 as well. Only EGFs in Zone 1 should have access to the Priority Reserve since it would have a lesser negative impact on air quality and sensitive receptors due to the lower concentration of pollutants present in Zone 1.

Response: *Staff did workshop a proposal that would not allow EGFs access to the priority Reserve in Zone 3, based on the ambient concentration of PM2.5 in that area. Zone 2 was established based on ambient PM2.5 concentrations lower than those in Zone 3. Zone 1 was established with concentrations lower than Zones 2 or 3. Although EGF access to the Priority Reserve would be authorized in Zone 2, there are additional limitations on toxics and increased mitigation fees and thus more funds dedicated to air quality improvements projects in the local community compared to Zone 1. As a result of comments received during the public outreach for this rulemaking, staff is offering a number of proposal options for Board consideration. Some options allow Priority Reserve access in all areas of the AQMD under certain conditions and some do not allow access in certain areas. None of the options collapse Zone 2 and 3. However, two of the options include the areas of highest cancer risk as a criteria in addition to ambient PM2.5 concentration. The air quality impact from any specific project is limited through the permitting process and would be the same regardless of the location. There are sensitive receptors in all zones and the impact on those receptors from a specific project is based upon emissions and distance from the receptors.*

Comment: The Board directed staff to develop proposed amendments to address issues of siting EGFs within communities disproportionately impacted by adverse air quality. Disproportionately impacted calls for consideration of the existing air quality burdens in a community. Using only high ambient

concentrations of PM2.5 is not adequate to establish whether or not an EGF should have access to Priority Reserve credits. Cumulative cancer risk, respiratory hazard index, exposure to other pollutants, including toxics as well as other factors such as concentrations of stationary and mobile sources in an area, pre-existing health conditions in a community and the burdens of poverty and inadequate health care resources should be criteria for determining areas disproportionately impacted by stationary and mobile source emissions and whether or not EGFs should have access to Priority Reserve credits in those areas.

Response: *Staff recommended areas of PM2.5 concentration as the criteria for identifying the more polluted areas within the AQMD because EGFs are significant emitters of PM2.5 and exposure to PM2.5 has been shown to have potential health impacts that far outweigh impacts from other criteria pollutants. EGFs are also significant emitters of NOx. However, the impacts of NOx emissions are more regional than localized and therefore, staff opted not to use NOx as a criteria. Gas-fired EGFs employing BACT are not significant emitters of toxic air contaminants. Nonetheless, the staff proposals include standards for cancer risk and burden and hazard index for EFGs in the more polluted areas that are more stringent than for other sources. In addition, two of the staff proposals include areas of highest cancer risk as criteria for EFGs Priority Reserve access in one proposal and additional limitations and mitigation fees in another proposal.*

Comment: Thresholds should be based on acceptable public health criteria and not other factors such as availability of transmission lines or administrative convenience. None of these areas can be mitigated merely by raising the cost of credits, only by eliminating the dangerous potential for new pollution.

Response: *The criteria recommended in the staff proposals are health based. Rule 1309.1 identifies which sources are eligible to use emission offsets credits from the Priority Reserve under what circumstances. The proposed amendments are to implement the Board directive for incentives for EGFs to locate in less polluted areas when eligible for credits from the Priority Reserve. The intent of the mitigation fee is to reduce pollution impacts by creating emission reductions or renewable energy that will benefit the impact area.*

Comment: The AQMD should consider a higher offset ratio for PM2.5 at the very least it should consider the offset ratio of 1.2 to 1.0.

Response: *The offset requirement in Regulation XIII is for PM10 and the District's NSR account and Priority Reserve are in PM10. It is impractical to break*

out the PM2.5 fraction from the existing credit balances in these accounts. The offset ratio for PM10 for EGFs that use Priority Reserve Credits is 1.2 to 1.0.

Comment: AQMD staff has a responsibility to account for an additional layer of protection in the proposed amendments that include income, asthma hospitalization rates, access to health insurance, age of housing stocks and other such social indicators to map out communities more vulnerable to pollution.

Response: Although staff has used a social indicator in other programs such as the Carl Moyer funding distribution, the criteria recommended is exposure to air pollution regardless of income or other social status.

CONCLUSIONS AND RECOMMENDATIONS

Each of the options sets more health protective standards than the current rule adopted by the Board on September 8, 2006, as a condition for EGF projects to locate in the more polluted areas and provides an incentive for siting these projects in less polluted areas.

FIGURE 1

Three – Year Average (2003 – 2005) PM2.5 Concentration Zones in SCAQMD

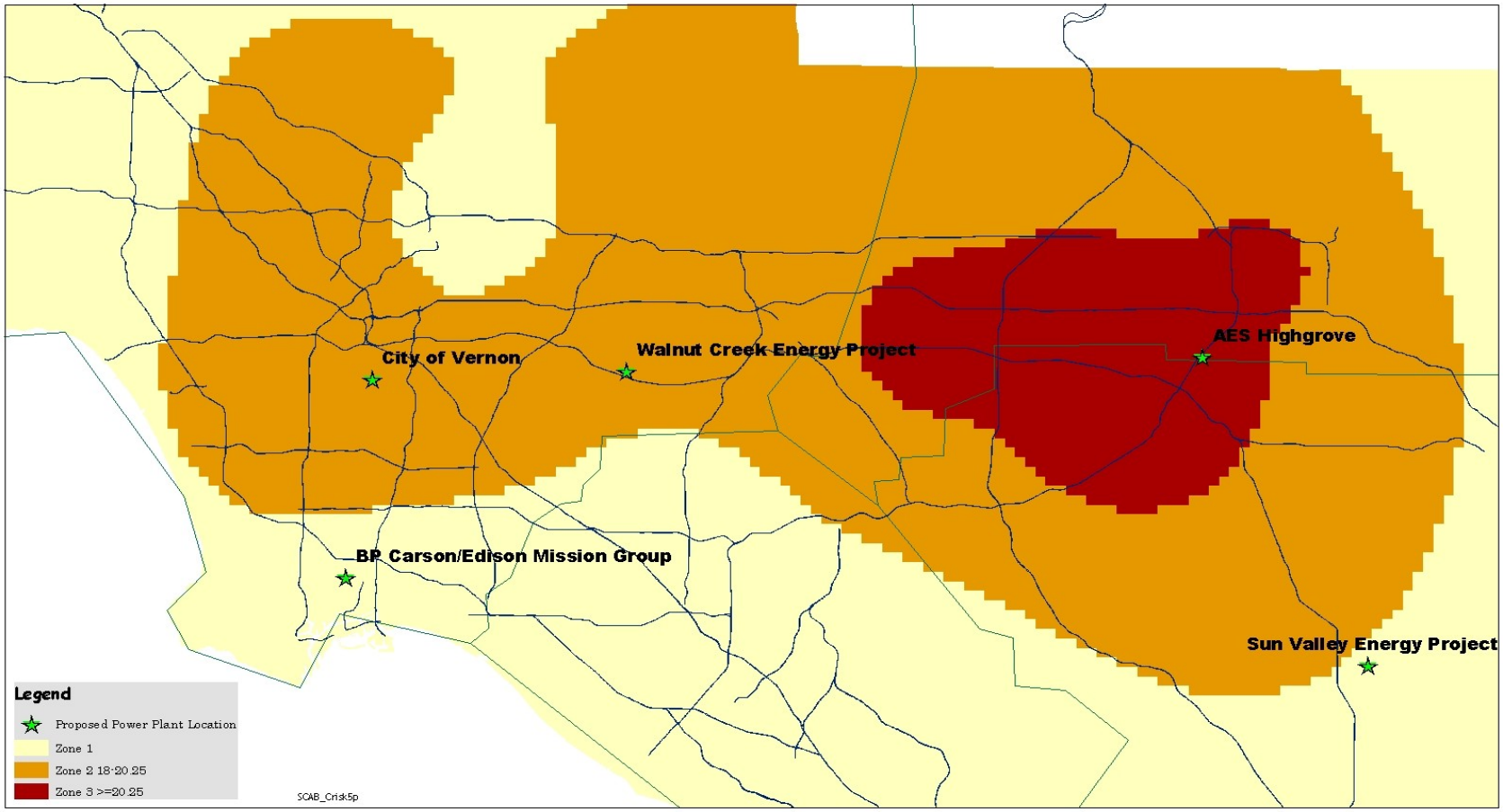
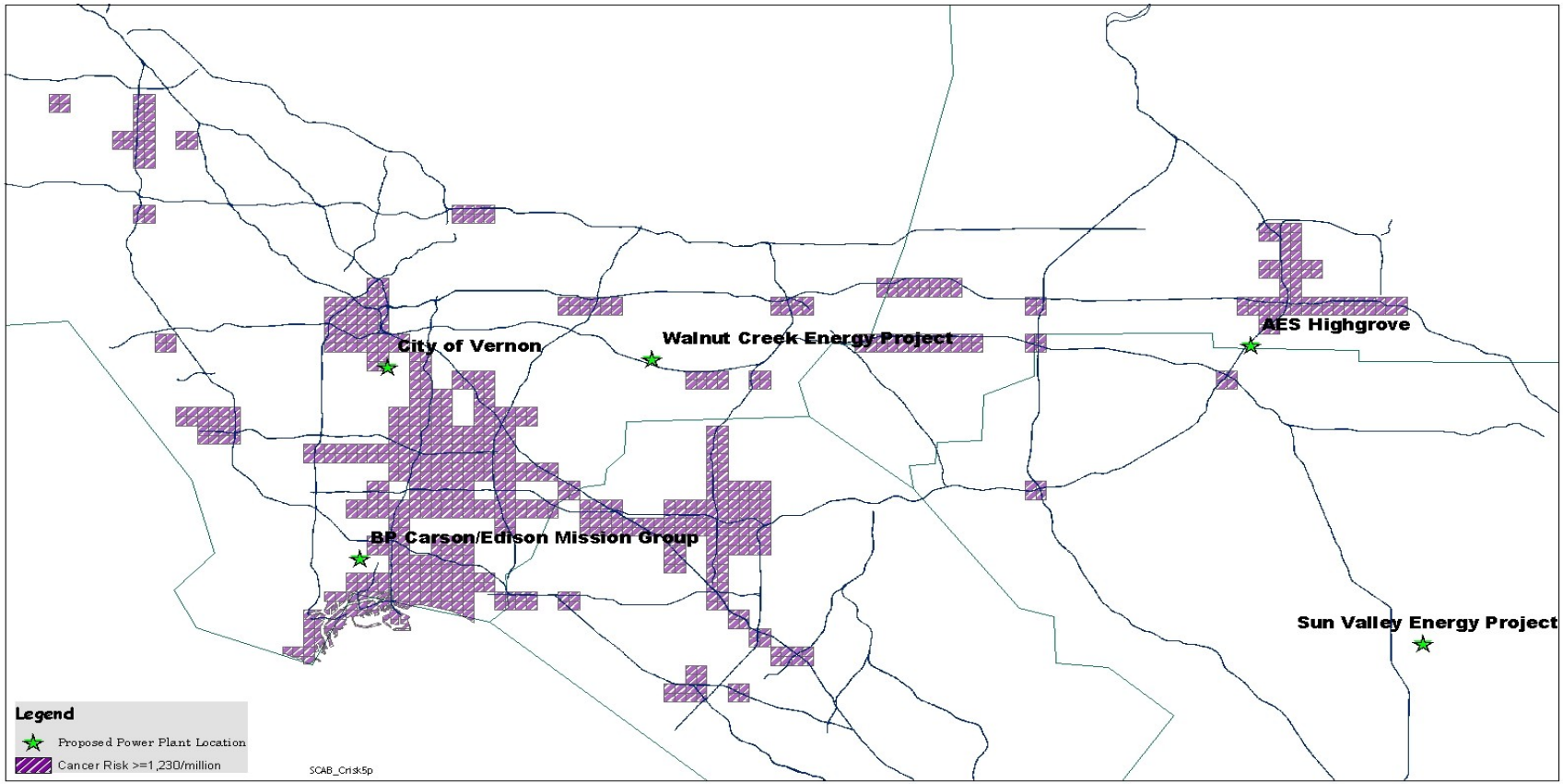


FIGURE 2

Cancer Risk Areas (CRA) in the SCAQMD



ATTACHMENT 1

GUIDANCE DOCUMENT FOR RULE 1309.1

PM2.5 Concentration With Zoning Determinations

Introduction:

South Coast Air Quality Management District (AQMD) staff proposed and the AQMD Governing Board adopted amendments on September 8, 2006 to provide a limited time window for Electrical Generating Facilities (EGFs) to utilize credits from the Priority Reserve, provided they demonstrate that the required offsets are not reasonably available in the open market and meet other eligibility criteria and requirements. In adopting the amendments to Rule 1309.1, the Board directed staff to develop additional requirements for EGF projects proposing to locate in the more polluted areas within the District. In response to the Board directive, staff has developed additional criteria for those EGF projects seeking to purchase credits from the Priority Reserve and propose to locate in more polluted areas.

For the purpose of Rule 1309.1, AQMD is subdivided into three geographic areas (zones) based on PM2.5 exposure levels. Specifically, Zone 1, 2, and 3 are defined as the areas with an average ambient PM2.5 concentration for years 2003 through 2005 of less than 18 $\mu g/m^3$, between 18 and 20 $\mu g/m^3$; and more than 20 $\mu g/m^3$, respectively. Particulates and oxides of Nitrogen (NOx) are the two most important pollutants released by EGFs. Most of the particulates released from EGFs are expected to be in the fine particulate (PM2.5) fraction with mostly regional and some localized impacts. NOx emissions released from EGFs disperse regionally contributing to the formation of ozone downwind. Exposure to higher concentrations of PM2.5 is associated with adverse health impacts that are a lot more serious compared to the health impacts from NOx and other pollutants released by the power plants. Furthermore, the vast majority of the South Coast Basin is in non-attainment with the federal and state PM2.5 standards and the attainment date for the federal annual average standard is just a few years away (2014-2015). For the reasons described above, the PM2.5 exposure level is used as the key criterion to subdivide the District into three geographic zones and establish additional criteria and incentives to locate EGFs in less polluted areas in an effort to minimize public exposure and associated health impacts. The section below details the procedure followed in establishing these concentration zones.

Process:

1. Data:
   The data for this analysis is derived from data collected at AQMD monitoring stations for the years 2003-2005 and from selected stations of the California Air Resources Board (CARB) located outside the AQMD's boundary. Four other locations, San Nicholas Island, off San Clemente Island, Mojave Desert and upper San Bernardino County were added. Values for those locations were determined by AQMD modeling staff.

In addition, several datasets were used in the analysis. They included an AQMD boundary shapefile and a polygon one kilometer grid file. Metadata for all data and map shape files is attached.

2. A point data file, consisting of the station data was created for the data.
3. Using the Geostatistical Analyst extension for ArcGIS, a surface layer was interpolated. This process uses the Inverse Distance Weighting modeling method (see modeling method properties). The model determined the grid size for the output and the resultant layer was classified smart quantiles with 10 classes. The surface layer was saved as a Geostatistical Analyst layer file.
4. Using the Prediction Tool of Geostatistical Analyst a value was predicted for each polygon in the grid file.
5. The grid file was then clipped to the AQMD boundary file and symbolized using three classes.

Dataset Metadata files:

- fcMasterStationList_Data
  a personal Geodatabase Feature Class. fcMasterStationList_Metadata.htm
- Xin1kUTM27.shp
  a shapefile; Xin1kUTM27_Metadata.htm
- PM25ik.shp
  a shapefile combining the polygon grid and predicted PM 2.5 values from the surface layer. pm251k_metadata.htm

Method Properties for Creation of Analysis Surface

Selected Method: Inverse Distance Weighting

Method Parameter(s):

Power: 2

Searching Neighborhood:

Neighbors to Include: 29 (include at least 29)

Searching Ellipse:

Angle: 0

Major Semiaxis: 1.0128

Minor Semiaxis: 1.0128

Sector Mode: 0