



AGENDA:
PCAPCD Board of Directors Meeting
Thursday, October 8, 2015 at 2:30 PM
Placer County Board of Supervisors' Chambers
175 Fulweiler Avenue, Auburn, California

Call to Order

Flag Salute

Roll Call / Determination of a Quorum

Page 3 **Approval of Minutes:** August 13, 2015, Regular Meeting

Public Comment: Any person desiring to address the Board on any item not on the agenda may do so at this time. No action will be taken on any issue not currently on the agenda.

Consent: Item 1

These items are expected to be routine and non-controversial. The Board will act upon these items at one time without discussion. Any Board member, Staff member, or interested citizen may request that an item be removed from the consent calendar for discussion.

Page 6 **1. Budget Revision #16-01 to Accept and Utilize Funds from the California Air Pollution Control Officers Association for the Air Monitoring Program.** *Adopt Budget Revision #16-01, thereby authorizing the Air Pollution Control Officer to accept and utilize the available funds, Four-Thousand-Five-Hundred Dollars (\$4,500.00) from the California Air Pollution Control Officers Association (CAPCOA) into the Operations Fund for equipment to support the Air Monitoring Program.*

Public Hearing/Action: Items 2 and 3

Page 9 **2. Adoption of Amended Rule 250, Stationary Gas Turbines.** *Conduct a Public Hearing regarding the proposed approval of amended Rule 250; and adopt Resolution #15-09, thereby approving amended Rule 250 and the findings in the Staff Report.*

Page 43 **3. 2015 Triennial Progress Report.** *Conduct a Public Hearing regarding the 2015 Triennial Progress Report; and adopt Resolution #15-10, thereby approving the 2015 Triennial Progress Report prepared to satisfy Section 40925 of the California Health and Safety Code.*

Closed Session: Item 4

4. Discuss Recruitment of the Air Pollution Control Officer / District Director. *Pursuant to Government Code §54957(b)(1), the Placer County Air Pollution Control District Board of Directors will hold a closed session to discuss the status of the recruitment of the Air Pollution Control Officer / District Director. A report on any action taken will be presented prior to adjournment.*

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Air Pollution Control Officer Report

- a) Revised federal National Ambient Air Quality Standards (NAAQS) for ground level ozone.
- b) Fiscal update – financial report will be provided at meeting.

Adjournment

Next Regularly Scheduled Board Meeting: December 10, 2015, at 2:30 PM

Placer County Air Pollution Control District is committed to ensuring that persons with disabilities are provided the resources to participate fully in its public meetings. If you require disability-related modifications or accommodations, please contact the Clerk of the Board. All requests must be in writing and must be received by the Clerk five business days prior to the scheduled meeting for which you are requesting accommodation. Requests received after such time will be accommodated only if time permits.

All materials related to this meeting which are provided to Board members are made available to the public at the subject meeting and/or upon request; and are available for public inspection during business hours at the Air Pollution Control District office at 110 Maple Street, Auburn, CA 95603.

District Office Telephone – (530) 745-2330



Minutes of the Thursday, August 13, 2015 Meeting of the Board of Directors

The Board of Directors of the Placer County Air Pollution Control District met for a regular meeting at 2:30 PM, Thursday, August 13, 2015, at the Placer County Board of Supervisors' Chambers, 175 Fulweiler Avenue, Auburn, California.

Representing the District were: Tom Christofk, Air Pollution Control Officer; A.J. Nunez, Administrative Services Officer; Russell Moore, I.T. Technician; and Shannon Harroun, Clerk of the Board.

The meeting was called to order by Chairperson, Robert Weygandt. Roll call was taken by the Clerk of the Board, with the following members in attendance: Tony Hesch, Stan Nader, Robert Weygandt, Robert Black, Jim Holmes, Diana Ruslin, and Carol Garcia. A quorum was established.

Approval of Minutes: June 11, 2015, Regular Meeting.

Motion to approve minutes: Carol Garcia. Unanimously approved.

Public Comment: There were no comments from the public.

Public Hearing/Action: Item 1

- 1. Proposed Final Budget FY 2015-16.** *Conduct a Public Hearing in accordance with the Health and Safety Code §40131. District Staff recommend Board adoption of Resolution #15-08, thereby approving the proposed Final FY 2015-2016 Budget.*

Ms. A.J. Nunez, Administrative Services Officer, presented the FY 2015-16 Proposed Final Budget in accordance with Health and Safety Code 40131(3)(A). She stated that the District philosophy of budgeting revenues conservatively and expenditures adequately allowed the District to end Fiscal Year 14-15 at 7.5% above revenue projections and 4.5% below proposed expenditures. This helped to create the fund balance of \$940,527 that provides the seed money for the FY15-16 Proposed Final Budget.

Ms. Nunez explained that the District budget is organized into five funds: the Operations Fund, DMV Fund, Mitigation Fund, Black Carbon Research Fund and Wildfire Mitigation Fund. The Settlement Fund and the Litigation Cost Recovery Fund that total \$1.6 Million Dollars are not shown in this budget, and can only be used at the discretion of the Board. The interest from these two funds is included in the District's budget.

Ms. Nunez reported that the Proposed Final Budget for FY 15-16 of \$4.5 Million is very similar to the approved budget for FY 2014-15, with about a 1 percent increase. The FY 15-16 Total Projected Revenue is \$3.6 Million, combined with the FY 14-15 Fund Carry-

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Over of \$940,527, provides the \$4.5 Million in Total Funds Available. Proposed expenditures total \$4.2 million.

Ms. Nunez noted that the FY 14-15 Operations Fund Carry-Over is \$497,283, which provides 10% of the FY 15-16 budget. The National Advisory Council on State and Local Budgeting recommends an Operations Fund Carry-Over of between 5 to 15%. The District is within that healthy range. The Operations fund includes the sub-funds, Non-Tort Defense Fund, Reserve (Contingency Fund), Building Capital Maintenance Fund, and Vehicle Replacement Fund. Ms. Nunez went on to provide details about the sources of revenue and proposed expenditures which are included in the District's Proposed FY 15-16 Final Budget.

Ms. Nunez stated that the District is required by the Health and Safety Code Section 40131 to hold a public hearing for the purpose of reviewing the budget and providing the public with the opportunity to comment on the proposed District budget. Upon the close of the public hearing, District Staff recommends the approval of Resolution #15-08, thereby adopting the District Budget for Fiscal Year 2015-16

Chair Weygandt asked what amount the litigation fund started at. APCO Tom Christofk responded that it was about \$3.4 million initially, then the District used about \$1.5 million for the building purchase and about \$400,000 for tenant improvements. Ms. Nunez added that the litigation Settlement Fund is currently at about \$1.2 million, and the building payback goes back into that fund, so it is always increasing; and the Litigation Cost Recovery Fund is at about \$338,000. Director Garcia then commented that she appreciated the thorough budget presentation.

There were no comments from the public.

Motion to approve Item 1: Stan Nader. Unanimously approved.

Action: Item 2

- 2. Subcommittee to Assist in the Recruitment for the Air Pollution Control Officer/District Director.** *Appoint a subcommittee of three to four Board members to work with and advise Heather Renschler of Ralph Andersen & Associates to approve the job specifications, recruitment materials, scope of the search, and to select candidates to be considered by the Board for Air Pollution Control Officer/District Director.*

APCO Tom Christofk explained that Heather Renschler from Ralph Andersen & Associates recommended the Board appoint a subcommittee to screen materials and applicants for the APCO recruitment process. The commitment is anticipated to be 4 or 5 meetings with Heather Renschler between now and the beginning of October. He stated that the District has budgeted funds to compensate members for their time in participating on this subcommittee.

Chair Weygandt suggested the subcommittee could be comprised of two County supervisors and two city representatives. Directors Garcia and Ruslin expressed an interest in serving on the subcommittee. Mr. Holmes and Mr. Weygandt confirmed they could participate. Chair Weygandt also asked Board members if everyone who wanted to provide input to Ms.

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Renschler has been able to do so. Board members affirmed that they have.

Director Jim Holmes made a motion to create an APCO recruitment subcommittee consisting of Jim Holmes, Robert Weygandt, Diana Ruslin and Carol Garcia. Unanimously approved.

After the Board approved the subcommittee, Mr. Christofk stated that he would transmit this information to Heather Renschler, and that District Staff would work with Ralph Andersen & Associates to schedule the appropriate work, in coordination with members' schedules. Director Weygandt asked Mr. Christofk what he would estimate as a completion date for the recruitment. Mr. Christofk said he would expect in the next 8 weeks, by October 8th, to have candidates screened, and that perhaps the appointment could be approved at the October 8th Board meeting. Mr. Christofk added that he will continue to serve as Director after the appointment, until the new APCO is established. Mr. Weygandt also encouraged all members to participate as much as they would like to in this process.

Air Pollution Control Officer Report

Fiscal Update – Ms. A.J. Nunez provided a fiscal update through the end of month 1 of FY 2015-16, stating that the District is below on expenditures by 69% for this point in the year, and above on revenues by 62%, compared to budget. The District has received 25% of projected revenue, and expended 4% of projected expenditures.

Adjournment

Chairperson Weygandt adjourned the meeting at 2:50 p.m.

Shannon Harroun, Clerk of the Board



Board Agenda Item #1

Consent

Agenda Date: October 08, 2015

Prepared By: A.J. Nunez, Administrative Services Officer

Topic: Budget Revision #16-01 to Accept and Utilize Funds from the California Air Pollution Control Officers Association for the Air Monitoring Program

Action Requested: Adopt Budget Revision #16-01 (Attachment #1), thereby authorizing the Air Pollution Control Officer to accept and utilize the available funds of Four-Thousand-Five-Hundred Dollars (\$4,500.00) from the California Air Pollution Control Officers Association (CAPCOA) in the Operations Fund for equipment to support the Air Monitoring Program.

Discussion: The California Air Pollution Control Officer's Association (CAPCOA) which represents the 35 air districts in California, including Placer County APCD, provided districts with a grant opportunity to receive additional funding for improvements in PM2.5 monitoring. The Placer County Air Pollution Control District (PCAPCD) applied for grant funding from CAPCOA for a Met One BAM Volumetric Flow Calibration Kit, (\$3,300) and security camera sets with DVR, (\$1,200) for three of the District's air monitoring sites. CAPCOA approved the PCAPCD grant request and awarded \$4,500.00 to PCAPCD for the purchase of the calibration kit and security camera equipment. These available funds, if approved for addition to the FY 2015-16 Budget for Air Monitoring (currently \$15,000), will bring the total funding available to \$19,500 for the District's Air Monitoring related activities.

Fiscal Impact: There will be no fiscal impact to the District's existing operating budget if these funds are approved for use in the Air Monitoring program, as the additional operation funds will be expensed for small equipment. The District is requesting that the Board approve the use of now available funds from the Operations Fund for the Air Monitoring program.

Recommendation: Staff recommends adoption of Budget Revision #16-01, thereby approving the acceptance and use of \$4,500 in the Operations Fund for Air Monitoring equipment.

Attachment: #1. Budget Revision #16-01; Acceptance and Use of Operations Funds for the Air Monitoring Program

ATTACHMENT #1

SUBJECT:

Budget Revision #16-01
Acceptance and Use of Operations Funds for the Air Monitoring Program



Board Agenda Item #2

Public Hearing/Action

Agenda Date: October 8, 2015

Prepared By: John Finnell, Manager, Permitting and Engineering

Topic: Amendment to Rule 250, Stationary Gas Turbines

Action Requested:

- 1) Conduct a Public Hearing regarding the proposed approval of amended Rule 250, Stationary Gas Turbines.
- 2) Adopt Resolution #15-09 (Attachment #2), thereby approving amended Rule 250, Stationary Gas Turbines, and the findings in the Staff Report (Attachment #1).

Discussion: Rule 250, Stationary Gas Turbines, applies to all stationary gas turbines rated 0.3 megawatts (MW) and larger. Currently, there are two facilities, Roseville Energy Park and City of Roseville Power Plant #2, subject to this rule.

This rule amendment was prompted by a notification by the U.S. Environmental Protection Agency (U.S. EPA) that Rule 250 did not meet current Reasonably Available Control Technology (RACT) requirements. This finding was provided as a result of the U.S. EPA's review of the District's 2014 RACT SIP Analysis Report.

EPA recommended that the District add limits during startup and shutdown, update the rule standards, and eliminate outdated references and definitions.

The most notable proposed changes are:

- The exemptions for pipeline and chemical processing gas turbines have been removed.
- References to efficiency have been removed from the rule standards, as they are no longer required.
- Limits during start-up and shutdown periods have been added for both simple cycle gas turbines and for combined cycle gas turbines.

Fiscal Impact: The amendments do not incur any additional costs for the District. The amendments are not expected to incur any new costs for existing regulated sources.

Recommendation: Staff recommends adoption of Resolution #15-09, (Attachment #2), thereby approving amended Rule 250, Stationary Gas Turbines, and the findings in the Staff Report of Attachment #1.

Attachments: #1. Staff Report, Amendment to Rule 250, Stationary Gas Turbine
#2. Resolution #15-09, Approval of an Amendment of the Placer County Air Pollution Control District's Rule 250, Stationary Gas Turbines, and Exhibit 1, Rule 250, Stationary Gas Turbines

ATTACHMENT #1

SUBJECT

Staff Report: Rule 250, Stationary Gas Turbines

**PLACER COUNTY
AIR POLLUTION CONTROL DISTRICT**

STAFF REPORT

**AMENDMENT OF
RULE 250, STATIONARY GAS TURBINES**

October 8, 2015

**Prepared by:
John Finnell
Manager of Permitting and Engineering**

INTRODUCTION

Rule 250, Stationary Gas Turbines, applies to all stationary gas turbines rated 0.3 megawatts (MW) and larger.

This rule amendment was prompted by U.S. Environmental Protection Agency (U.S. EPA) notification that Rule 250 does not meet current Reasonably Available Control Technology (RACT).

The most notable changes are:

- The exemptions for pipeline and chemical processing gas turbines have been removed.
- References to efficiency have been removed from the rule standards, as they are no longer required.
- Limits during start-up and shutdown periods have been added for simple cycle gas turbines and for combined cycle gas turbines.

PUBLIC COMMENTS

A draft Rule 250 was prepared and public notice published on September 6, 2015 that the draft Rule 250 was available for review and comment beginning September 8, 2015.

No public comments have been received.

U.S. EPA provided verbal comments. The following changes were made in response to those comments:

Section 102 – Deleted reference to Sections 110 and 111 which are now Sections 103 and 104. They are in the rule but this language is not needed.

Section 105 – Revised section which had included a new exemption from SU/SD for low use turbines. This section was changed to only allow an exemption from the monitoring provisions for existing low use units operating less than 877 hours per year.

Section 204 – Major source definition was added.

Section 206 – Deleted HHV definition as it is no longer needed.

Section 206 – Performance testing definition was added. The District's rules use the terms source testing and performance testing as interchangeable equivalent terms.

Section 207 – Deleted LHV definition as it is no longer needed.

Section 210 – Reinstated SCR definition that was previously in the rule.

Section 301 – Added that the one-hour average is based on four consecutive 15-minute averages. Removed wording "thermal stabilization" and changed to "startup and shutdown".

Section 501.1.3 – Deleted the 4,000 hr. requirement for CEMS, as other districts do not have this. However, an exemption is proposed, as shown in Section 105.

Section 501.2 – No change to this section. The District uses the term performance testing interchangeably with source testing. A Performance Testing definition has been added in Section 206.

Section 502.1 – Deleted sentence defining major source and added a major source definition. The District would like to keep the requirement that records be kept for major sources for 5 years and non-major sources for 2 years.

BACKGROUND

There are currently two permitted facilities within the District that are subject to Rule 250. They are both owned and operated by the City of Roseville, Roseville Electric. One facility has two combined cycle gas turbine units with heat recovery and the other one has two simple cycle units.

The District does not expect the proposed rule amendments to have a significant impact on either of these sources or the environment. It will not create emission reductions. This amendment simply provides an updated RACT rule.

The amended rule, if approved, will also apply to any new sources. New sources will trigger Best Available Control Technology (BACT) requirements for NO_x emissions. These will be more stringent than the requirements of this rule.

Stationary gas turbines are engines consuming liquid or gaseous fuels, which produce mechanical power that can be used to perform mechanical work or can be converted into electrical power. After air is compressed in the compressor section of the engine, fuel is introduced and mixed with the air, and then the mixture is ignited in the combustor. The expanding combustion gases exhaust through the turbine section of the engine, causing the turbine blades to spin and thus creating shaft power. The combustion of fuel by the stationary gas turbine results in the emission of criteria pollutants: carbon monoxide (CO), oxides of nitrogen (NO_x), oxides of sulfur (SO_x), volatile organic compounds (VOC), and particulate matter ten microns (PM₁₀). Many stationary gas turbines utilize selective catalytic reduction (SCR) as an emissions control technology. This control technology results in the emission of ammonia, which can negatively affect the respiratory system with acute and chronic exposures.

In the simple cycle gas turbine, power plant electrical power is created from the generator driven by the gas turbine.

A later development in stationary power generation is the combined cycle power plant, which utilizes additional components. The more complex combined cycle extracts useful heat energy from the gas turbine exhaust with a heat recovery steam generator. The heat recovery steam generator then channels the steam to drive a steam turbine. The shaft power from the steam turbine is used to drive an additional electric generator. The additional equipment of the

combined cycle power plant results in a greater amount of time necessary to reach steady-state operation compared to the simple cycle process.

AMENDMENTS OF RULE 250

Staff is proposing to make a number of amendments to update the rule and to gain EPA SIP approval. These amendments are described below. A strikeout version of the amended rule is included in this staff report.

Section 100 General

Section 101, Purpose, was revised to remove the reference to Best Available Retrofit Control Technology (BARCT) determinations. This is not needed. The rule amendment is intended to meet Reasonably Available Control Technology (RACT) requirements.

Section 102, Applicability, was revised to remove references to Section 110 and 111. Section 110 is now 103. Section 111 is now 104. The exemptions for pipeline and chemical processing gas turbines were removed. There are none in Placer. If one was added, they should meet this rule, and the units would be subject to the more stringent Best Available Control Technology (BACT) standards when applying for a permit.

Section 105, Exemption – Low Use Unit, was added to provide an exemption from the monitoring requirements in Section 501.1.3. Without the exemption, the low use units would need to add an expensive continuous monitoring system.

Section 200 Definitions

The definition of BARCT, chemical processing gas turbine, high heating value (hhv), low heating value (lhv), measured NO_x emissions concentration, pipeline gas turbines and thermal stabilization were removed because the terms are not used in the proposed rule.

The definition of performance testing was added to clarify that this meant stack emissions testing or source testing.

A startup and a shutdown definition were added. The previous rule allowed a two hour startup period. The time allowed for startup for a combined cycle turbine was increased from two (2) hours to six (6) hours.

Section 300 Standards

Section 301, Limitations, currently has the standards shown below:

EXISTING LIMITATIONS Unit Size Megawatt Rating (MW)	Compliance limit NO _x , ppm @ 15% O ₂	
	Gas ^A	Oil ^B
0.3 to Less Than 2.9 MW and Units Greater Than or Equal to 4 MW That Operate Less Than 877 Hour/Year	42	65
2.9 to Less Than 10 MW	25 x EFF /25	65
10.0 MW and Over with SCR	9 x EFF /25	25 x EFF /25
10.0 MW and Over Without SCR	15 x EFF /25	42 x EFF /25

A. GAS INCLUDES NATURAL, DIGESTER, AND LANDFILL GASES.

B. OIL INCLUDES KEROSENE, JET, AND DISTILLATE. THE SULFUR CONTENT OF THE OIL SHALL BE LESS THAN 0.05%.

Where: **EFF**(efficiency) is the higher of the following:

$$301.1 \text{ EFF} = \frac{3412 \times 100\%}{\text{AHR}}$$

[where: AHR = Actual Heat Rate at HHV of Fuel (BTU/KW-HR)], which is the demonstrated percent efficiency of the gas turbine only as calculated without consideration of any downstream energy recovery from the actual heat rate, (BTU/KW-HR) or 1.34 (BTU/HP-HR); corrected to the HHV (higher heating value) of the fuel and ISO conditions, as measured at peak load for that facility, or

$$301.2 \text{ EFF} = \frac{\text{MRE} \times \text{LHV}}{\text{HHV}}$$

[where: MRE = Manufacturer's Rated Efficiency with Air Pollution Equipment at LHV.], which is the manufacturer's continuous rated percent efficiency of the gas turbine with air pollution equipment after correction from LHV to HHV of the fuel at peak load for that facility.

PROPOSED CHANGES TO NO_x EMISSION CONCENTRATION LIMITS

PROPOSED LIMITATIONS Unit Size Megawatt Rating (MW)	Compliance limit NO _x , ppm @ 15% O ₂	
	Gas ^A	Oil ^B
Units rated 0.3 to Less Than 2.9 MW OR Units Greater Than or Equal to 4 MW That Operate Less Than 877 Hour/Year	42	65
2.9 to Less Than 10 MW	25	65
10.0 MW and Over	9	25

A. GAS INCLUDES ONLY COMMERCIAL NATURAL AND LIQUIFIED PETROLEUM GASES.

B. OIL INCLUDES KEROSENE, JET, AND DISTILLATE OIL. THE SULFUR CONTENT OF THE OIL SHALL BE LESS THAN 0.05%.

The proposed rule amendment removes the efficiency factor of EFF/25 which was applicable to the 9 and 25 ppm limits. These are no longer used or needed. This makes the rule standards more stringent without having to make additional calculations to determine compliance.

The definition of EFF (Efficiency) was deleted because it is no longer used or needed.

Section 302 Startup/Shutdown Combined Cycle

This section adds emission limits during startup or shutdown periods.

There is a concern that an exemption of emission limits during startup without other limitations would provide a loophole for operators to have significant emissions during startup. While there has been considerable discussion about startup and shutdown emissions, there is very little literature on actual emissions during these periods. The actual emissions vary depending on many factors including how long the turbine has been offline and ambient air temperature.

The best way to limit emissions is to limit the length of time of a startup. The rule amendment allows up to six (6) hours which is sufficient time for a large combined cycle unit to come online, even if there is a problem initially on the startup.

In addition, a startup/shutdown emission limit of 70 ppmv @15% O₂ was added based on the most recent rule change found in Yolo-Solano Air Quality Management District (YSAQMD) Amendment to Rule 2.34 Stationary Gas Turbines.

Alternatively, operators may comply by meeting a pounds per million British Thermal Unit limit (lbs./MMBtu)

The startup/shutdown pounds per MMBtu/hr limit was based on the permit limit in the Roseville Electric Roseville Energy Park. The lbs/MMBtu of .016 was determined by dividing the NO_x pounds per hour limit during startup by the input fuel rate in MMBtu/hr.

The emission limit of 226 @15% O₂ when a turbine is operated on fuel oil was also found in the YSAQMD Amendment to Rule 2.34 Stationary Gas Turbines.

Section 303 Startup/Shutdown Simple Cycle Units

This section was added to require basic good practices be applied during startup or shutdown of simple cycle units.

Section 400 Administrative Requirements

The compliance schedule in Section 401 and requirement to have an emission control plan in Section 402 were removed as they are no longer needed.

Section 500 Monitoring and Recordkeeping

Section 501 Monitoring

The language requiring a NO_x continuous emissions monitor on units 10 MW or greater that operated more the 4000 hours per year over the last three years prior to July 13, 1994 has been changed to delete the wording, “that operated more than 4000 hours per year over the last three years prior to July 13, 1994”.

A NO_x monitor is now required unless a gas turbine is a low use unit and exempt under Section 105.

Section 502 Recordkeeping

A requirement was added for the owner or operator of a major source to maintain records for a period of five years. Non-major sources must keep records for a minimum of two (2) years.

The reference to the demonstrated percent efficiency (EFF) was deleted as it is no longer used in the emission standards.

The reference to recording in Pacific Standard Time was deleted at the request of Roseville Electric.

Section 502.6 required maintaining a gas turbine operating log. This section was nearly identical to the previous section 502.5 and is deleted because it is redundant.

Section 503 Test Methods

The test methods for LHV and HHV of fuel were deleted as they are not used in the proposed version of this rule.

COMPARISON TO OTHER APPLICABLE REGULATIONS AND REQUIREMENTS

New Source Performance Standards

Stationary gas turbines with a 10 Million Btu per hour heat input rate at peak load (based on the higher heating value of the fuel fired) are subject to the requirements of the EPA's New Source Performance Standards (NSPS) contained in 40 CFR Part 60, Subpart KKKK. Table 2 below presents a comparative analysis between specific elements of the proposed revised rule and the corresponding elements of the existing federal regulation.

Comparison of Proposed Rule Revision Emission Limits with NSPS 40 CFR, Part 60, Subpart KKKK

Turbine Rating	District Rule 250 NO _x Emission Limits, ppmv@15% O ₂	Federal Regulation 40 CFR Part 60, Subpart KKKK NO _x Emission Limits, ppmv@15% O ₂
< 10 MW fired on Natural Gas	25 or 42	42, 100, or 150
< 10 MW fired on fuel other than Natural Gas	25, 42, or 65	96 or 150
≥ 10 MW fired on Natural Gas	9 or 42*	15, 25, 42, 100, or 150
≥ 10 MW fired on fuel other than Natural Gas	9, 25, 42, or 65*	42, 74, 96, 100, or 150

* The 42 and 65 ppmv NO_x limits in these categories only apply to turbines which are limited to operating for less than 877 hours/year

The standards for sulfur dioxide of 40 CFR Part 60, Subpart KKKK requires either that the emission of sulfur dioxide (SO₂) from any stationary gas turbine not exceed 0.90 pounds per megawatt-hour or that the fuel burned not contain potential sulfur emissions in excess of 0.060 pounds of SO₂ per million BTU. The subpart also contains alternative compliance limits for turbines in a non-continental area or if the EPA administrator finds both that the turbine is located in an area where natural gas is not available, and that the removal of sulfur compounds would cause more environmental harm than benefit. District Rule 250 currently does not contain any restrictions on sulfur oxides and the proposed amendments will not add any restrictions. Emissions of sulfur oxides from stationary gas turbines will be limited by other District rules and regulations, as well as state-level regulations on fuel sulfur content.

Stationary gas turbines with a 10 Million Btu per hour heat input rate at peak load (based on the lower heating value of the fuel fired) and not regulated under Subpart KKKK are subject to the requirements of NSPS contained in 40 CFR Part 60, Subpart GG. Table 3 below presents a comparative analysis between specific elements of the proposed revised rule and the corresponding elements of the existing federal regulation.

Comparison of Proposed Rule Revision Emission Limits with NSPS 40 CFR, Part 60, Subpart GG

Turbine Rating	District Rule 250 NO _x Emission Limits, ppmv@15% O ₂	Federal Regulation 40 CFR Part 60, Subpart GG NO _x Minimum Emission Limits, ppmv@15% O ₂
0.3 to Less Than 2.9 MW And Units Greater Than or Equal to 4 MW That Operate Less Than 877 Hour/Year	42 or 65	75 or 150
2.9 to Less Than 10.0 MW	25 or 65	150
10.0 MW and Over	9 or 25	75 or 150

The NO_x emission limits presented for Subpart GG reflect the most stringent emission limits which can be increased to higher levels with an adjustment factor calculated from the manufacturer's rated heat rate at the manufacturer's rated peak load and a NO_x emission allowance for fuel-bound nitrogen.

The federal regulation requires that if a nonzero emission allowance for fuel-bound nitrogen is used in the calculation of the applicable NO_x emission limit in Subpart GG, the owner or operator of the turbine shall monitor the nitrogen content of the fuel combusted by the approved methods.

The standards for sulfur dioxide of 40 CFR Part 60, Subpart GG require that the emission of sulfur dioxide from any stationary gas turbine not exceed 0.015 percent by volume at 15 percent excess oxygen on a dry basis. The regulation also requires the fuel fired in a stationary gas turbine shall not contain sulfur in excess of 0.8 percent by weight. District Rule 250 currently does not contain any restrictions on sulfur oxides, and the proposed amendments will not add any restrictions. Emissions of sulfur oxides from stationary gas turbines will be limited by other District rules and regulations as well as state-level regulations on fuel sulfur content.

Both 40 CFR Part 60, Subpart GG and District Rule 250 require monitoring of the emission unit to demonstrate compliance with the applicable emissions standards. The federal regulation requires monitoring of the total sulfur content of the fuel combusted in the turbine. This monitoring becomes elective if the owner or operator can demonstrate by approved means that the fuel being fired in the turbine meets the definition of natural gas given in the regulation. District Rule 250 has not contained, and the rule revision will not add, any limitations on sulfur dioxide emissions.

Reasonably Available Control Technology

The revisions to this rule would establish for steady-state operation the same NO_x emission limits as those currently established for stationary gas turbines by the Sacramento Metropolitan Air Quality Management District, Yolo-Solano AQMD and other districts, which are equal to or lower than the applicable standards established by the federal government under 40 CFR 60 Subpart KKKK, and well below the lowest applicable standards required by Subpart GG.

Best Available Retrofit Control Technology

The Sacramento Federal Non-Attainment Area is classified by the EPA to be in severe nonattainment of the 8-hour national ambient air quality standard for ozone. According to Section 40920 of the California Health and Safety Code, a district with severe air pollution shall, to the extent necessary to meet the requirement that a district design a plan to achieve and maintain air quality standards by the earliest practicable date, include in the district plan all measures required for moderate and serious nonattainment areas. One of the measures for districts with serious air pollution is the use of the Best Available Retrofit Control Technology (BARCT) for existing permitted stationary sources. The only existing stationary gas turbines subject to the rule are operated by Roseville Electric. The District has not relied on the application of BARCT for stationary gas turbines as a means to achieve ambient air quality standards in the 2012 Triennial Assessment and Plan Update. BARCT is not required, and this rule does not establish BARCT.

ANALYSIS

The following Analysis and the subsequent Findings are intended to address the requirements set forth in the Health and Safety Code relating to adoption of a new or amended District Rule, as well as other State statutes referenced herein.

1. Cost-Effectiveness of a Control Measure

California Health & Safety Code (H&S) Section 40703 requires a District to consider and make public “the cost-effectiveness of a control measure”. Emission reductions are not anticipated. There will be no known costs to comply.

2. Socioeconomic Impact

H&S Section 40728, in relevant part, requires the Board to consider the socioeconomic impact of any new or amended rule if air quality or emission limits are significantly affected. The two facilities where the rule is applicable are in compliance with the proposed rule amendments. A socioeconomic impact is not anticipated.

3. Environmental Review and Compliance

California Public Resources Code Section 21159 requires an environmental analysis of the reasonably foreseeable methods of compliance should be conducted. Compliance of the proposed rule amendment is expected to already be achieved. Staff has concluded that no adverse environmental impacts will be caused by compliance with the proposed rule amendment.

According to the above conclusion, Staff finds that the proposed rule amendment is exempt from the California Environmental Quality Act (CEQA) because: (1) it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment (CEQA Guidelines §15061(b) (3)), and (2) it is as an action by a regulatory agency for protection of the environment (Class 8 Categorical Exemption, CEQA Guidelines §15308).

FINDINGS

- A. **Necessity:** The adoption of proposed amended Rule 250 satisfies the objective of the District to adopt RACT requirements.
- B. **Authority:** California Health and Safety Code, Sections 40000, 40001, 40701, 40702, 40716, 41010, and 41013, are provisions of law that provide the District with the authority to adopt this proposed amended Rule.
- C. **Clarity:** There is no indication, at this time, that the proposed amended Rule is written in such a manner that persons affected by the Rule cannot easily understand them.
- D. **Consistency:** The proposed amended Rule is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.
- E. **Non-duplication:** The proposed amended Rule does not impose the same requirements as an existing state or federal regulation.
- F. **Reference:** All statutes, court decisions, and other provisions of law used by the District in interpreting this proposed amended Rule are incorporated into this analysis and this finding by reference.

SUMMARY

District Staff recommend the District Board conduct a public hearing and approve the amendments to Rule 250, Stationary Gas Turbines.

STRIKEOUT VERSION

RULE 250, STATIONARY GAS TURBINES

RULE 250 STATIONARY GAS TURBINES

Adopted 10-17-94
(Amended 10-08-15)

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October 8, 2015

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100 GENERAL

101 PURPOSE: The purpose of this rule is to limit NOx emissions from stationary gas turbines, ~~in conformance with BARCT determinations approved by the California Air Resources Board to meet the requirements of the California Clean Air Act.~~

~~102~~ **APPLICABILITY:** ~~Except as provided in Sections 110 and 111,;~~ This rule shall apply to all stationary gas turbines, 0.3 megawatt (MW) and larger.

~~14003~~ **EXEMPTION – LABORATORY, OR FIREFIGHTING/FLOOD CONTROL, AND PIPELINE UNITS:** The provisions of this rule with the exception of Section 402.3 shall not apply to the operation of stationary gas turbines used under the following conditions:

~~140043.1~~ Laboratory units used in research and testing for the advancement of gas turbine technology.

~~104340.2~~ Units operated exclusively for firefighting and/or flood control.

~~110.3~~ Pipeline gas turbines provided that the owner/operator demonstrates to the satisfaction of the Air Pollution Control Officer that water or steam injection, selective catalytic reduction, or any other emission control technology is not technologically feasible, cost effective or creates adverse environmental impacts such as those associated with the use, transport, or disposal of supplies such as water and ammonia.

~~110.4~~ Chemical processing gas turbine units.

~~14404~~ **EXEMPTION - EMERGENCY STANDBY AND SMALL UNITS:** The provisions of this rule with the exception of Sections ~~402.3, 403, and 502.5~~ 502.5 shall not apply to the operation of stationary gas turbines used under the following conditions:

~~14404.1~~ Emergency standby units demonstrated to operate less than 200 hours per calendar year.

~~14404.2~~ Units of less than 4 MW operating less than 877 hours per calendar year.

~~105~~ **EXEMPTION – LOW USE UNITS:** The monitoring provisions of Section 501.1.3 shall not apply to low use units operating less than 877 hours per year and installed prior to October 8, 2015.

~~105~~ **EXEMPTION – EXISTING SIMPLE CYCLE UNITS:** The provisions of Section 302, Startup and Shutdown shall not apply to simple cycle units in operation prior to October 9, 2015 and operating less than 877 hours per year.

200 DEFINITIONS

~~201~~ **BARCT:** "Best Available Retrofit Control Technology" as defined in Section 40406 of the California Health and Safety Code as an "emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source".

~~202~~ **CHEMICAL PROCESSING GAS TURBINE UNIT:** A stationary gas turbine that vents its exhaust gases into the operating stream of a chemical process.

October 8, 2015

~~203~~ ~~201~~ ~~COMPLIANCE LIMIT:~~ Allowable NO_x emissions expressed in parts per million by volume (ppmv).

2042 CONTROL SYSTEM OPERATING PARAMETERS: Operating parameters that the Air Pollution Control Officer deems necessary to analyze when determining compliance, such as ammonia and exhaust flow rates and exhaust gas temperature for SCR; of humidity, water injection rate, exhaust gas flow rate, and temperature for water injection.

2053 EMERGENCY STANDBY UNIT: A stationary gas turbine that operates only as a mechanical or electrical power source for a facility when the primary power source has been rendered inoperable due to a failure beyond the reasonable control of the operator, except due to power interruption pursuant to a voluntary interruptible power supply agreement. Electricity generated by such a unit cannot be sold.

~~2064~~ ~~HHV:~~ The higher heating value of a fuel. **MAJOR SOURCE:** For the purpose of this rule a major source is defined as a stationary source with a potential to emit exceeding: 25 tons per year of nitrogen oxides, 25 tons per year of volatile organic compounds, 100 tons per year of sulfur dioxide, 100 tons per year of carbon monoxide, 100 tons per year of PM₁₀, or 100 tons per year of a regulated air pollutant.

~~207~~ ~~LHV:~~ The lower heating value of the fuel.

~~2085 MEASURED NO_x EMISSIONS CONCENTRATION:~~ The concentration of NO_x emissions corrected to International Standards Organization (ISO) standard conditions:

$$\text{NO}_x = (\text{NO}_{x\text{obs}})(P_{\text{ref}}/P_{\text{obs}})^{0.5} (288^\circ/T_{\text{amb}})^{1.53} [e^{19(H_{\text{obs}}-0.00633)}]$$

~~Where:~~

~~No_x = Emissions of NO_x at 15 percent oxygen and ISO standard conditions on a dry basis, ppm.~~

~~No_{xobs} = Measured NO_x emissions corrected to 15 percent oxygen on a dry basis, ppm.~~

~~P_{ref} = Standard reference pressure, 14.696 psia.~~

~~P_{obs} = Measured site ambient absolute pressure, psia.~~

~~H_{obs} = Measured humidity of ambient air, pounds water per pound dry air.~~

~~e = Transcendental constant (2.718).~~

~~T_{amb} = Measured temperature of ambient air, degrees K.~~

~~or an alternate correlation that corrects to ISO standard conditions and is approved by the Air Pollution Control Officer.~~

~~209~~ **NO_x EMISSIONS (NO_x):** The sum of nitric oxides and nitrogen dioxide in the exhaust gas stream.

~~210~~ **PIPELINE GAS TURBINES:** A stationary gas turbine used to transport gases or liquids in a pipeline.

241006 PERFORMANCE TESTING: Performance testing for stationary source air emissions is also known as stack testing or source testing. Performance testing is the measurement of air emissions.

207 POWER AUGMENTATION: An increase in the gas turbine shaft output and/or the decrease in gas turbine fuel consumption by the addition of energy recovered from exhaust heat.

242108 PUBLIC SERVICE UNIT: A gas turbine used to generate electricity for sale or for use in serving the public.

210932 RATING: The continuous megawatt (MW) rating or mechanical equivalent by a manufacturer for gas turbine(s) without power augmentation.

210443 SELECTIVE CATALYTIC REDUCTION (SCR): A post combustion control technology that utilizes ammonia injected into the exhaust gas stream where it reduces NOx to molecular nitrogen in the presence of a catalyst.

211

~~2145~~ **STATIONARY GAS TURBINE:** Any gas turbine system that is gas and/or liquid fueled with or without power augmentation. This unit is either attached to a foundation at a facility or is portable equipment operated at a specific facility for more than 90 days in any 12-month period. Two or more gas turbines powering one shaft shall be treated as one unit.

21256 SHUTDOWN: The time necessary to cease operation of a gas turbine under load conditions. The period begins when the shutdown command is given to the gas turbine. This time shall not exceed one (1) hour.

~~STARTUP THERMAL STABILIZATION PERIOD:~~ The two hour start up time necessary to bring the heat recovery steam generator a unit to the normal operating proper temperature, not to exceed two (2) hours. ~~If the unit fails to synchronize online properly an additional period of two (2) hours for simple cycle and six (6) hours for combined cycle units is allowed.~~

~~2137 STARTUP:~~ The time necessary to bring the gas turbine to the design rating not to exceed two (2) hours for simple cycle and six (6) hours for combined cycle gas turbine power plants.

~~SHUTDOWN:~~ The time needed to shut down the unit.

300 STANDARDS

301 LIMITATIONS: The owner or operator of any stationary gas turbine unit shall not operate such unit under load conditions, excluding the ~~thermal stabilization startup or shutdown period~~ which results in the measured NOx emissions concentration exceeding the compliance limit listed below, averaged over ~~15 minutes~~ one (1) hour based on four consecutive 15-minute averages:

Unit Size	Compliance limit NO _x , ppm @ 15% O ₂	
	Gas ^A	Oil ^B
Megawatt Rating (MW)		
<u>Units rated 0.3 to Less Than 2.9 MW</u> <u>OR</u> <u>and Units Greater Than or Equal to 4 MW That</u> <u>Operate Less Than 877 Hour/Year</u>	42	65
2.9 to Less Than 10 MW	25 x EFF/25	65
10.0 MW and Over with SCR	9 x EFF/25	25 x EFF/25
10.0 MW and Over Without SCR	15 x EFF/25	42 x EFF/25

A. GAS INCLUDES NATURAL, DIGESTER, AND LANDFILL GASES.

B. OIL INCLUDES KEROSENE, JET, AND DISTILLATE. THE SULFUR CONTENT OF THE OIL SHALL BE LESS THAN 0.05%.

Where: **EFF**(efficiency) is the higher of the following:

$$\frac{301.1 \text{ EFF}}{\text{AHR}} = \frac{3412 \times 100\%}{\text{AHR}}$$

[where: AHR = Actual Heat Rate at HHV of Fuel (BTU/KW-HR)], which is the demonstrated percent efficiency of the gas turbine only as calculated without consideration of any downstream energy recovery from the actual heat rate, (BTU/KW-HR) or 1.34 (BTU/HP-HR); corrected to the HHV (higher heating value) of the fuel and ISO conditions, as measured at peak load for that facility, or

$$\frac{301.2 \text{ EFF}}{\text{HHV}} = \frac{\text{MRE} \times \text{LHV}}{\text{HHV}}$$

[where: MRE = Manufacturer's Rated Efficiency with Air Pollution Equipment at LHV.], which is the manufacturer's continuous rated percent efficiency of the gas turbine with air pollution equipment after correction from LHV to HHV of the fuel at peak load for that facility.

302 —STARTUP/SHUTDOWN COMBINED CYCLE UNITS: The NO_x emissions shall meet at least one of the following averaged over the duration of the startup or shutdown period:

302.1 70 ppm @ 15% O₂ for turbines fired on gas or,

302.2 0.16 pounds per MMBtu/hr input for turbines fired on gas or oil or,

302.3 226 ppm @ 15% O₂ for turbines fired on oil liquid fuels.

303 STARTUP/SHUTDOWN SIMPLE CYCLE UNITS: The NO_x emissions shall be kept to a minimum by use of the following:

303.1 Manufacturer's recommendation for operation during startup and shutdown.

303.2 Injection of water as soon as reasonably possible

303.3 Maintaining proper air to fuel ratios

400 ADMINISTRATIVE REQUIREMENTS

~~401 COMPLIANCE SCHEDULE: Owners or operators of all gas turbines existing on the date of adoption and subject to the provisions of this rule shall comply with the applicable provisions of Section 301 in accordance with the following schedule:~~

~~401.1 No later than May 31, 1995, demonstrate final compliance.~~

~~402 EMISSION CONTROL PLAN: The owner or operator of any existing stationary gas turbine shall submit to the Air Pollution Control Officer for approval an Emissions Control Plan of all actions, including a schedule of increments of progress, which will be taken to meet or exceed requirements of the applicable emissions limitations in Section 301 and compliance schedule in Section 401.~~

~~402.1 The Emission Control Plan shall contain, as a minimum, a list that provides the following for each gas turbine subject to the provisions of this rule:~~

- ~~a. Permit or identification number;~~
- ~~b. Name of gas turbine manufacturer;~~
- ~~c. Model designation;~~
- ~~d. Rated shaft power output (MW);~~
- ~~e. Type of liquid fuel and/or type of gaseous fuel;~~
- ~~f. Fuel consumption (cubic feet of gas or gallons of liquid) for the previous one-year period;~~
- ~~g. Hours of operation in the previous one-year period;~~
- ~~h. Heat rate (BTU/KW-HR), corrected to the HHV for each type of fuel (liquid/gas), and~~
- ~~i. HHV for each fuel.~~

~~402.2 A listing of all gas turbines required to be controlled, identifying the type of emission control to be applied to each gas turbine along with documentation showing existing emissions of oxides of nitrogen.~~

~~402.3 Support documentation for any units exempt under the provisions of Sections 110 and 111.~~

~~403 EXEMPT UNITS AND EMERGENCY STANDBY UNITS: Exempt units and emergency standby units shall comply with the following:~~

~~4013.1 The owner or operator of any unit listed below shall notify the Air Pollution Control Officer in writing within seven days if the 877 hour-per-year limit is applicable and was exceeded. A public service unit operating during a state of emergency, when such emergency is declared by proclamation of the Governor of the State of California and when the unit is located in the specific geographical location identified in the proclamation, shall be excluded from the hour-per-year limit. If the hour-per-year limit is exceeded, the exemption shall be permanently withdrawn. Within 30 days after the exceedance, the owner or operator shall submit an application for Authority to Construct that details a plan to meet the applicable limits specified in Section 301 of this rule within two years. Included in this application, the owner or operator shall submit an emission control plan that includes a schedule of increments of progress for the installation of the required~~

control equipment. This schedule shall be subject to the review and approval of the Air Pollution Control Officer.

~~a-401.1.1~~ Any unit smaller than 4 MW or emergency standby unit exempt under Sections 110 and 111.

~~b-401.1.2~~ Any unit equal to or greater than 4 MW.

500 MONITORING AND RECORDKEEPING

501 MONITORING: The owner or operator of any stationary gas turbine subject to the provisions of this rule shall perform the following actions:

501.1 Install, operate and maintain in calibration equipment, as approved by the Air Pollution Control Officer, that continuously measures and records the following:

~~a-501.1.1~~ Control system operating parameters;

~~b-501.1.2~~ Elapsed time of operation; and

~~c-5-01.1.3~~ For units of 10 MW or greater that operated more than 4000 hours per year over the last three years prior to July 13, 1994, the exhaust gas NOx concentrations on a continuous basis corrected to ISO conditions at 15 percent oxygen on a dry basis. The NOx monitoring system shall meet U.S. Environmental Protection Agency (EPA) requirements as specified in 40 CFR Part 60, App. B, Specification 2 or other systems that are acceptable to the EPA.

501.2 Performance Testing: Performance testing shall be conducted annually for major sources of NOx and at least every three years for non-major sources of NOx.

502 RECORDKEEPING:

502.1 All records shall be available for inspection at any time for a period of five (5) years for major source and two (2) years for non-major sources. ~~Major sources are those facilities that emit more than twenty-five (25) tons of NOx.~~

502.2 Submit to the Air Pollution Control Officer information demonstrating that the system has data gathering and retrieval capability.

502.3 Submit to the Air Pollution Control Officer, prior to issuance of a Permit to Operate, information correlating the control system operating parameters to the associated NOx output. This information may be used by the Air Pollution Control Officer to determine compliance when there is no continuous emission monitoring system for NOx available or when the continuous emission monitoring system is not operating properly.

502.4 Provide ~~performance~~ source test information ~~annually~~ regarding the exhaust gas NOx concentration at ISO conditions corrected to 15 percent oxygen on a dry basis, ~~and the demonstrated percent efficiency (EFF) of the turbine unit.~~

502.5 Maintain a gas turbine operating log that includes, on a daily basis, the actual ~~Pacific Standard Time~~ start-up and stop time, total hours of operation, type and quantity of fuel used (liquid/gas). This information shall be available for inspection at any time from the date of entry.

~~502.6 Maintain a gas turbine operating log for units exempt under Section 111 that includes, on a daily basis, the actual Pacific Standard Time start-up and stop time, total hours of operation, and cumulative hours of operation to date for the calendar year. This information shall be available for inspection at any time for two years from the date of entry and submitted to the Air Pollution Control Officer at the end of each calendar year in a manner and form approved by the Air Pollution Control Officer.~~

~~503 TEST METHODS:~~

~~503.1 **Oxides of Nitrogen (NO_x):** Oxides of Nitrogen (NO_x) emissions shall be determined in accordance with EPA Method 20.~~

~~503.2 **Oxygen (O₂):** Oxygen (O₂) concentrations shall be determined in accordance with EPA Method 3A.~~

~~503.3 **HHV and LHV:** HHV and LHV shall be determined in accordance with ASTM D-240-87, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, or D-2382-88, Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-precision Method), for distillate fuels, and ASTM D-3588-91, Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density (Specific Gravity) of Gaseous Fuels, ASTM D-1826-88, Standard Test Method for Calorific (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, or ASTM D-1945-81, Standard Method for Analysis of Natural Gas by Gas Chromatography, for gaseous fuels.~~

ATTACHMENT #2

SUBJECT

Resolution #15-09

Approval of an Amendment of the
Placer County Air Pollution Control District's
Rule 250, Stationary Gas Turbines



Board Resolution:
Resolution # 15-09

Before the Placer County Air Pollution Control District Board of Directors

In the Matter Of: Approval of an Amendment of the Placer County Air Pollution Control District’s Rule 250, Stationary Gas Turbines, as shown in Exhibit I

The following **RESOLUTION** was duly passed by the Placer County Air Pollution Control District Board of Directors at a regular meeting held on **October 8, 2015** by the following vote:

Ayes: Berlant _____ Hesch _____ Nader _____ Weygandt _____ Black _____
Holmes, J. _____ Ruslin _____ Montgomery _____ Garcia _____
Alternates: _____

Noes: Berlant _____ Hesch _____ Nader _____ Weygandt _____ Black _____
Holmes, J. _____ Ruslin _____ Montgomery _____ Garcia _____
Alternates: _____

Abstain: Berlant _____ Hesch _____ Nader _____ Weygandt _____ Black _____
Holmes, J. _____ Ruslin _____ Montgomery _____ Garcia _____
Alternates: _____

Signed and approved by me after its passage:

_____ Chairperson

_____ Attest: Clerk of said Board

WHEREAS, Section 40001 of the Health and Safety Code of the State of California authorizes the Placer County Air Pollution Control District to adopt and enforce Rules and Regulations to achieve and maintain ambient air quality standards within the District; and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District is authorized to adopt rules and regulations and do such acts as may be necessary or proper to execute the powers and duties granted by Health and Safety Code Sections 40001, 40702, 40716, 41010, and 41013 (Health and Safety Code Section 40727(b)(2)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has determined that the meaning of the amended Rule 250 can be easily understood by the persons directly affected by it (Health and Safety Code Section 40727(b)(3)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has determined that the amended Rule 250 is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations (Health and Safety Code Section 40727(b)(4)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has maintained records of the rulemaking proceedings (Health and Safety Code Section 40728); and

WHEREAS, the District Board has made the findings pursuant to Health and Safety Code Section 40727, of necessity, authority, clarity, consistency, non-duplication, and reference in regard to the proposed new rule; and,

WHEREAS, the District has considered the relative cost effectiveness of the measure as well as other factors, as required by Health and Safety Code Section 40922, and made reasonable efforts to determine the direct costs expected to be incurred by regulated parties pursuant to Health and Safety Code Section 40703; and

WHEREAS, the District finds that the proposed amended Rule 250 is exempt from the California Environmental Quality Act (CEQA) because (1) it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment (CEQA Guidelines §15061(b)(3)) and (2) it is as an action by a regulatory agency for protection of the environment (Class 8 Categorical Exemption, CEQA Guidelines §15308); and

WHEREAS, portions of the Placer County Air Pollution Control District (PCAPCD) have been designated as “severe” non-attainment areas for the federal 8-hour ozone standard, and as non-attainment for the 1-hour ozone standard, pursuant to the Federal Clean Air Act Amendments of 1990 (FCAA): and

WHEREAS, The California State Clean Air Act requires the adoption of all feasible measures; and

WHEREAS, this amendment is required to comply with requirements of California Health and Safety Code Sections 40001 and 40910, and with Title 1, Part D, Subpart 2, Section 182(f), of the 1990 Federal Clean Air Act Amendments for the submittal of Reasonable Available Control Technology (RACT); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District held these proceedings in a public hearing on October 8, 2015, that was duly noticed in newspapers of general circulation in the District no less than 30 days in advance of said hearing, and the Board has considered public comments on the proposed new rule with evidence having been received and this Board having duly considered the evidence (Health and Safety Code Sections 40725, 40726, and 40920.6); and

NOW, THEREFORE, BE IT RESOLVED, that this Board approves and adopts the amendment of Rule 250, Stationary Gas Turbines, as shown in Exhibit I.

BE IT RESOLVED AND ORDERED that the Air Pollution Control Officer is hereby authorized and directed to submit this adopted rule for approval as a revision to the State Implementation Plan (SIP).

BE IT FURTHER RESOLVED AND ORDERED that the Air Pollution Control Officer is hereby authorized and directed to submit this adopted rule, in the form as required by the California Air Resources Board, on behalf of the Placer County Air Pollution Control District, and to perform such acts as are necessary to carry out the purpose of this resolution.

EXHIBIT I

Rule 250, Stationary Gas Turbines

RULE 250 STATIONARY GAS TURBINES

Adopted 10-17-94
(Amended 10-08-15)

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500 MONITORING AND RECORDKEEPING

- 501 MONITORING
- 502 RECORDKEEPING
- 503 TEST METHODS

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100 GENERAL

- 101 PURPOSE:** The purpose of this rule is to limit NOx emissions from stationary gas turbines.
- 102 APPLICABILITY:** This rule shall apply to all stationary gas turbines, 0.3 megawatt (MW) and larger.
- 103 EXEMPTION – LABORATORY OR FIREFIGHTING/FLOOD CONTROL UNITS:** The provisions of this rule with the exception of Section 402.3 shall not apply to the operation of stationary gas turbines used under the following conditions:
- 103.1 Laboratory units used in research and testing for the advancement of gas turbine technology.
- 103.2 Units operated exclusively for firefighting and/or flood control.
- 104 EXEMPTION - EMERGENCY STANDBY AND SMALL UNITS:** The provisions of this rule with the exception of Section 502.5 shall not apply to the operation of stationary gas turbines used under the following conditions:
- 104.1 Emergency standby units demonstrated to operate less than 200 hours per calendar year.
- 104.2 Units of less than 4 MW operating less than 877 hours per calendar year.
- 105 EXEMPTION – LOW USE UNITS:** The monitoring provisions of Section 501.1.3 shall not apply to low use units operating less than 877 hours per year and installed prior to October 8, 2015.

200 DEFINITIONS

- 201 COMPLIANCE LIMIT:** Allowable NOx emissions expressed in parts per million by volume (ppmv).
- 202 CONTROL SYSTEM OPERATING PARAMETERS:** Operating parameters that the Air Pollution Control Officer deems necessary to analyze when determining compliance, such as ammonia and exhaust flow rates and exhaust gas temperature for SCR; of humidity, water injection rate, exhaust gas flow rate, and temperature for water injection.
- 203 EMERGENCY STANDBY UNIT:** A stationary gas turbine that operates only as a mechanical or electrical power source for a facility when the primary power source has been rendered inoperable due to a failure beyond the reasonable control of the operator, except due to power interruption pursuant to a voluntary interruptible power supply agreement. Electricity generated by such a unit cannot be sold.
- 204 MAJOR SOURCE:** For the purpose of this rule a major source is defined as a stationary source with a potential to emit exceeding: 25 tons per year of nitrogen oxides, 25 tons per year of volatile organic compounds, 100 tons per year of sulfur dioxide, 100 tons per year of carbon monoxide, 100 tons per year of PM10, or 100 tons per year of a regulated air pollutant.
- 205 NOx EMISSIONS (NOx):** The sum of nitric oxides and nitrogen dioxide in the exhaust gas stream.

- 206 PERFORMANCE TESTING:** Performance testing for stationary source air emissions is also known as stack testing or source testing. Performance testing is the measurement of air emissions.
- 207 POWER AUGMENTATION:** An increase in the gas turbine shaft output and/or the decrease in gas turbine fuel consumption by the addition of energy recovered from exhaust heat.
- 208 PUBLIC SERVICE UNIT:** A gas turbine used to generate electricity for sale or for use in serving the public.
- 209 RATING:** The continuous megawatt (MW) rating or mechanical equivalent by a manufacturer for gas turbine(s) without power augmentation.
- 210 SELECTIVE CATALYTIC REDUCTION (SCR):** A post combustion control technology that utilizes ammonia injected into the exhaust gas stream where it reduces NOx to molecular nitrogen in the presence of a catalyst.
- 211 STATIONARY GAS TURBINE:** Any gas turbine system that is gas and/or liquid fueled with or without power augmentation. This unit is either attached to a foundation at a facility or is portable equipment operated at a specific facility for more than 90 days in any 12-month period. Two or more gas turbines powering one shaft shall be treated as one unit.
- 212 SHUTDOWN:** The time necessary to cease operation of a gas turbine under load conditions. The period begins when the shutdown command is given to the gas turbine. This time shall not exceed one (1) hour.
- 213 STARTUP:** The time necessary to bring the gas turbine to the design rating not to exceed two (2) hours for simple cycle and six (6) hours for combined cycle gas turbine power plants.

300 STANDARDS

- 301 LIMITATIONS:** The owner or operator of any stationary gas turbine unit shall not operate such unit under load conditions, excluding the startup or shutdown period which results in the measured NOx emissions concentration exceeding the compliance limit listed below, averaged over one (1) hour based on four consecutive 15-minute averages:

Unit Size	Compliance limit NO _x , ppm @ 15% O ₂	
	Gas ^A	Oil ^B
Megawatt Rating (MW)		
Units rated 0.3 to Less Than 2.9 MW OR Units Greater Than or Equal to 4 MW That Operate Less Than 877 Hour/Year	42	65
2.9 to Less Than 10 MW	25	65
10.0 MW and Over	9	25

A. GAS INCLUDES NATURAL, DIGESTER, AND LANDFILL GASES.

B. OIL INCLUDES KEROSENE, JET, AND DISTILLATE. THE SULFUR CONTENT OF THE OIL SHALL BE LESS THAN 0.05%.

302 STARTUP/SHUTDOWN COMBINED CYCLE UNITS: The NO_x emissions shall meet at least one of the following averaged over the duration of the startup or shutdown period:

302.1 70 ppm @ 15% O₂ for turbines fired on gas or,

302.2 0.16 pounds per MMBtu input for turbines fired on gas or oil or,

302.3 226 ppm @ 15% O₂ for turbines fired on oil.

303 STARTUP/SHUTDOWN SIMPLE CYCLE UNITS: The NO_x emissions shall be kept to a minimum by use of the following:

303.1 Manufacturer's recommendation for operation during startup and shutdown.

303.2 Injection of water as soon as reasonably possible

303.3 Maintaining proper air to fuel ratios

400 ADMINISTRATIVE REQUIREMENTS

401 EXEMPT UNITS AND EMERGENCY STANDBY UNITS: Exempt units and emergency standby units shall comply with the following:

401.1 The owner or operator of any unit listed below shall notify the Air Pollution Control Officer in writing within seven days if the 877 hour-per-year limit is exceeded. A public service unit operating during a state of emergency, when such emergency is declared by proclamation of the Governor of the State of California and when the unit is located in the specific geographical location identified in the proclamation, shall be excluded from the hour-per-year limit. If the hour-per-year limit is exceeded, the exemption shall be permanently withdrawn. Within 30 days after the exceedance, the owner or operator shall submit an application for Authority to Construct that details a plan to meet the applicable limits specified in Section 301 of this rule within two years. Included in this application, the owner or operator shall submit an emission control plan that includes a schedule of increments of progress for the installation of the required control equipment. This schedule shall be subject to the review and approval of the Air Pollution Control Officer.

401.1.1 Any unit smaller than 4 MW or emergency standby unit exempt under Sections 110 and 111.

401.1.2 Any unit equal to or greater than 4 MW.

500 MONITORING AND RECORDKEEPING

501 MONITORING: The owner or operator of any stationary gas turbine subject to the provisions of this rule shall perform the following actions:

501.1 Install, operate and maintain in calibration equipment, as approved by the Air Pollution Control Officer that continuously measures and records the following:

501.1.1 Control system operating parameters;

501.1.2. Elapsed time of operation; and

501.1.3 For units of 10 MW or greater, the exhaust gas NO_x concentrations on a continuous basis corrected to ISO conditions at 15 percent oxygen on a dry basis. The NO_x monitoring system shall meet U.S. Environmental

Protection Agency (EPA) requirements as specified in 40 CFR Part 60, App. B, Specification 2 or other systems that are acceptable to the EPA.

- 501.2 Performance Testing: Performance testing shall be conducted annually for major sources of NO_x and at least every three years for non-major sources of NO_x.

502 RECORDKEEPING:

- 502.1 All records shall be available for inspection at any time for a period of five (5) years for major source and two (2) years for non-major sources.
- 502.2 Submit to the Air Pollution Control Officer information demonstrating that the system has data gathering and retrieval capability.
- 502.3 Submit to the Air Pollution Control Officer, prior to issuance of a Permit to Operate, information correlating the control system operating parameters to the associated NO_x output. This information may be used by the Air Pollution Control Officer to determine compliance when there is no continuous emission monitoring system for NO_x available or when the continuous emission monitoring system is not operating properly.
- 502.4 Provide performance test information regarding the exhaust gas NO_x concentration at ISO conditions corrected to 15 percent oxygen on a dry basis.
- 502.5 Maintain a gas turbine operating log that includes, on a daily basis, the actual start-up and stop time, total hours of operation, type and quantity of fuel used (liquid/gas). This information shall be available for inspection at any time from the date of entry.

503 TEST METHODS:

- 503.1 **Oxides of Nitrogen (NO_x):** Oxides of Nitrogen (NO_x) emissions shall be determined in accordance with EPA Method 20.
- 503.2 **Oxygen (O₂):** Oxygen (O₂) concentrations shall be determined in accordance with EPA Method 3A.

**Board Agenda Item #3***Public Hearing/Action*

Agenda Date: October 8, 2015

Prepared By: Ann Hobbs, Air Quality Specialist

Topic: 2015 Triennial Progress Report

Action Requested:

- 1) Conduct a Public Hearing regarding the 2015 Triennial Progress Report.
- 2) Adopt Resolution #15-10 (Attachment #1), thereby approving the 2015 Triennial Progress Report (Exhibit #1) prepared to satisfy Section 40925 of California Health and Safety Code.

Background: The California Clean Air Act (CCAA) requires that an air quality management plan (AQMP) be prepared by an air district if it is designated as nonattainment based on the California Ambient Air Quality Standards (CAAQS). The AQMP identifies implementation measures to attain these standards by the earliest practicable date. California Health and Safety Code Section 40925 also requires that by the end of 1994 and once every three years thereafter, nonattainment air districts prepare a report to demonstrate the progress toward attaining the CAAQS. These planning requirements are separate from those based on the National Ambient Air Quality Standards under the Federal Clean Air Act, and amendments.

Placer County is designated as nonattainment for CAAQS ozone standards. The Placer County Air Pollution Control District Board of Directors adopted the 1991 AQMP on April 7, 1992. Subsequent triennial progress reports updates have been approved by your board, from 1994 through the last report period, 2011.

Discussion: The 2015 Triennial Progress Report (2015 Report): 1) describes the historical trends in ambient air quality levels; 2) provides information on the emission inventories in Placer County; 3) summarizes the progress of emissions reductions; and 4) concludes with an overview of air quality planning progress from 2012 to 2014 in Placer County.

Historical Air Quality Trends: The California Air Resource Board (CARB) has approved three indicators to analyze and verify the progress of air quality improvement. The analysis in the 2015 Report shows a declining trend in ozone exposure concentrations measured. This decrease demonstrates an improvement in the current air quality control progress made in reducing the peak ozone concentrations and the ozone exposure.

Emission Inventory: Emission inventories for reactive organic gases (ROG) and nitrogen oxides (NOx) include stationary sources, area-wide sources, on-road mobile sources, and off-road mobile sources. The base year (2012) inventories provided by CARB indicated the majority of ROG and NOx emissions in Placer County are from mobile sources (including on-road and off-road sources), at 52% and 80% respectively. According to the projected emissions from 2015 to 2025, overall ROG emissions are expected to continue decreasing about 6%, with NOx emissions decreasing another 30%.

Emission Reductions: The 2015 Report summarizes the achievement of emission reductions from 2012 to 2014. In the previous triennial report, eleven control measures were committed for evaluation, with eight rules amended or adopted. The other three rules were determined to meet the U.S. EPA's Reasonable Available Control Technology (RACT) requirements upon detailed review, and no further rule amendment was conducted for these three control measures during the 2012-2014 triennial review period.

In addition to above rule activities, the District has implemented proactive strategies which continue to help offset mobile source and other emissions in Placer County. These included participating in regional incentives programs, implementing District managed grant programs, sponsoring forest biomass-related projects, managing the Tahoe Area Woodstove Exchange Program, and providing financial assistance through the Technology Assessment Program for the development of air pollution reducing technologies.

Future Emission Reductions: Since the overall averaged emission reduction from 2012 to 2014 is less than the mandatory 5% annual emission reduction as required by the CAAA, the District shall review and analyze all feasible control measures/reduction programs which are suitable to reduce ozone precursor emissions in Placer County. The 2015 Report identifies seven control measures which will be further re-evaluated for amendment or adoption in the next triennial period (2015 – 2017). In addition, the District will continue to participate in many of the same programs outlined in the 2015 Report.

Public Review Process. A public notice of the workshop and public hearing was published in the Auburn Journal on September 6, 2015 (Attachment #2) and posted on the District's website. A public workshop was held on September 24, 2015 in the District's office. No comments have been received during the public review period.

Recommendation: District Staff recommends that the Board of Directors approve Resolution #15-10, thereby approving the 2015 Triennial Progress Report.

Attachments: #1: Resolution #15-10, Adoption of the 2015 Triennial Progress Report, and Exhibit #1, 2015 Triennial Progress Report
#2: Proof of Publication for Public Workshop and Hearing

ATTACHMENT #1

SUBJECT

Resolution #15-10

Adoption of the 2015 Triennial Progress Report



Board Resolution:
Resolution # 15-10

Before the Placer County Air Pollution Control District Board of Directors

In the Matter Of: Approval of the Placer County Air Pollution Control District’s 2015 Triennial Progress Report as shown in Exhibit #1.

The following **RESOLUTION** was duly passed by the Placer County Air Pollution Control District Board of Directors at a regular meeting held on **October 8, 2015**, by the following vote:

Ayes: Berlant _____ Hesch _____ Nader _____ Weygandt _____ Black _____
Holmes, J. _____ Ruslin _____ Montgomery _____ Garcia _____
Alternates: _____

Noes: Berlant _____ Hesch _____ Nader _____ Weygandt _____ Black _____
Holmes, J. _____ Ruslin _____ Montgomery _____ Garcia _____
Alternates: _____

Abstain: Berlant _____ Hesch _____ Nader _____ Weygandt _____ Black _____
Holmes, J. _____ Ruslin _____ Montgomery _____ Garcia _____
Alternates: _____

Signed and approved by me after its passage:
_____ Chairperson

_____ Attest: Clerk of said Board

WHEREAS, the Placer County Air Pollution Control District is designated as nonattainment for the State ozone standard; and

WHEREAS, Section 40911 of the California Health and Safety Code ("Health and Safety Code") requires each air district which has been designated nonattainment for the state ambient air quality standards for ozone to prepare and submit a plan for attaining the state standards to the state Board; and

WHEREAS, the Placer County Air Pollution Control District prepared the 1991 Air Quality Attainment Plan which was designed to make expeditious progress toward attaining the state ozone standards and was adopted by the Board of Directors of the Placer County Air Pollution Control District on April 7, 1992; and

WHEREAS, at least once every three years, beginning in 1994, the Placer County Air Pollution Control District shall review and revise its attainment plan to correct for deficiencies in meeting the interim measures of progress incorporated into the plan, and to incorporate new data or projections into the plan (Health and Safety Code 40925); and

WHEREAS, a Triennial Progress Report is required for the 3-year reporting period 2012-2014, and this report will be called the “2015 Triennial Progress Report”; and

WHEREAS, the proposed 2015 Triennial Progress Report includes a review of the historical trends in ambient air quality levels, an update to the emission inventories in Placer County, a summary of the progress of emissions reductions, and an overview of air quality planning progress, from 2012-2014 in Placer County; and

WHEREAS, the Placer County Air Pollution Control District has adopted or amended eleven rules which were committed to in the 2012 Triennial Progress Report; and the District is committed to evaluating other feasible control measures as outlined in the 2015 Triennial Progress Report; and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District held a public hearing on October 8, 2015, that was duly noticed in the Auburn Journal, a newspaper of general circulation in the District, and notice was posted on the District’s website, and

WHEREAS, the Board of Directors Board has considered public comments on the proposed 2015 Triennial Progress Report.

NOW, THEREFORE BE IT RESOLVED, that the Board of Directors of the Placer County Air Pollution Control District approves the 2015 Triennial Progress Report, as shown in Exhibit #1; and

BE IT FURTHER RESOLVED AND ORDERED, that the Board of Directors of the Placer County Air Pollution Control District directs staff to forward the 2015 Triennial Progress Report to the California Air Resources Board as a requested revision to the District’s plan for meeting the state ozone standards.

EXHIBIT #1

2015 Triennial Progress Report

**PLACER COUNTY
AIR POLLUTION CONTROL DISTRICT**

2015 TRIENNIAL PROGRESS REPORT

**PREPARED IN COMPLIANCE WITH
THE CALIFORNIA CLEAN AIR ACT**

October 2015

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1 OVERVIEW OF THE AIR QUALITY PLANNING PROCESS

1.1 Background

The Placer County Air Pollution Control District (District) is one of 35 local air districts established pursuant to Section 40002 of the California Health & Safety Code (HSC). The District is a “county” level agency, with its jurisdiction being the County of Placer which extends from North Lake Tahoe in the east, the Sierra Nevada and the Sacramento Valley in the west. With its special topographic features, portions of Placer County are located within the boundaries of three air basins: the Sacramento Valley Air Basin (SVAB), the Mountain Counties Air Basin (MCAB), and the Lake Tahoe Air Basin (LTAB).

The California Clean Air Act (CCAA) of 1988 required the California Air Resources Board (CARB) to establish and adopt ambient air quality standards to protect public health, safety, and welfare. Under the CCAA requirement, CARB established criteria for designating areas as attainment or nonattainment for the state air quality standards. According to the area designations adopted in 1989, the SVAB and MCAB portions of Placer County were designated as nonattainment for the state ozone standard¹ and the entire county was designated as nonattainment for the state particulate matter standard (PM₁₀).

The CCAA requires that an air district which has not attained the state air quality standards prepare a plan to attain the standards by the earliest practicable date. However, when the California legislature passed the CCAA in 1988, it recognized the difficulty in managing PM₁₀ and did not require attainment plans for the state PM₁₀ standard. In compliance with the CCAA, the District prepared the 1991 Air Quality Attainment Plan (AQAP) which was designed to make expeditious progress toward attaining the state ozone standard. The AQAP contained proposed control programs/strategies on stationary sources, transportation, and indirect sources. The 1991 AQAP was adopted by the District’s Board of Directors on April 7, 1992, and approved by the California Air Resources Board (CARB) on March 12, 1993.

In addition to the AQAP, the CCAA also required that by the end of 1994 and once every three years thereafter, nonattainment districts prepare a progress report to demonstrate their progress toward attaining the state air quality standards. This triennial progress report should include air quality improvement with the amount of emission reductions achieved from control measures adopted for the preceding three year period. The districts must also review and revise their attainment plan, and if necessary, correct deficiencies in meeting the progress goals, along with incorporating new data or projections. This 2015 Triennial Progress Report is prepared to fulfill these requirements for the years 2012-2014.

1.2 Triennial Progress Reports Since 1991

The CCAA requirement for the first Triennial Progress Report, along with the revision of the AQAP, was fulfilled with the preparation and adoption of the 1994 Sacramento Area Regional Ozone Attainment Plan (1994 Ozone SIP). This 1994 Ozone SIP was prepared to demonstrate how and when the Sacramento Federal Ozone Nonattainment Area (SFONA) would attain the federal ambient air quality standards for ozone, and was construed by CARB to also fulfill the

¹ The LTAB was designated by CARB as nonattainment-transitional for the state ozone standard in March 2010. This latest area designation may result in the revision of AQAP prepared by local air districts as well as the Regional Plan Updates developed by Tahoe Regional Planning Agency (TRPA). The future planning requirement under CCAA will be determined by the collaborative efforts between TRPA and CARB.

1994 requirements of the CCAA with certain appendices attached. The 1994 Ozone SIP was adopted by the District's Board of Directors on December 20, 1994 and approved by the U.S. Environmental Protection Agency (EPA) on September 26, 1996.

The 1997 Triennial Progress Report was a requirement of the CCAA to assess the progress in the three years since the 1994 Plan. The District's Board of Directors approved the adoption of the 1997 Triennial Progress Report on July 16, 1998 with CARB conditionally approving the plan on August 27, 1998. This approval was based on the District's review of the document, Identification of Achievable Performance Standards and Emerging Technologies for Stationary Sources, March 1998, which identified further measures for emission reductions. Discussion on these control measures were outlined under the 2000 Triennial Progress Report Section.

On April 11, 2001, the District's Board of Directors approved the 2000 Triennial Progress Report. This Report met the requirement of the CCAA in assessing the progress since the adoption of the 1997 Triennial Progress Report. Three (3) ROG control measures listed in the 1997 Triennial Progress Report, Polyester Resin Operations, Pleasure Craft Coating, and Internal Combustion Engines were still pending adoption during this period. Since these control measures were not adopted, there was a deficiency in the 1997 Triennial Progress Report.

On October 13, 2005, the District's Board of Directors approved the 2003 Triennial Progress Report. The three (3) ROG control measures previously pending in the 2000 Triennial Progress Report were adopted during this period. In addition, the District also adopted one NO_x control measure (Stationary Internal Combustion Engine) to fulfill the District's commitment in the 1994 Ozone SIP.

On August 12, 2010, the District's Board of Directors approved the 2009 Triennial Progress Report for two triennial review periods (2003-2005 and 2006-2008). In this Triennial Progress Report, a total of nine (9) stationary/area-wide control rules were amended or adopted. Although not all of these rule actions resulted in significant emission reductions, the District achieved about 0.66 tons per day emission reductions in ROG from these rule activities.

On October 10, 2013, the District's Board of Directors approved the 2012 Triennial Progress Report for the district's air quality progress from 2009 to 2011. In this Triennial Progress Report, three (3) existing rules were amended, with two (2) additional proposed rules evaluated and removed due to economic concerns. As a result, the expected emission reductions from these rules for ROG were .245 tons/day. In addition, another eight (8) rules were amended and/or adopted which may not be quantifiable or qualifiable, but demonstrate the District's efforts to look for opportunities to improve air quality.

The District has implemented proactive strategies to help offset mobile sources along with other emissions in Placer County. These include participating in regional incentives programs, implementing District managed grant programs, sponsoring and participating in forest biomass-related projects and providing financial assistance through the Technology Assessment Program (TAP) for the development of air pollution reducing technologies.

1.3 2015 Triennial Progress Report

The 2015 Triennial Progress Report is a requirement of the CCAA to assess the progress made towards attaining the state air quality standards in Placer County from the evaluation period of 2012 – 2014.

The triennial progress report 1) describes the historical trends in ambient air quality levels; 2) provides information on the emission inventories in Placer County; 3) summarizes the progress of emissions reductions from 2012 to 2014 in Placer County; and 4) concludes with an overview of air quality planning progress.

The historical trends in ambient air quality continue to present an improvement in Placer County. Air quality indicators show significant overall progress toward reducing exceedances of the ambient ozone standards since the late 1990's.

The emission inventories indicate that the majority of ROG and NOx emissions in Placer County are from mobile sources. Between 1990 and 2015, emission inventory trends in Placer County show that overall ROG emissions declined from 39 tons per day to 21 tons per day, a 47% decrease; and overall NOx emissions declined from 36 tons per day to 21 tons per day, a 43% decrease. These emission reductions have mainly occurred from on-road and off-road mobile sources. Projected emission forecasts to 2025 show a more gradual declining trend. From 2015 to 2025, overall Placer County ROG emissions are expected to continue decreasing another 6%, with NOx emissions decreasing another 30%.

2 AIR QUALITY TRENDS

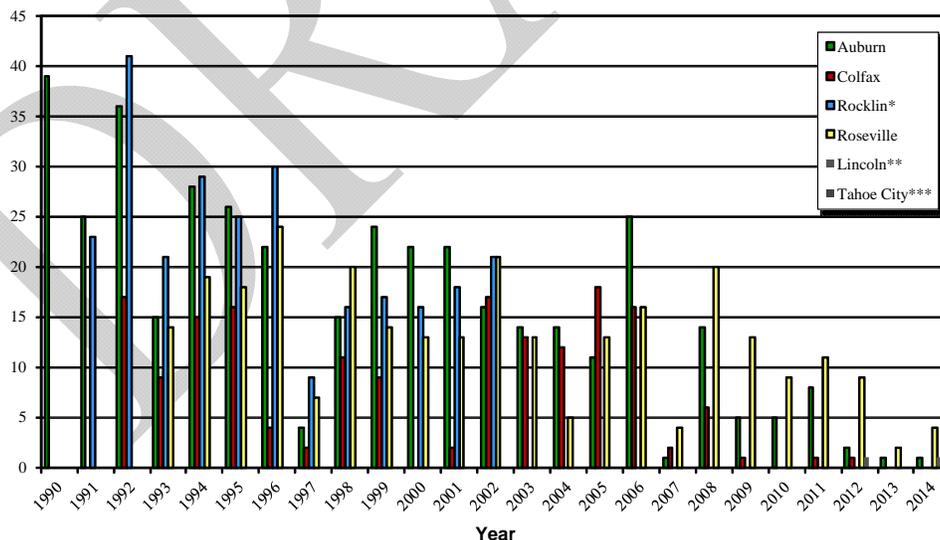
The Health and Safety Code (HSC section 40924 (b)) requires districts to report their progress of air quality improvement for ozone that was achieved during the preceding three-year evaluation period based on ambient concentration measurements and air quality indicators (statistically derived values based on monitoring air quality data). In addition, the Health and Safety Code (HSC section 39607 (f)) requires districts to use one or more State approved air quality indicators to assess the progress in attaining the state ambient health standards (HSC section 39607(f)). The CARB has approved three indicators for use: the Expected Peak Day Concentration or EPDC indicator, the 1-hour population weighted exposure indicator, and the 1-hour area weighted exposure indicator. This section discusses the ozone air quality trends using these CARB air quality indicators.

2.1 Ozone Exceedances

The number of ozone exceedance days in an area is the most common method to assess the air quality trend. The state ambient air quality standard for the 1-hour ozone standard was set at 0.09 parts per million (ppm) in 1988. In 2005, the CARB approved the 8-hour ozone of 0.070 ppm. Exceedances occur when the monitored ozone concentrations exceed the standards.

From 2012 to 2014, five monitoring stations operated in Placer County: Auburn, Colfax, Lincoln, Tahoe City, and Roseville for ozone². The District operates the Auburn, Colfax, Lincoln, and Tahoe City stations, with CARB maintaining the Roseville station. The Auburn station has the most complete ozone data available from 1974 to present. The Rocklin station operated from 1991 until it closed in 2002.

Figure 2-1
Days over the State 1- hour Ozone Standard (0.09 ppm)



* Ozone data from Rocklin was available from 1991 to 2002.

** Ozone monitoring at Lincoln station was from 2012.

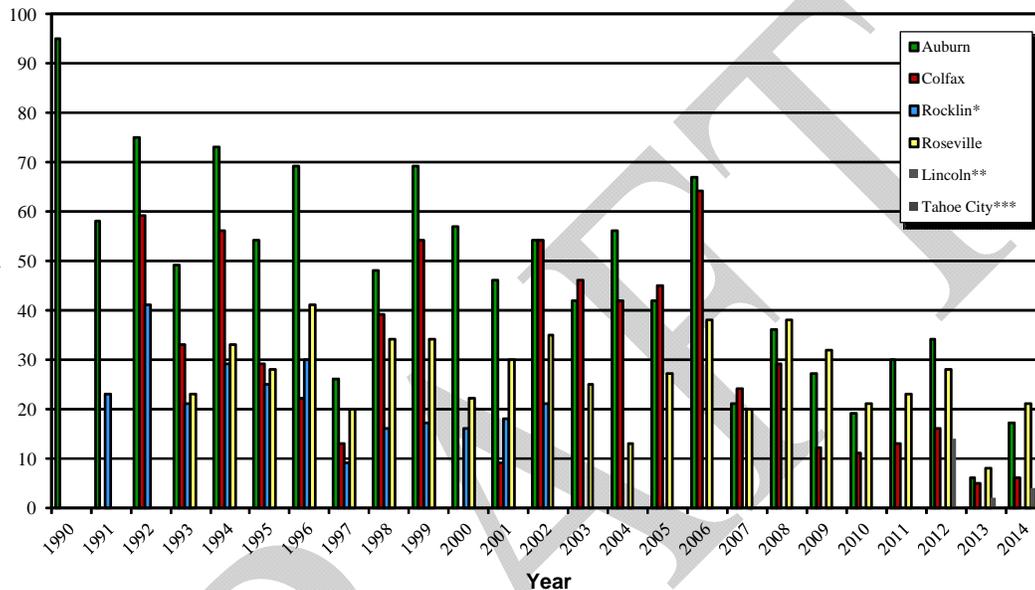
*** Ozone monitoring at Tahoe City station was from 2013.

² The District added the Lincoln station into the ozone monitoring network in January 2012 and the Tahoe City station in November 2013.

Figure 2-1 shows the number of days at each monitoring site in Placer County which exceeded the state 1-hour ozone standard (0.09 ppm) since 1990. An exceedance of this standard occurs when the monitored ambient concentration level is greater than 0.095 ppm.

Figure 2-2 shows the number of days at each monitoring site which exceeded the State 8-hour ozone standard (0.070 ppm) since 1990. An exceedance of this standard occurs when the hourly monitored ambient concentrations averaged over an 8-hour period is greater than 0.071 ppm.

Figure 2-2
Days over the State 8- hour Ozone Standard (0.070 ppm)



* Ozone data from Rocklin was available from 1991 to 2002.

** Ozone monitoring at Lincoln station was from 2012.

*** Ozone monitoring at Tahoe City station was from 2013.

The ozone exceedances from each station are different due to meteorology and the economic activity patterns around that station from year to year. Although not all patterns show a steady decline, they do show a trend downward in general. It suggests that the worst years for air quality are becoming less severe and the best air quality years are becoming cleaner with fewer exceedance days.

2.2 Ozone Exposure Indicators

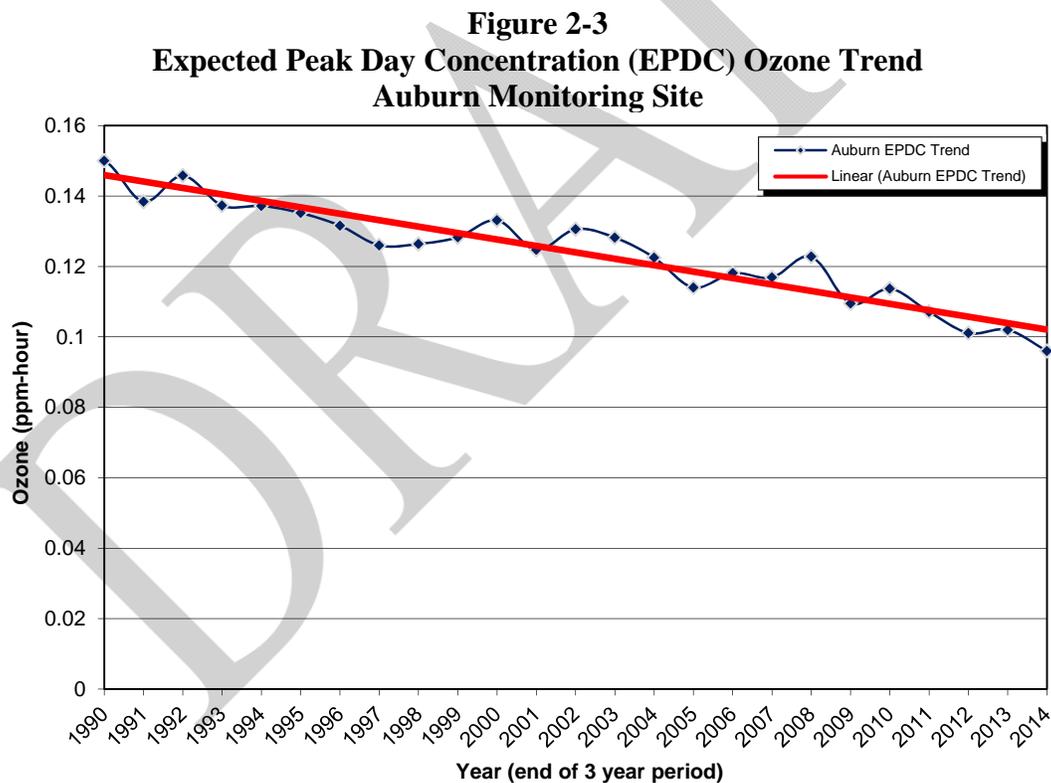
In July 1993, the California Air Resources Board approved three progress-reporting indicators for use in assessing advancement toward attaining the state air quality standards. “An indicator is a way of summarizing measured air quality data so as to represent one aspect of air quality in a specific area. An indicator summarizes and represents air quality in the same sense that the Dow Jones Industrial Average (DJIA) summarizes and represents the condition of the stock market. An air quality-related indicator is based on measured air quality data, whereas the DJIA is based on stock price data. One application for indicators is measuring and reporting the progress that has been made in attaining the State standards. In this case, progress means the change or improvement in air quality over time that can be attributed to a reduction in emissions rather than

the influence of other factors, such as variable meteorology.”³ These are 1) the expected peak day concentration, 2) the population-weighted exposure indicator, and 3) the area-weighted exposure indicator. These indicators represent three different aspects of air quality data that measure progress or changes in air quality over time.

2.2.1. Expected Peak Day Concentrations

The expected peak day concentration (EPDC) is used as the “hot spot” indicator. This peak indicator is derived by a statistical method and is representative of specific monitoring sites. This indicator assesses air quality trends at specific air monitor locations and does not include trends in air quality from surrounding areas. The EPDC is defined as the air quality concentration expected to recur at a rate of once a year. Each EPDC value is calculated using three years of monitoring data; for example, the EPDC for 2002 uses 2000 - 2002 data.

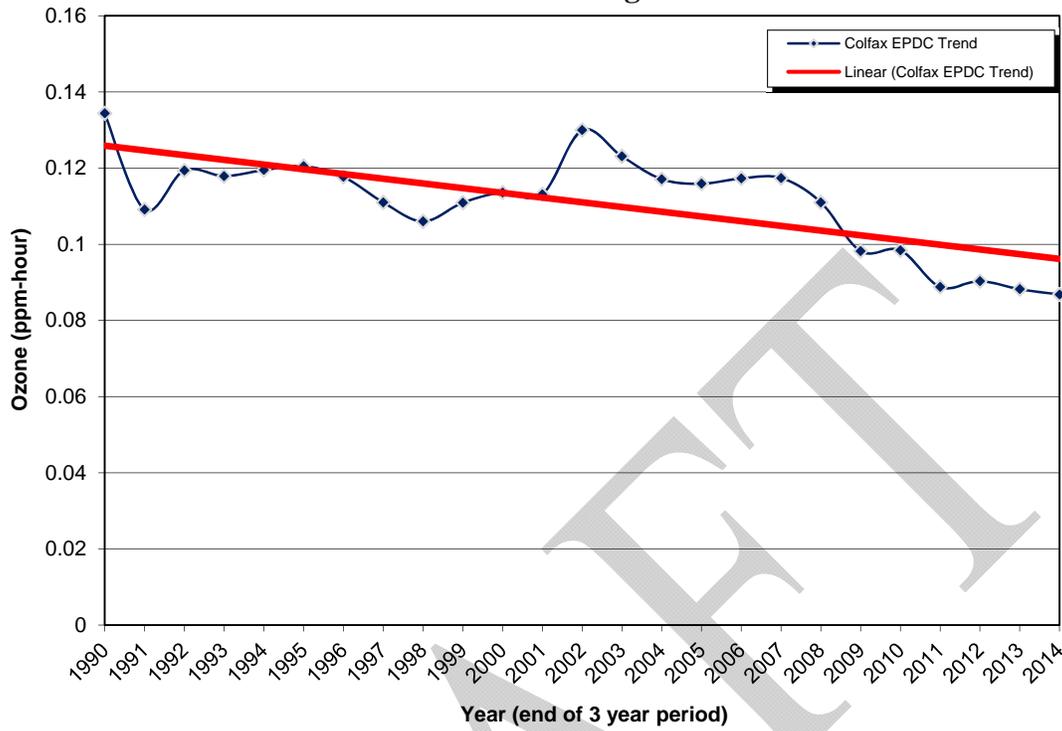
Figures 2-3 to 2-5 illustrates the ozone EPDC indicators from 1990 to 2014 at three monitoring sites (Auburn, Colfax, and Roseville) in Placer County. There is no monitoring data from the Rocklin site since it was closed in 2002. In addition, ozone monitoring at the Lincoln and Tahoe City sites began from 2012 and 2013, respectively, thus there is no EPDC indicator available during the 2012-2014 period.



EPDC data source: California Air Resources Board

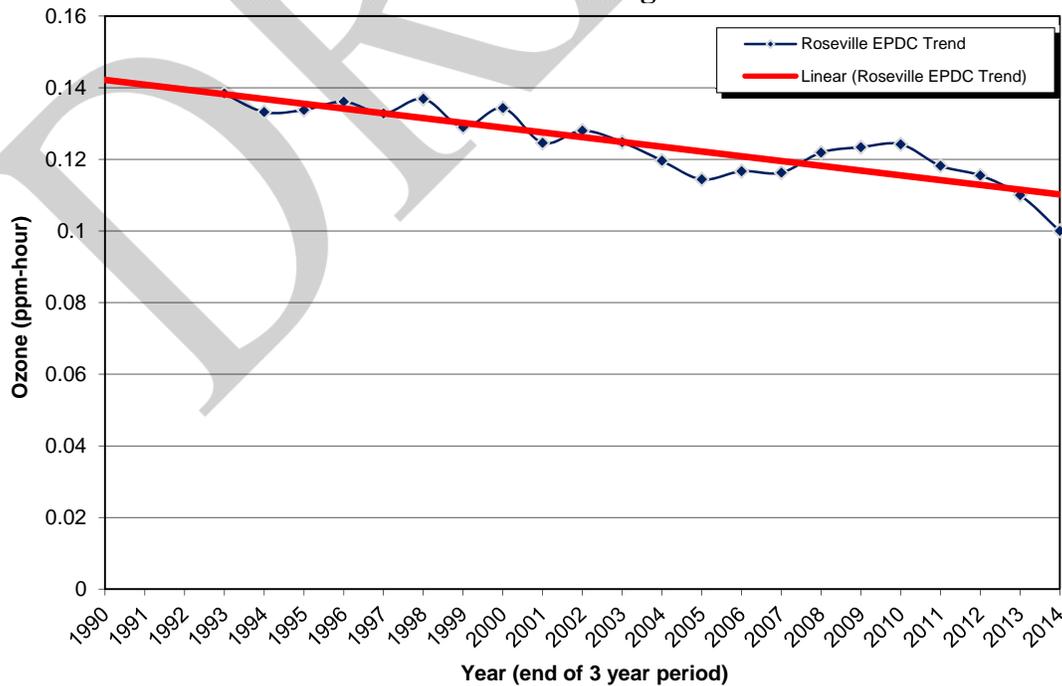
³ Guidance for Using Air Quality-Related Indicators in Reporting Progress in Attaining the State Ambient Air Quality Standards. California Air Resources Board, September 1993.

Figure 2-4
Expected Peak Day Concentration (EPDC) Ozone Trend
Colfax Monitoring Site



EPDC data source: California Air Resources Board

Figure 2-5
Expected Peak Day Concentration (EPDC) Ozone Trend
Roseville Monitoring Site



EPDC data source: California Air Resources Board

The Auburn - Dewitt monitoring site is the only location in Placer County which can be used to document the EPDC progress from the base period (1986 - 1988) to the end period (2012 - 2014) as it has been located in the same community for the analyzed time. At the Auburn site, there was a 37.25% decrease in the EPDC from the base period through the end period. At the Colfax monitoring site there was a 33.04 % decrease in the EPDC between 1990 and 2014. And there was a 27.75% decrease in the EPDC occurring at the Roseville monitoring site between 1993 and 2014. Overall this particular indicator shows a decrease in the local peak ozone concentrations; which equates to an improvement of air quality.

2.2.2. Population-Weighted Exposure Indicator

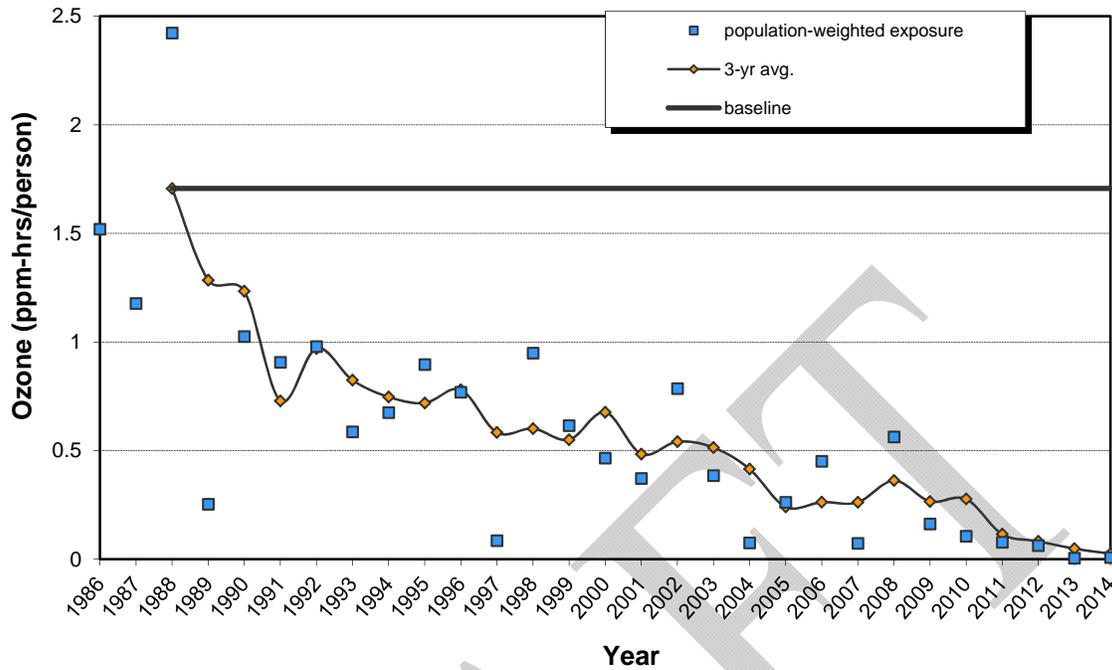
The population-weighted exposure indicator is a statistically derived air quality indicator provided by CARB. The purpose of the population-weighted indicator is to characterize the potential average outdoor exposure per person to concentrations above the level of the state ozone standard. The population-weighted exposure (PWE) represents a composite of exposures around each monitoring site that is weighted to emphasize equally the exposure for each person in the area. Exposure can be thought of as the annual sum of the number of hours above the state health standard. For example, a measured ozone concentration of 0.13 ppm for 2 hours represents an exposure of 0.8 ppm-hours above the state ozone standard of 0.09 ppm $((0.13 \text{ ppm} - 0.09 \text{ ppm}) \times 2 \text{ hours} = 0.8 \text{ ppm-hours})$.

Table 2-1 and Figure 2-6 summarize the population-weighted ozone exposure for the 3-year average base period (1986 - 1988) and the 3-year average period (2012 - 2014) within Placer County. There has been a 98.5% decrease in the population-weighted ozone exposure between the base period and the 2012-2014 period. Compared with the previous triennial review period (2009-2011), there is a 78% decrease in population-weighted ozone exposure. The results represent a defined downward trend in ozone exposure below the baseline.

Table 2-1
Summary of Population-Weighted Exposure in Placer County

Exposure Indicator	Base Period (1986 - 1988) 3-year average	Previous Triennial Period (2009-2011)	End Period (2012 - 2014) 3-year average	Reduction (%) Compare with Base Period	Reduction (%) Compare with 2009-2011 Period
Population Weighted (ppm-hrs/person)	1.707	0.115	0.025	98.52%	78.09%

**Figure 2-6
Population-Weighted Exposure Trends in Placer County**



Exposure data source: California Air Resources Board

2.2.3. Area-Weighted Exposure Indicator

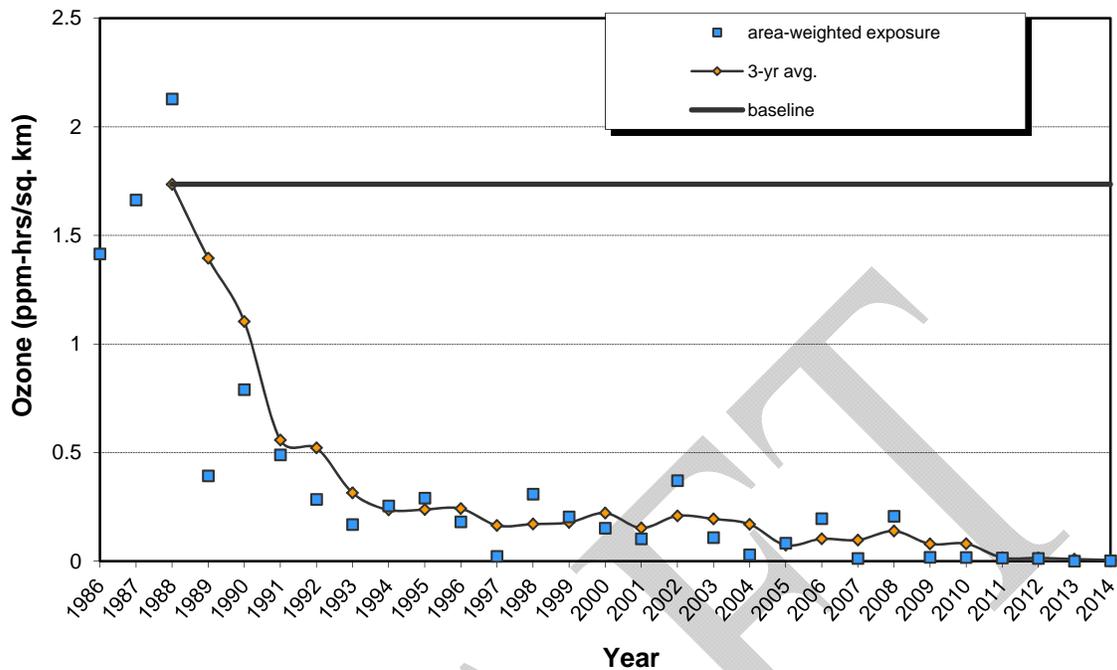
The purpose of the area-weighted exposure (AWE) indicator is to characterize the potential average annual outdoor exposure per unit area. The area-weighted exposure indicator represents a composite of exposure at individual locations that have been weighted to emphasize equal exposures throughout the area.

Table 2-2 and Figure 2-7 summarizes the area-weighted ozone exposure for the 3-year average base period (1986 - 1988) and the 3-year average end period (2012 - 2014) within Placer County. According to the table, there is a 99.7% decrease in the area-weighted ozone exposure between the based period and the 2012-2014 period. Compared with the previous triennial review period, there is a 69.2% decrease in area-weighted ozone exposure. As the population-weighted ozone indicator, the area-weighted ozone exposure also represents a defined downward trend in ozone exposure above the State standard.

**Table 2-2
Summary of Area-Weighted Exposure in Placer County**

Exposure Indicator	Base Period (1986 - 1988) 3-year average	Previous Triennial Period (2009-2011)	End Period (2012 -2014) 3-year average	Reduction (%) Compare with Base Period	Reduction (%) Compare with 2009-2011 Period
Area Weighted (ppm-hrs/sq. km)	1.735	0.017	0.005	99.70%	69.20%

Figure 2-7
Area-Weighted Exposure Trends in Placer County



Exposure data source: California Air Resources Board

2.3 Summary of the Results of Air Quality Indicators

The Air Quality Indicators are technical tools used for the exposure analysis on local air quality within Placer County. The population-weighted exposure and area-weighted exposure analyses are based solely on ambient (outdoor) ozone measurements using the 1-hour ozone standard. The calculation methodology assumes that an “exposure” occurs when a person experiences a 1-hour ozone concentration outdoors that is higher than 0.09 ppm, the level of the State ozone standard. The expected peak day concentration analysis shows the trend at the various air monitoring locations.

The analysis of the expected peak day concentration levels, the population-weighted and area-weighted indicators all show a declining trend in ozone exposure concentrations measured within Placer County. This decrease demonstrates progress in improving the current air quality control by reducing the peak ozone concentrations and the ozone exposure.

3 EMISSION INVENTORY

3.1 Development of Emission Inventories

The emission inventory provides a foundation to validate the reduction of emissions resulting from federal, state, and local regulations. It can also be used to assess the progress that the region is making toward attaining the California air ambient quality standards. In order to determine to what extent various sources within the region are responsible for ozone precursor production, emission inventories have been developed for ROG and NO_x.

The emission inventories for these two ozone precursors are divided into four major source categories: stationary, area-wide, on-road mobile, and other mobile source groupings. Stationary sources include facilities such as cogeneration or concrete/asphalt plants, while area-wide sources include an aggregate of individual small sources, which when grouped together have significant emissions such as dry cleaners or gasoline stations. On-road mobile sources consist of cars and trucks that travel on streets and highways. Other mobile sources include agricultural and construction equipment, trains, aircraft, and recreational vehicles. Each major category has a number of subcategories.

The emission inventory represents estimates of actual emissions that are calculated using reported or estimated process rates and emission factors. For example, emissions from a facility are calculated by process rates reported by the facility and emission factors estimated by source tests. Motor vehicle emissions are estimated by the fleet mix, vehicle miles traveled, vehicle speeds, and vehicle emission factors.

To derive future year emission inventories, a current base year inventory is projected forward based on the expected growth rates of the population, travel, employment, industrial/commercial activities, and energy use. In addition, the emission projections take into account the control factors based on historical and anticipated emission reduction effects from previous control measures adopted by federal, state and local governments.

3.2 Emission Inventory Updates

Emission inventories are updated and improved to reflect the conditions within the region and to better determine the contribution of various sources of air pollution. Tables 3-1 and 3-2 provide updated source category estimates of Placer County daily emissions (tons per day) of ROG and NO_x for 1990, 1995, 2000, 2005, 2010, 2012, 2015, 2020, and 2025. These are the latest updated inventories from CARB, including calculated emissions in past years and the projected emissions for future years. Please note that the projected emissions from 2015 through 2025 are based on the most current 2012 base year emission estimates⁴, along with the expected growth and control factors, so the emission trends can be forecasted.

⁴ The California Almanac of Emissions and Air Quality, 2013 Edition <http://www.arb.ca.gov/aqd/almanac/almanac.htm>

**Table 3-1
Placer County ROG Emission Inventory**

ROG Emissions (tons per day) - Placer County*									
	1990	1995	2000	2005	2010	2012	2015	2020	2025
Stationary Sources									
FUEL COMBUSTION	0.28	0.31	0.33	0.43	0.42	0.43	0.46	0.44	0.45
WASTE DISPOSAL	0.26	0.24	0.08	0.09	0.10	0.11	0.12	0.13	0.13
CLEANING AND SURFACE COATINGS	3.27	3.10	1.76	1.81	2.01	2.09	2.36	2.54	2.55
PETROLEUM PRODUCTION AND MARKETING	0.94	0.74	0.66	0.70	0.78	0.80	0.89	0.95	0.99
INDUSTRIAL PROCESSES	2.67	3.20	1.30	1.53	1.55	1.60	1.85	2.10	2.36
Total Stationary Sources	7.42	7.58	4.13	4.56	4.86	5.03	5.68	6.16	6.48
Area-Wide Sources									
CONSUMER PRODUCTS	1.90	1.83	1.92	1.94	1.87	1.85	1.94	2.09	2.25
ARCHITECTURAL COATINGS/SOLVENTS	0.59	0.70	0.95	0.99	1.04	0.80	0.88	0.94	1.03
PESTICIDES/FERTILIZERS	0.16	0.67	0.19	0.12	0.12	0.13	0.14	0.15	0.15
ASPHALT PAVING / ROOFING	0.18	0.16	0.20	0.21	0.21	0.22	0.23	0.24	0.24
RESIDENTIAL FUEL COMBUSTION	1.66	1.82	2.65	1.99	1.77	1.76	1.87	1.86	1.86
FARMING OPERATIONS	0.52	0.52	0.37	0.37	0.37	0.37	0.39	0.39	0.39
MISCELLANEOUS PROCESSES	1.19	1.20	0.49	0.51	0.54	0.52	0.55	0.56	0.56
Total Area-Wide Sources	6.21	6.91	6.77	6.13	5.92	5.65	6.00	6.23	6.48
ON-Road Mobile Sources									
PASSENGER	6.55	5.24	3.79	2.48	1.80	1.39	0.83	0.51	0.39
LIGHT DUTY TRUCKS	5.46	4.60	4.39	4.37	3.19	2.59	1.66	1.10	0.91
MEDIUM DUTY TRUCKS	0.81	0.91	0.66	0.84	0.78	0.75	0.62	0.55	0.50
HEAVY DUTY GAS TRUCKS	2.27	2.32	0.50	0.62	0.55	0.47	0.37	0.31	0.24
HEAVY DUTY DIESEL TRUCKS	1.07	0.75	0.52	0.64	0.45	0.44	0.33	0.29	0.29
MOTORCYCLES	0.65	0.59	0.45	0.53	0.48	0.46	0.39	0.40	0.43
BUSES	0.08	0.05	0.05	0.07	0.02	0.01	0.01	0.01	0.01
MOTOR HOMES (MH)	0.09	0.08	0.07	0.03	0.02	0.02	0.01	0.01	0.00
Total On-Road Motor vehicles	16.98	14.54	10.43	9.58	7.29	6.13	4.22	3.18	2.77
Off-Road Mobile Sources									
AIRCRAFT	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
TRAINS	0.18	0.19	0.21	0.21	0.14	0.14	0.13	0.10	0.09
COMMERCIAL HARBOR CRAFT	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
RECREATIONAL BOATS	4.29	4.29	4.47	3.92	3.30	3.02	2.68	2.21	1.82
OFF-ROAD RECREATIONAL VEHICLES	1.34	1.40	0.90	1.17	1.04	0.94	0.89	0.85	0.84
OFF-ROAD EQUIPMENT	2.03	1.86	1.48	1.50	1.09	1.03	0.93	0.84	0.85
FARM EQUIPMENT	0.30	0.28	0.25	0.22	0.17	0.15	0.11	0.07	0.06
FUEL STORAGE AND HANDLING	0.37	0.37	0.37	0.30	0.19	0.17	0.15	0.13	0.12
Total Off-Road Motor Vehicles	8.54	8.44	7.72	7.36	5.97	5.49	4.93	4.24	3.82
Grand Total	39.15	37.47	29.05	27.63	24.04	22.30	20.83	19.81	19.55

*Data source: CARB Emission Projection Data, base year: 2012

**Table 3-2
Placer County NOx Emission Inventory**

NOx Emissions (tons per day) - Placer County*									
	1990	1995	2000	2005	2010	2012	2015	2020	2025
Stationary Sources									
FUEL COMBUSTION	2.34	2.77	3.44	3.16	3.40	3.54	4.10	4.22	4.38
INDUSTRIAL PROCESSES	0.08	0.09	0.09	0.14	0.09	0.09	0.10	0.13	0.15
Total Stationary Sources	2.42	2.85	3.53	3.30	3.49	3.63	4.20	4.35	4.53
Area-Wide Sources									
RESIDENTIAL FUEL COMBUSTION	0.97	0.95	0.92	0.83	0.83	0.82	0.94	0.96	0.95
MISCELLANEOUS PROCESSES	0.09	0.10	0.11	0.12	0.13	0.12	0.14	0.15	0.15
Total Area-Wide Sources	1.06	1.04	1.03	0.95	0.96	0.94	1.08	1.11	1.10
ON-Road Mobile Sources									
PASSENGER	4.68	4.05	3.30	2.03	1.37	1.08	0.76	0.48	0.34
LIGHT DUTY TRUCKS	5.53	5.37	4.85	2.20	1.42	1.18	0.86	0.53	0.37
MEDIUM DUTY TRUCKS	1.04	1.38	1.23	1.60	1.27	1.13	0.92	0.66	0.46
HEAVY DUTY GAS TRUCKS	1.60	1.28	0.46	0.74	0.73	0.69	0.62	0.52	0.43
HEAVY DUTY DIESEL TRUCKS	8.69	9.04	9.90	12.69	8.34	7.63	6.10	4.05	2.77
MOTORCYCLES	0.08	0.08	0.06	0.11	0.13	0.14	0.14	0.15	0.16
BUSES	0.24	0.23	0.33	0.41	0.32	0.32	0.28	0.21	0.19
MOTOR HOMES (MH)	0.16	0.20	0.18	0.13	0.13	0.12	0.11	0.09	0.07
Total On-Road Motor vehicles	22.01	21.63	20.31	19.91	13.71	12.29	9.79	6.69	4.79
Off-Road Mobile Sources									
AIRCRAFT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAINS	3.84	3.85	4.09	3.22	2.07	2.15	2.25	2.12	1.89
COMMERCIAL HARBOR CRAFT	0.30	0.30	0.31	0.30	0.28	0.27	0.20	0.15	0.14
RECREATIONAL BOATS	0.85	0.89	0.53	0.66	0.63	0.61	0.60	0.59	0.59
OFF-ROAD RECREATIONAL VEHICLES	0.03	0.03	0.01	0.04	0.04	0.04	0.05	0.06	0.07
OFF-ROAD EQUIPMENT	4.05	3.73	2.74	4.04	1.90	1.87	1.71	1.21	0.94
FARM EQUIPMENT	1.66	1.41	1.22	1.05	0.84	0.75	0.61	0.40	0.27
Total Off-Road Motor Vehicles	10.72	10.22	8.90	9.31	5.76	5.69	5.42	4.53	3.90
Grand Total	36.20	35.74	33.77	33.47	23.92	22.55	20.49	16.68	14.32

*Data source: CARB Emission Projection Data, base year: 2012

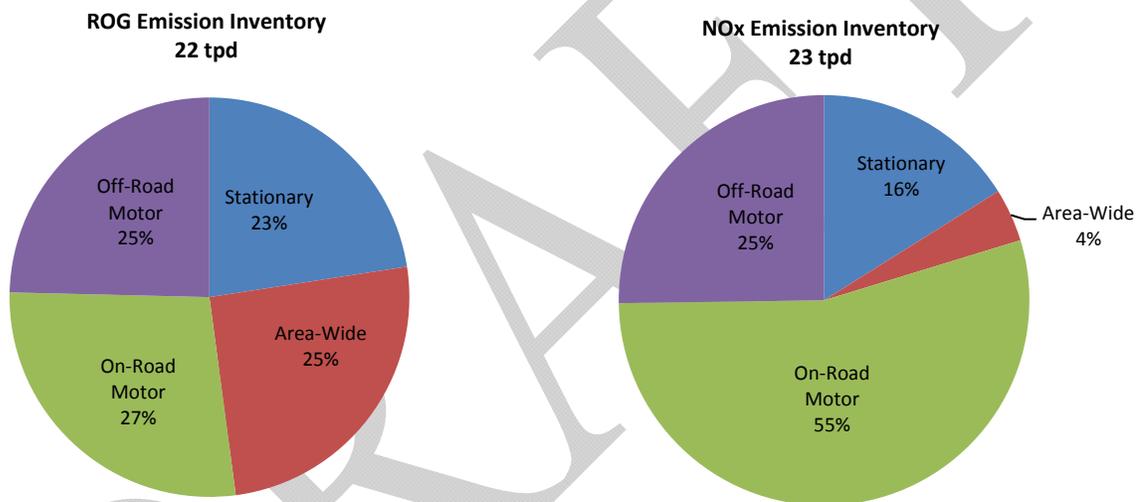
According to Tables 3-1 and 3-2, the stationary source emissions contribution is a result primarily from cleaning and surface coatings activities, petroleum production and marketing, industrial processes for ROG emissions and fuel combustion for NOx emissions. The ROG emissions from area-wide source categories are primarily from consumer products and residential fuel combustion. The major NOx emissions in the area-wide source categories are primarily from residential fuel combustion. The emissions estimates for the stationary and area-wide source categories are based on actual throughput data and source test results reported from facilities and population-related methodology developed by CARB or local districts.

In 2012, the majority of ROG and NOx emissions in Placer County came from on-road and off-road mobile sources. These mobile source emission categories consist of light-duty automobiles, various truck categories, recreational boats, off-road construction/industrial equipment, farm equipment, and trains. The EMFAC 2011 motor vehicle emission model developed by CARB is designed to estimate on-road mobile source emissions by using a wide variety of on-road motor vehicle types, vehicle emission factors, vehicle population, and vehicle miles traveled. CARB also developed the OFFROAD emission model to estimate average seasonal daily emissions

from a large spectrum of diesel powered off-road equipment, and developed forecasts based on anticipated growth and controls within each equipment category. The emission inventory shows that the major contribution to ROG emissions from mobile sources is from light-duty vehicles and recreational boats. The major contribution to NO_x emissions is from heavy-duty trucks and trains.

Figure 3-1 shows pie charts of the ROG and NO_x emission inventories of the four source categories. The contribution from these major source categories to total ROG emissions in 2012 is 23% from stationary sources, 25% from area-wide sources, 27% from on-road mobile sources, and 25% from off-road mobile sources. The contribution to total NO_x emissions is 16% from stationary sources, 4% from area-wide sources, 55% from on-road mobile sources, and 25% from off-road mobile sources. The District regulates emissions from stationary sources, with CARB having direct authority over mobile sources.

Figure 3-1
2012 Emission Inventories in Placer County



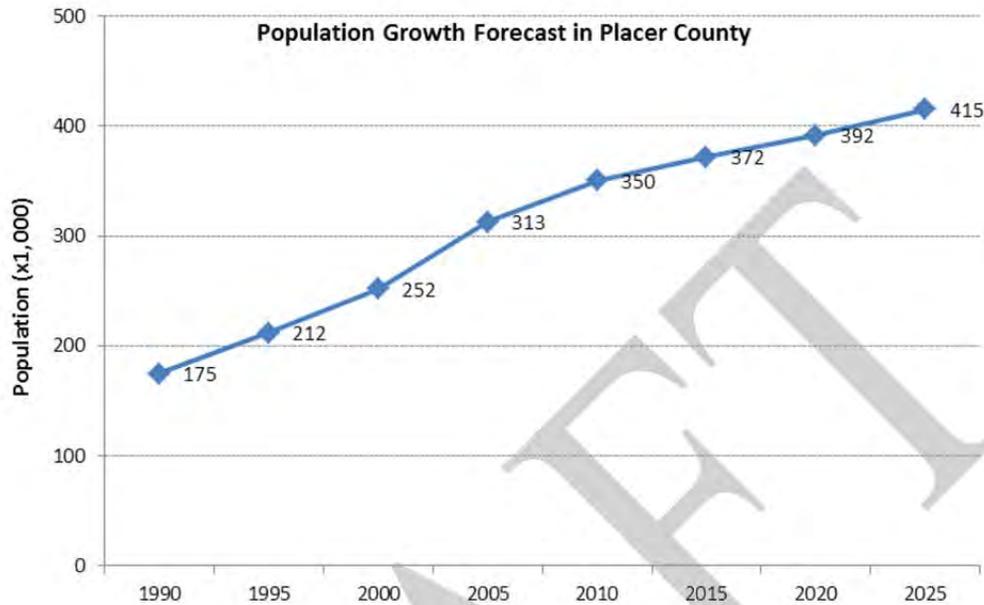
3.3 Population and Vehicle Miles Traveled (VMT)

In addition to the updates in the methodologies, process rates, and emission factors for individual emission source categories, updates in growth factors can also affect the emission inventory forecasts. Changes to the most recent growth assumptions for the Placer County population and daily vehicle miles traveled (VMT) could contribute to some of the emission differences in population-related area sources and on-road/off-road mobile sources.

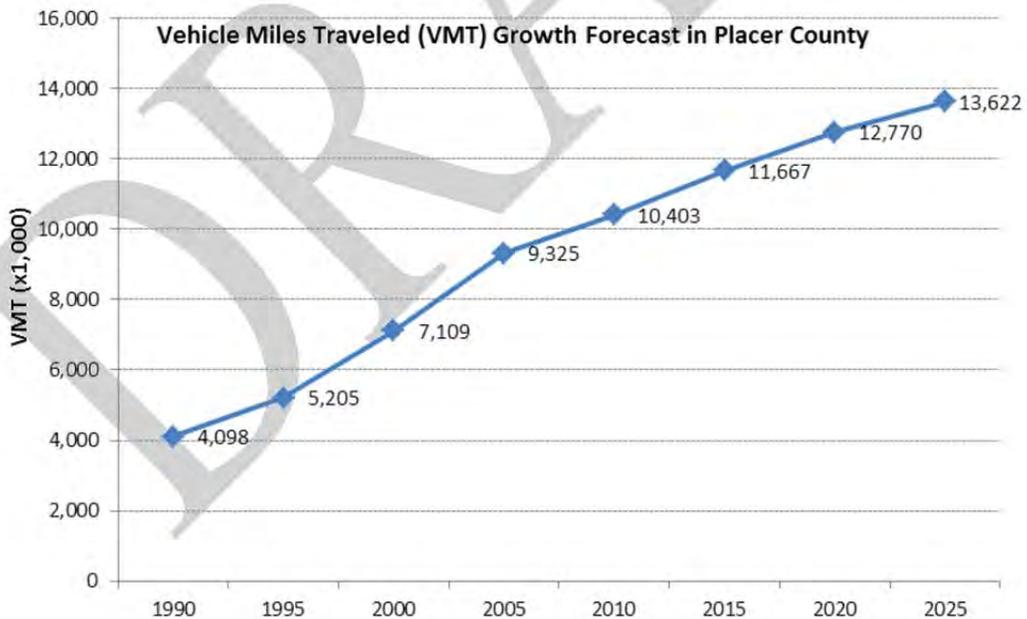
Figure 3-2 illustrates the growth curve of the population and daily VMT between 1990 and 2025. According to the data, the Placer County population has increased about 6% from 2010 to 2015. Overall when comparing the population between 1990 and 2015, the Placer County population has grown about 112%. Based on the growth forecast, the expected population in 2025 would be around 415,000, an expected increase of 12% from 2015 to 2025. The continued population growth contributes to the increases in daily VMT. In 2015, overall VMT in Placer County was estimated at 11.6 million miles per day, about a 184% increase with VMT estimates from 1990 and about 12% increase from 2010. According to the data forecast, there is an expected increase of 17% from 2015 to 2025. With Placer County's growth over the last decade, VMT will

contribute to emission changes in the future, which will be reflected in the emission inventory trends.

**Figure 3-2
Placer County Population and Vehicle Miles Traveled Growth**



Source: California Air Resources Board 2013 Almanac of Emissions and Air Quality



Source: California Air Resources Board 2013 Almanac of Emissions and Air Quality

3.4 Emission Inventory Trends

Figures 3-3 and 3-4 show the declining trend of both ROG and NOx emissions between 1990 and 2025. Between 1990 and 2015, the overall ROG emissions declined about 47%, and NOx emissions decreased about 43%. From 2010 to 2015, the overall ROG emissions reduced about

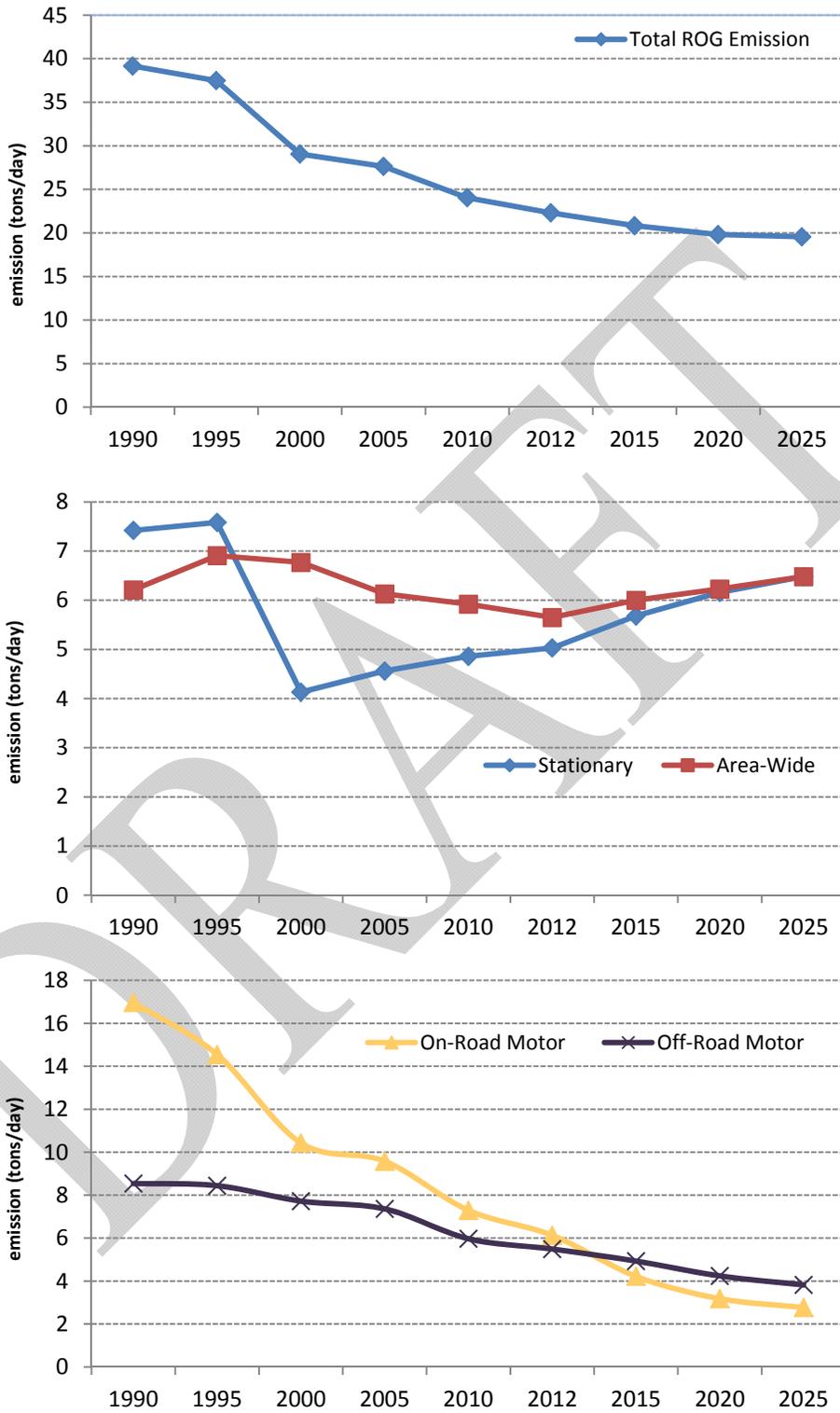
13% and NO_x emissions reduced about 14%. From 2015 to 2025, overall ROG emissions are expected to continue decreasing about 6% with NO_x emissions decreasing about 30%.

These emission reductions are mostly from the on-road and off-road mobile sources categories, of which CARB has primary regulatory authority. Statewide mobile source regulations such as low emission vehicle programs and reformulated gasoline have been very effective in reducing ROG emissions from mobile sources, despite the significant growth in the number of vehicle miles traveled. In addition, the more stringent mobile source emission standards, which are set by CARB, cleaner burning fuels, and advanced technologies for engine design or exhaust treatment have also largely contributed to the steady decline in NO_x emissions.

However, for stationary and area-wide sources, the ROG and NO_x emissions have increased slightly since 2000, due to Placer County's population growth and subsequent housing and associated energy demands. These demands have increased emissions in fuel combustion, cleaning and surface coatings, and consumer products.

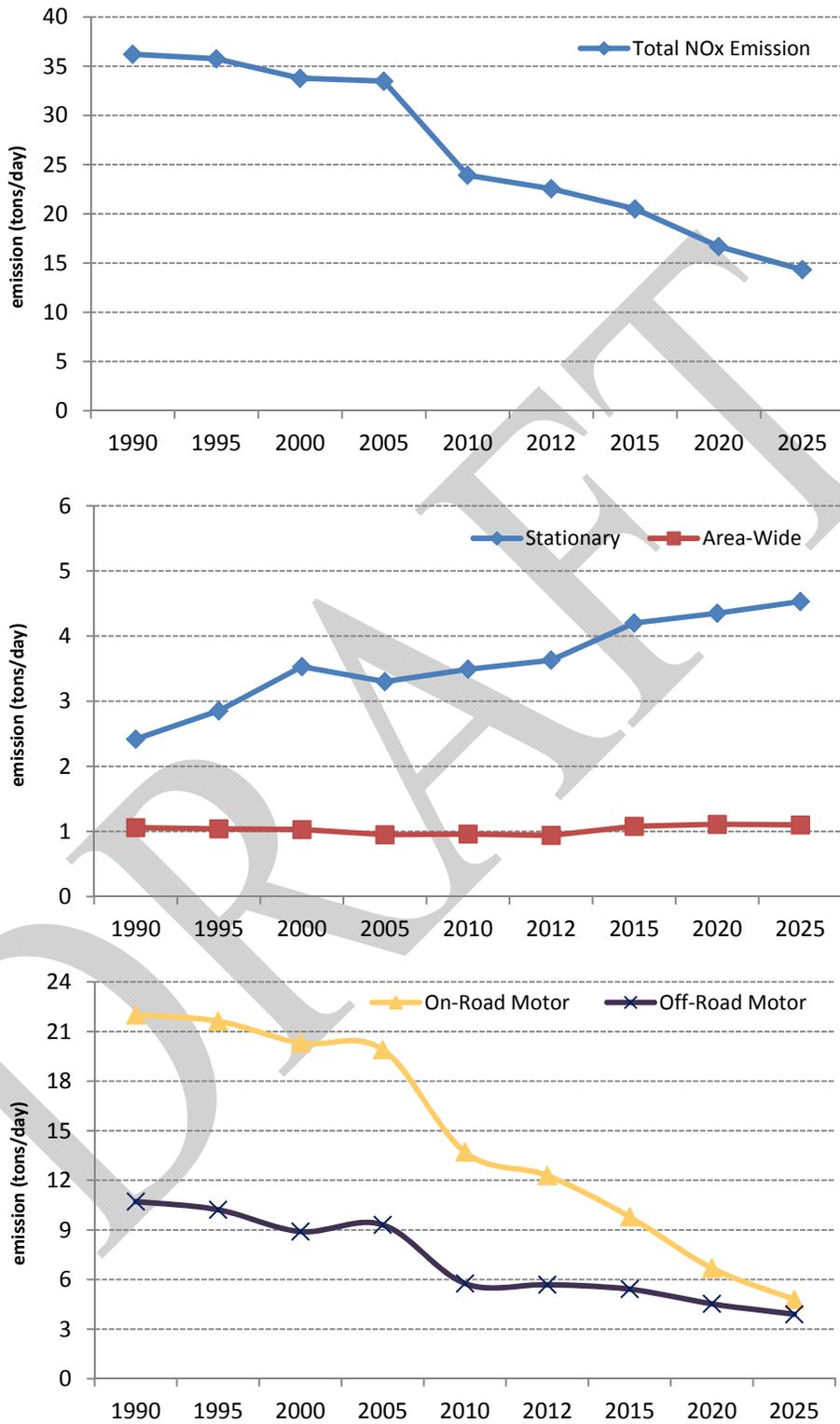
The District has focused on rulemaking for stationary and area sources. Several District related rules (discussed in the following chapter) have been adopted or amended between 2012 and 2014 to control and limit emissions from industrial coating and solvent usage, adhesives and sealants usage, and fuel combustion processes. These control efforts will continue providing additional ROG and NO_x emission reductions in Placer County in the following years.

**Figure 3-3
Placer County ROG Emission Inventory Trends
(Base Year: 2012)**



Source: CARB 2013 Almanac of Emissions and Air Quality

Figure 3-4
Placer County NOx Emission Inventory Trends
(Base Year: 2012)



Source: CARB 2013 Almanac of Emissions and Air Quality

4 IMPLEMENTATION OF EMISSION REDUCTIONS IN PLACER COUNTY

The California Clean Air Act (CCAA) under Section 40924 of the Health and Safety Code (H&SC) requires that each triennial progress plan should include the expected and revised emission reductions for each measure scheduled for adoption in the preceding three-year period. This chapter will review and summarize the progress of emission reductions from the overall control strategies (including stationary, area, and mobile sources) implemented by the District from 2012 to 2014.

4.1 Reduction from Stationary and Area Sources Control Measures

The District has committed to evaluate feasible control measures during the triennial review period for potential rule amendment or adoption to meet the District's commitment for reducing ozone precursor emissions in Placer County. Eight of eleven control measures, which were committed for evaluation in the 2012 Triennial Progress Report, were amended or adopted during this triennial review period (2012-2014).

- District Rule 206 - Incinerator Burning was amended on April 11, 2013, to resolve conflicting requirements for human/animal cremation. The amendment removed the operating requirements for cremation to new District Rule 241, Crematories, to clearly address the operating requirements for human and animal remains cremation. In addition, the amendment also addresses requirements for non-crematory waste incineration. No additional emission reduction can be quantified for this rule amendment during this triennial review period.
- District Rule 213 - Gasoline Transfer into Stationary Storage Containers was amended on February 21, 2013. The amendment adds the provisions of Standing Loss Vapor Recovery Control (SLC) which were promulgated by CARB to require the use of specific white, sun reflective paint on the external surface of the tank along with the use of specific pressure/vacuum relief (P/V) values. In addition to the SLC provisions, the format of the rule was modified to be consistent with the current District format for rules. Some definitions, references, and wording were updated without altering the original meaning. A definition for CARB Certified was added. No additional emission reductions can be quantified for this rule amendment during this triennial review period.
- District Rule 214 - Transfer of Gasoline into Vehicle Fuel Tanks was amended on February 21, 2013, to address the U.S. EPA's comments for the SIP approval. No additional emission reductions can be quantified for this rule amendment during this triennial review period.
- District Rule 233 - Biomass Boilers was amended on June 14, 2012, to address the U.S. EPA's comments for the SIP approval. The amendment changed the NO_x limitation during startup and shutdown to meet the RACT requirements. Since the rule is only applicable to two biomass boilers in Placer County that already meet the new emission limitations, no additional emission reductions can be quantified for this rule amendment during this triennial review period.
- District Rule 235 - Adhesives was amended on October 11, 2012. The amendment was made to address the latest Control Technology Guidance (CTG) issued by U.S. EPA and to meet

the RACT requirements for the SIP approval. No additional emission reductions can be quantified for this rule amendment during this triennial review period.

- District Rule 239 - Graphic Arts Operations was amended on October 11, 2012. The amendment was made to address the latest CTG requirements and to meet the RACT requirements for the SIP approval. No additional emission reductions can be quantified for this rule amendment during this triennial review period.
- District Rule 247 – Natural Gas-Fired Water Heaters, Small Boilers, and Process Heaters was adopted on October 10, 2013, to fulfill the regional ozone SIP commitment. The original commitment was to adopt a new rule for reducing NO_x emissions for all natural gas fired large water heaters and small boilers with rated input size in the range of 75,000 up to 1,000,000 Btu/hr by 2015. This new rule covers the size range from 75,000 Btu/hr up to less than 5,000,000 Btu/hr which is beyond the original SIP commitment. In addition, the rule also limits NO_x emissions for new boilers and water heaters to 20 ppmv. The estimated additional NO_x reduction from this rule adoption is 0.32 tons per day in 2015.
- District Rule 249 – Surface Coating of Plastic Parts and Products was adopted on August 8, 2013, to fulfill the U.S. EPA’s RACT requirements to adopt a control measure that incorporates the Control Technology Guideline (CTG). Currently, only one permitted minor source in Placer County will be required to meet the requirements of this rule. No additional emission reductions can be quantified for this rule amendment during this triennial review period.

The following three control measures were committed to for further evaluation to determine whether an amendment is needed to meet U.S. EPA’s Reasonably Available Control Technology (RACT) requirements:

- District Rule 216 - Organic Solvent Cleaning Degreasing Operations,
- District Rule 217 - Cutback and Emulsified Asphalt Paving Materials, and
- District Rule 240 – Surface Preparation and Cleanup

According to the “2014 Reasonably Available Control Technology State Implementation Plan Analysis” (RACT SIP Analysis) adopted by the District Governing Board on February 13, 2014, these three control measures were determined to meet RACT requirements upon detailed review. Therefore, there is no further rule amendment for these three control measures during this triennial review period (2012-2014).

Table 4-1 summarizes the status of each rule which was listed to be considered for amendment/adoption in the District’s 2012 Triennial Progress Report⁵.

⁵ PCAPCD 2012 Triennial Progress Report, Table 7-1.

Table 4-1
Summary of the Rule Commitment Status in the 2012 Triennial Progress Report

Emission Source Control Categories	Associated District Rule Name	Proposed Action in 2012 Triennial Progress Report	Status	8-hour Ozone SIP Commitment
Incinerator Burning/ Pathological Incineration	Incinerator Burning (Rule 206)	Evaluate for amendment needed to resolve conflicting requirements for human/animal cremation	It was amended on Apr. 11, 2013	
Gasoline Service Stations (Storage Tanks)	Gasoline Transfer into Stationary Storage Containers (Rule 213)	Evaluate for amendment needed to address new standing loss requirements and deficiencies	It was amended on Feb. 21, 2013	
Gasoline Service Stations (Transfer to Vehicle)	Transfer of Gasoline into Vehicle Fuel Tanks (Rule 214)	Amend to address US EPA comments for SIP approval	It was amended on Feb. 21, 2013	
Solvent Cleaning	Organic Solvent Cleaning and Degreasing Operations (Rule 216)	Evaluate for amendments needed to meet FCAA RACT requirements	2014 RACT SIP Analysis determined that the rule is compliant with US EPA requirements. No amendment is needed.	
Fugitive Emissions	Cutback and Emulsified Asphalt Paving Materials (Rule 217)	Evaluate for amendments needed to meet FCAA RACT requirements	2014 RACT SIP Analysis determined that the rule is compliant with US EPA requirements. No amendment is needed.	
Boiler, Biomass	Biomass Boilers (Rule 233)	Evaluate for amendments needed to meet FCAA RACT requirements	It was amended on Jun. 14, 2012	
Adhesives	Adhesives (Rule 235)	Evaluate for amendments needed to meet FCAA RACT requirements	It was amended on Oct. 11, 2012	
Graphic Arts	Graphic Arts Operations (Rule 239)	Evaluate for amendments needed to meet FCAA RACT requirements	It was amended on Oct. 11, 2012	
Surface Preparation & Cleanup Solvents	Surface Preparation and Cleanup (Rule 240)	Evaluate for amendments needed to meet FCAA RACT requirements	2014 RACT SIP Analysis determined that the rule is compliant with US EPA requirements. No amendment is needed.	
Large Water Heaters and Small Boilers	Large Water Heaters (Rule 247)	Regulate NOx emissions for all new large water heaters (75,000 to 1,000,000 Btu/hr)	It was adopted on Oct. 10, 2013	Yes (2015)
Plastic Part Coating	Plastic Parts Coating (Rule 249)	Evaluate for amendments needed to meet FCAA RACT and CCAA BARCT requirements	It was adopted on Aug. 8, 2013	

In addition to the above rule activities, there are several rules which were amended and/or adopted by the District during this triennial review period (2012-2014). Although emission reductions from these rule activities may not be quantified or qualified for the District's triennial evaluation, the list shows the District's efforts to look for opportunities to improve air quality:

- District Rule 241 - Crematories was adopted on April 11, 2013, to regulate crematories where human or animal remains are burned.
- District Regulation 3 - Open Burning, consisting of Rules 301 – 306, and District Rule 102 - Definitions were amended on February 9, 2012, to address U.S. EPA comments and deficiencies identified by District staff in order to avoid a limited approval/disapproval of the SIP revision.

- District Rule 502 - New Source Review was amended on August 8, 2013, to address U.S. EPA comments for SIP approval.
- District Rule 604 - Source Test Observation and Report Evaluation was amended on October 10, 2013, to adjust fees and add an annual CPI adjustment.
- District Rule 610 - Air Toxics “Hot Spots” Fees was amended on October 9, 2014, to reflect current charges of CARB and current costs to the District.

4.2 Reductions from Mobile Sources Control Measures

Figure 3-1 shows that mobile sources, including on-road and off-road, contribute about 52% of the total ROG emissions and about 80% of total NO_x emissions in Placer County. Although the District does not have the authority to directly regulate mobile source emissions through the regulatory processes, the District may promote market-based incentive programs to complement the progress in reducing mobile source emissions.

4.2.1 Regional Incentive Programs for Mobile Sources

Placer County is located within the Sacramento Federal Ozone Nonattainment Area (SFONA), the District works with the other local air districts in the development and implementation of the air quality management plan, known as the Sacramento Regional 8-hour Ozone State Implementation Plan (Sacramento 8-hr Ozone SIP). Mobile sources are recognized as the major contributor in the regional NO_x emission inventory. Although the local air districts do not have the authority to regulate mobile sources, reductions can be achieved through market-based incentive programs to promote lower emission technologies. The regional incentive programs include the Carl Moyer Memorial Program, and the Sacramento Emergency Clean Air and Transportation (SECAT) Program.

Carl Moyer Memorial Program and the SECAT Program

The Carl Moyer Memorial Program is a state-funded program codified in H&SC Section 44275 et seq.; to provide incentives on the replacement of agricultural pumps and off road and on road heavy-duty diesel equipment.

The SECAT Program is a partnership between the Sacramento Metropolitan Air Quality Management District (AQMD) and the Sacramento Area Council of Governments (SACOG) whose goal is to reduce harmful emissions *from* on-road heavy-duty vehicles operating in the Sacramento region.

The Sacramento Metropolitan AQMD administers both the regional Carl Moyer Memorial Program and the SECAT Program on behalf of the entire SFONA. These emission sources and their associated emission reductions occur throughout the SFONA, with the District’s portion of these emission reductions not specifically identified. The Sacramento Region has received about 12.4 million in funding for the Carl Moyer Memorial Program and 6.6 million for the SECAT Program between 2012 and 2014. During this period there have been 118 on-road and 213 off-road vehicle applications awarded by the Carl Moyer and SECAT funding in the region, which includes Placer County. These two regional market-based incentive programs have provided an estimated NO_x emission reduction of 0.53 tons per day from those projects initiated since 2012,

including on-road heavy-duty vehicles with 0.14 tons per day reduction, and the off-road mobile portion with 0.39 tons per day reduction. Table 4-2 provides additional details on the emission reductions for these two programs.

**Table 4-2
Estimated Emission Reductions from
Regional SECAT and Carl Moyer Incentive Programs**

Project Categories	Number of Engines				Estimated NO _x Reductions (tons/day)			
	2012	2013	2014	Total	2012	2013	2014	Total
On-Road Heavy-Duty Vehicles ^a	3	31	84	118	0.002	0.06	0.08	0.14
Off-Road Self-Propelled Vehicles ^b	82	76	55	213	0.20	0.13	0.06	0.39
Total	85	107	139	331	0.20	0.19	0.14	0.53

^a On-road vehicle projects occur throughout the Sacramento federal ozone nonattainment region.

^b Off-road vehicle and agricultural water pumping engine projects occur throughout the Sacramento federal ozone nonattainment region.

4.2.2 District's Incentive Programs

Clean Air Grant Program

In 2001, the District established the Clean Air Grant (CAG) Program to make funds available to public and private agencies or individuals for projects that cost-effectively achieve air pollution reductions. The District has two sources of funding available for the CAG Program: the DMV Surcharge Fee and the Air Quality Offsite Mitigation Fund.

DMV Surcharge Fee

The District authorized DMV surcharge was provided for by two Assembly Bills, AB 2766 and AB 923, which together allowed for a \$6 surcharge fee on a vehicle registered (DMV surcharge fee) within Placer County. The surcharge revenues are to be used solely to reduce air pollution from on-road motor vehicles and for related planning, monitoring, enforcement and technical studies necessary for the implementation of the California Clean Air Act of 1988. The District allocates \$2 of the DMV surcharge fee to its annual Clean Air Grant Program.

Air Quality Offsite Mitigation Fund

The District receives funding from developers within Placer County through the District's Offsite Mitigation Program for mitigation measures that are recommended by the District to offset air quality impacts. This includes the implementation of off-site emission reduction projects, or the payment of in-lieu-of fees into the Offsite Mitigation Fund Program in accordance with the District Board's approved Policy Regarding Land Use Air Quality

Mitigation Funds. Land use developers can participate in this Program to offset a project's related air quality impacts when the on-site mitigation is not sufficient.

From 2012 to 2014, the District has awarded \$3.16 million to emission reduction projects through the CAG program. The overall project lifetime emission reductions for ROG and NOx is about 12.88 tons and 110 tons, which is about 0.01 tons per day and 0.06 tons per day reduction, respectively.

4.3 Reduction from the District's Forest Biomass Program

Placer County has over one-half million acres of forested land, stretching from Auburn to Lake Tahoe, covering parts of three national forests and including 60 percent of Lake Tahoe's West Shore. Years of successful fire suppression activities have left the forests unnaturally dense, with overstocked vegetation and hazardous fuel loads. Our forests are at significant risk for catastrophic wildfire. Numerous major wildfires since the year 2001 have affected more than 106,000 acres of our forested landscape (with almost 40,000 acres in the past three years); including critically important upland watersheds and wildfire habitat.

The condition of Placer County's forests and how they are managed has a very strong effect on air quality. Wildfire smoke is a significant source of air pollution, with fine particulate matter (PM), ozone precursors (NOx and VOCs), and air toxics, extremely detrimental to regional air quality and public health. In addition to wildfire smoke, smoke from prescribed burning and open pile burning, which are important tools of forest management for reducing fuel loads, are also a significant source of air pollution.

To address the risk of catastrophic wildfire and improve air quality, the District has teamed with Placer County and other public and private stakeholders to implement environmentally, economically, and socially sustainable forest management activities to help restore these forested landscapes to a fire-resilient condition. The following accomplishments from the District's Biomass program took place from 2012 to 2014:

1. Continued sponsorship of forest biomass waste for energy projects in Placer County as an alternative to open pile burning. Through the District's CAG program, over \$100,000 has been awarded for projects to move approximately 5,000 bone dry tons of biomass wastes, which resulted in a reduction of 1,500 tons of GHG, 200 tons of PM, and 50 tons of ozone precursors.
2. Developed a protocol to quantify greenhouse gas reductions from biomass energy (Biomass to Energy) activities which was approved into the California Air Pollution Control Officer Association (CAPCOA) GHG Reduction Exchange (GHG Rx) program.
3. Implemented a project under the approved "Biomass to Energy" protocol, with 2,516 tons of GHG offset credits issued and registered in the CAPCOA GHG Rx program.
4. Developed a protocol to quantify greenhouse gas reductions from biochar production; the protocol is under review by CAPCOA and anticipated to be approved in late 2015.
5. Assessed two strategically located and sized biomass energy generation facilities in the Tahoe Basin and on the Foresthill ridge area.
6. Advocated to State Agencies, including the California Public Utilities Commission, CARB, California Energy Commission, and the State Attorney General's Office, for a biomass electricity rate that recognizes the full suite of environmental, societal, and economic benefits.

4.4 Reduction from Land Use and Miscellaneous Programs

4.4.1 District's Land Use Program

One of the District's Goals is to "mitigate effects of growth through the review of development plans for impacts on air quality with work towards mitigating those impacts through initiatives and programs that reduce emissions". As part of an ongoing effort to improve air quality, the District reviews and comments on California Environmental Quality Act (CEQA) documents which are prepared for discretionary development proposals that may result in substantially significant air pollutant emissions within the County. As a part of our review process, the District makes recommendations for reducing emissions of air pollutants to mitigate potential air quality impacts. These recommendations are then provided to the County, as well as incorporated municipalities within the County, during the planning process.

One of the recognized feasible mitigation measures is the offsite mitigation program which allows an offsite project (e.g., retrofitting vehicles, alternative fuel application, etc.) to be implemented by the applicant, or a payment of fees to the District's Offsite Mitigation Funds, in lieu of on-site reductions. If a developer chooses to implement the mitigation by paying the fee, the fee received is applied towards emission reduction projects through the District's annual CAG program. The recommendation for the use of offsite mitigation measures is based on an approved action taken by the District's Board in April 2001 in the "Policy Regarding Land Use Air Quality Mitigation Funds". It provides an alternative to developers and lead agencies when a land use project is required to offset the project's related emissions (e.g. vehicle exhaust, water heater, and consumer products) and where on-site mitigation measures are not sufficient to offset the emissions resulting from project.

During the 2012 to 2014 period, the District received \$1,108,384 in mitigation fees paid by land use developers in Placer County. These were managed in concert with the DMV Surcharge fee to provide incentives to emission reduction projects through the annual CAG program. The overall project lifetime emission reductions for NOx were about 38 tons, which is equal to 0.02 tons per day. This reduction is already included in the District's CAG program.

4.4.2 District's Fallen Leaves and Pine Needle Drop-Off Program

The Placer County Meadow Vista Community Plan identified smoke from the burning of leaves and pine needles by residents, to be an air pollution concern. In 1997, in an effort to decrease smoke impacts from this burning, the Placer County APCD, Placer County Facility Services - Solid Waste Division and Recology (formerly Auburn Placer Disposal Service) jointly sponsored a leaves and pine needles drop off at the Meadow Vista Transfer Station.

A debris box for the disposal of leaves and needles, was located at the Meadow Vista Transfer station during a four (4) month period. Information regarding the program is distributed primarily through a "Door Hanger" flyer hung on residents' garbage cans on Recology's routes. Flyers are also distributed to the local schools, along with the posting of information on the District's webpage under alternatives to burning.

The emission reductions are from not burning the leaves and pine needles, which are instead recollected and used to create compost. Based on data from the Placer County Facility Services

administrator, the overall project's emission reduction for ROG is approximately 12.7 tons (.01 tons/day) from 2012 to 2014.

4.4.3 Tahoe Area Woodstove Exchange Program

On November 20, 2013, the Governing Board of the Tahoe Regional Planning Agency (TRPA) approved woodstove retrofit rebate funding for the Lake Tahoe area. TRPA has allocated \$95,000 from its general fund, to be used in existing woodstove incentive programs already established by local agencies, to target the replacement of 126 non-EPA certified woodstoves in the Lake Tahoe area. Non-EPA certified woodstoves are replaced with EPA certified or equivalent woodstoves, which will result in measureable improvement in air quality and significant health benefits to the residents within the Tahoe region.

The District was offered \$23,750 by TRPA to target the replacement of 31 non-EPA certified woodstoves, based on the proportion of existing residential dwellings within Placer County in the Tahoe region. The District's exchange program was re-launched in the fall of 2014, to provide an incentive of up to \$650 per unit for the residents living within the Placer County portion of the Tahoe region to replace their non-EPA certified woodstoves or open hearth fireplaces. As of now, a total of 10 vouchers have been issued to the applicants for replacement. The District will continue accepting applications and issuing vouchers to qualified applicants in the Lake Tahoe area, with funding to be completely distributed before 2017. The total emission reduction from this woodstove exchange program will be quantified in the next triennial review period (2015-2017).

4.4.4 District's Technology Assessment Program

The Technology Assessment Program (TAP) was established by the District's Board of Directors in FY 2009-2010 to provide financial assistance, in the form of grants, for the development and evaluation of technologies which have the potential to reduce air pollution in Placer County. The program's intent is to provide grant funding for studies and other analysis that would help to assess emissions effects on projects, and to foster projects that may result in emission reductions in future years. The emphasis is on projects that have the potential to reduce criteria pollutants and/or greenhouse gases from stationary sources and transportation. The Program has been made available for projects that have the potential to push the edges of technology to achieve higher efficiency/lower impact results.

During this triennial review period, one grant was awarded to the Placer County Resource Conservation District, who collaborated with the Foresthill BioEnergy Steering Committee, the Placer County Planning Services Division, and the Sierra Nevada Conservancy (SNC), to propose a Foresthill Biomass Utilization Feasibility Study. The Study will complete an assessment on the possibility of developing multiple biomass-to-energy facilities and the potential economic and community development benefits to the Foresthill area.

4.5 Reduction Summary

Emission reductions from rule amendments, along with reductions from various District programs between 2012 and 2014, are shown in Table 4-3. The District achieved a 0.02 tons per day reduction for ROG and a 0.38 tons per day reduction for NOx. In addition, there was a 0.08 tons per day reduction for ROG and a 0.59 tons per day reduction for NOx resulting from the

regional incentive programs (Carl Moyer Memorial Program, SECAT Program, and the regional “Spare the Air” Program (which is discussed in Section 5)).

**Table 4-3
Emission Reductions
District Control Strategies Implementation between 2012 and 2014**

Categories	Associated Rules/Programs	Emission Reduction	
		ROG (tpd)	NOx (tpd)
District's Rule/Regulation	Rule 247*		0.32
District's emission reduction programs	Clean Air Grant (CAG) Program	0.01	0.06
	Fallen Leaves and Pine Needle Drop-off program	0.01	
Total Emissions from District's Rule/Program		0.02	0.38
Regional emission reduction programs	Regional Mobile Source Incentive Programs		0.53
	Regional "Spare the Air" Program	0.08	0.06
Total Emissions from Regional Programs**		0.08	0.59

* The rule was committed in the 2012 Triennial Plan.

** Emission Reductions occur throughout the Sacramento Federal Ozone Nonattainment Area

5 COMUNITY EDUCATION PROGRAM

As a required element under the District's 1991 Air Quality Attainment Plan (AQAP), the District continues to support public outreach programs within Placer County. However, the emission reductions from some of the public outreach programs are not easily quantified. Below is a list of existing public outreach efforts by the District.

5.1 Spare the Air Program

The Sacramento Region's Spare the Air (STA) Program is a voluntary, summertime effort aimed at reducing air pollution (specifically, ground-level ozone). The District contributes financially and assists in the implementation of the STA driving curtailment program, which marked its 20th year of operation since it was created in 1995. This program is a cooperative effort by the El Dorado County AQMD, Placer County APCD, Sacramento Metropolitan AQMD, and Yolo-Solano AQMD for the Sacramento Region. To maintain statewide program consistency, this program is coordinated with the Spare the Air Programs in the San Francisco Bay Area and the San Joaquin Valley.

The air districts of the region coordinate the STA program which provides notifications to the public on the daily air quality forecast and advisories. Residents can subscribe to the "Air Alert" program to receive emails or text messages with regional air quality forecasts.

Highlights of the program effort include:

- A website (www.SpareTheAir.com) with daily regional air quality forecasting, ozone concentration maps, historical air quality data, pollutant health effects, transportation tips to drive less, and other ways to reduce pollution.
- Over 3,100 businesses, community groups and schools are the STA partners which receive free Air Alert notifications, consisting of an email or text message when the daily air quality forecast reaches certain unhealthy Air Quality Index (AQI) levels.
- Radio spots promoting general awareness and specific action alerts on STA days.
- STA alerts are broadcast during Sacramento weather forecasts and printed on the weather page of the Sacramento Bee.
- Scooter, the Spare the Air Mascot, attendance at community events in Placer County.
- Development of educational programs, brochures, and other printed materials distributed to the public, schools, and business community.

Annual evaluations have been conducted since 1995 to assess the effectiveness of the STA program for the residents in the Sacramento nonattainment area. Levels of awareness, driving behaviors, health issues, and estimated emission reductions have been measured and tracked.

The specific evaluation objectives were to:

- Measure general awareness and awareness of the specific episodic request not to drive on STA days among drivers in the Sacramento Nonattainment Area.
- Measure the effectiveness of the STA program in terms of reduced driving among drivers who were aware of the program and purposefully reduced the number of trips they made due to air quality reasons.
- Estimate emission reductions from the trips reduced during Spare The Air episodes.

- Compare awareness of the STA campaign and driving reduction among the individual air quality districts in the Sacramento Nonattainment Area.
- Measure the percentage of drivers who habitually drive less during the summer season in order to improve air quality, and estimate the emission reductions from this group of seasonal reducers.
- Track awareness and behavioral changes over time.

Over the last three years, the survey results show that the level of public awareness for the STA program is at 47% in 2012 and at 32% in 2013 and 2014. The survey estimates the emission reduction attributed directly to the STA program during the 2012-2014 period as follows⁶:

- 2012 - .00 tons/day⁶
- 2013 - .02 tons/day
- 2014 - .12 tons/day

5.2 Additional Public Outreach Efforts

The District has continued the following public outreach efforts, including:

- Participation in Earth Day and other public events
- Response to public inquires and continued news media coverage
- Development of informational brochures, newsletters and fact sheets and utilization of the District's website: <http://www.placer.ca.gov/apcd>

⁶ According to the survey results, the 2012 STA program did not demonstrate emission reductions in the Sacramento Nonattainment Area. The STA annual survey results can be downloaded from the webpage: <http://www.sparetheair.com/survey.cfm>.

6 TRANSPORT MITIGATION REGULATION

The CCAA requires CARB to assess the contribution of ozone and ozone precursors from upwind regions on ozone concentrations that violate the State ozone standard in downwind areas. The CCAA also directs CARB to establish mitigation requirements for upwind districts, designed to mitigate their impact on downwind districts. According to the CCAA requirement, CARB originally established mitigation requirements in 1990 which are contained in Title 17, California Code of Regulations, Sections 70600 and 70601. These regulations were amended in 1993 and more recently in 2003. The CARB Board adopted amendments on May 22, 2003, which became effective on January 3, 2004.

The 2003 State Ozone Transport Mitigation Regulation Amendment requires upwind districts to 1) consult with their downwind neighbors and adopt and implement “all feasible measures” and 2) amend their “no net increase” thresholds for permitting so that they are as stringent as those of their downwind neighbors no later than December 31, 2004. This Amendment is intended to make sure that upwind districts which impact downwind districts with their transported air pollution implement control measures that are at least as stringent as the downwind district. The CARB has identified the “Broader Sacramento Area” as transporting to the upper Sacramento Valley, the San Joaquin Valley, the San Francisco Bay Area, and the Mountain Counties. According to the definition, a portion of Placer County APCD is in the Broader Sacramento Area.

The first requirement of all feasible measures was addressed during the consultation and creation of the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan⁷. In that plan an extensive all feasible measures analysis was conducted with a list of control measure commitments developed for each air district in the SFONA to reduce air pollutant emissions. The second requirement was implemented through the amendment of District Rule 502 - New Source Review, which was approved by the District’s Board on December 9, 2004. This rule amendment modified the offset thresholds for ROG and NOx to 10 tons per year, the same thresholds adopted by the San Joaquin Unified APCD, to achieve no net increase in emissions within the District. The later amendment of Rule 502 on August 8, 2013, was to address EPA’s comments for the SIP approval.

⁷ The 2009 Sacramento Regional Nonattainment Area 8-Hour Ozone Attainment and Reasonable Further Progress Plan which was prepared for 1997 federal 8-hour ozone standard (0.08 ppm) was approved by the Placer County Air Pollution Control District’s Board on February 19, 2009.

7 EVALUATION OF FUTURE EMISSION REDUCTIONS

HSC Section 40914 requires an air district with a nonattainment designation to achieve a reduction in district-wide ozone precursor emissions of 5% or more per year averaged every consecutive three-year period. According to the emission inventories shown in Table 3-1 and 3-2, the overall average rate of total ROG and NOx emission reductions between 2012 and 2014 in Placer County is about 2% and 3% per year, respectively. This overall averaged emission reduction is less than the mandatory 5% annual emission reduction required by the CCAA. The District is obligated to review and analyze all control measures/reduction programs which are feasible to reduce ozone precursor emissions in Placer County.

7.1 Commitments for the Next Triennial Review Period

All Feasible Measures

The District is committed to reviewing all feasible measures, in conjunction with CARB and other air districts within the SFONA, to obtain future emissions reductions. On February 13, 2014, the District's Board adopted the 2014 Reasonably Available Control Technology State Implementation Plan (RACT SIP) analysis which evaluated all feasible control measures. It was prepared in response to requests from U.S. EPA to periodically demonstrate that the District's State Implementation Plan (SIP) rules fulfill the Reasonably Available Control Technology (RACT) requirements for volatile organic compounds (VOC) and nitrogen oxides (NOx). RACT requires that District rules cover both: (1) source categories for which there is RACT guidance and for which there are affected sources that operate in the District, and (2) major sources in the District. The analysis involved a comparison of all RACT guidance documents with existing District rules and sources that operate in the District.

In addition to the RACT SIP analysis, the District is working with the other local air districts within the Sacramento Nonattainment area to develop the ozone attainment demonstration plan for the federal 8-hour ozone standard which was revised by the U.S. EPA to a level of 0.075 parts per million (ppm) in 2008. The plan development includes the analysis for reasonably available control measures (RACM) to review and identify potential control measures which would assist the region in reducing ozone precursor emissions and attaining the federal 8-hour ozone standards at the target year. Additional control measures may be committed by the District for the future amendment/adoption when the regional SIP for the 2008 8-hour ozone standard is developed. The detailed District's 2008 SIP commitment will be included and reviewed in the next triennial progress report.

Table 7-1 contains a list of the control measures which could be considered to be amended or adopted during the next triennial review period (2015-2017). The actual emission reductions cannot be estimated for those identified control measures at this time. A more thorough evaluation will be conducted during the rule development process and will be summarized in the next triennial progress report.

Table 7-1
List of Rules Proposed to be Considered for Amendment/Adoption through 2017

District Rule Name	Proposed Action	Proposed Schedule of Amendment/Adoption
Stationary Gas Turbines (Rule 250)	Evaluate for amendment needed to address RACT requirement for the SIP approval	Possible amendment between 2015 and 2017
Incinerator Burning (Rule 206)	Evaluation for amendment needed to address EPA comments for the SIP approval	Possible amendment between 2015 and 2017
Metal Container Coating (Rule 223)	Evaluation for amendment needed to update the VOC exempt compound definition	Possible amendment between 2015 and 2017
Semiconductor Operations (Rule 244)	Evaluation for amendment needed to update the VOC exempt compound definition	Possible amendment between 2015 and 2017
Natural Gas-Fired Water Heaters (Rule 246)	Evaluation for amendment needed to address EPA concerns for the SIP approval	Possible amendment between 2015 and 2017
Natural Gas-Fired Water Heaters, Small Boilers and Process Heaters (Rule 247)	Evaluation for amendment needed to address EPA concerns for the SIP approval	Possible amendment between 2015 and 2017
Aerospace Coating Operations	Evaluation for adopting a new rule to address the EPA CTG emission control requirements for aerospace coating operations	Possible adoption between 2015 and 2017

Mobile Source Incentive Programs

For the next triennial period through 2017, the District will continue participating in regional mobile source incentive programs to promote the emission reductions from on-road and off-road mobile sources. In addition the District also will continue implementing the District's annual CAG program by using the DMV surcharge fee and the offsite mitigation fee to provide incentives for cost-effective emission reduction projects in Placer County.

7.2 Additional Emission Reduction Program

In addition to the committed feasible measure evaluations and the mobile source incentive programs, the District will continue to implement the forest biomass program in the next triennial review period. Under the program, the District is conducting/sponsoring several projects, including the development of protocols to quantify the GHG offset credits for forest fuel treatment thinning and hazard reduction, the black carbon reductions from avoided open pile burning, and the feasibility research of small scale distributed woody forest biomass systems. Although the District's forest biomass program is primarily focused on GHG emission reduction, the implementation of projects will result in criteria pollutant reduction as a co-benefit in the future. The performances of these projects will be reviewed in the next triennial progress report.

8 CONCLUSION

Placer County has made considerable progress in improving air quality. Air quality indicators show overall reductions of peak ambient ozone and county-wide exposure to unhealthy concentrations since 1990. It represents that overall exposure to residents from ozone continues to decrease in Placer County.

Emission inventory information shows a significant overall reduction of ozone precursor emissions in the 2012 through 2014 time period. The District has conducted an “all feasible measures” analysis and committed to amending existing rules and adopt new rules to further reduce ozone precursor emissions. Table 7-1 shows the proposed list of rules to be considered for amendment or adoption for the next triennial review period (2015-2017). Incentive programs such as the Carl Moyer Program and the District’s Offsite Mitigation Program will continue to assist in reducing additional NOx emissions from mobile sources. The District believes that this triennial progress report demonstrates progress in the effort set forth in the control plan towards attaining the state ozone standards in accordance with the CCAA requirements.

DRAFT

ATTACHMENT # 2

SUBJECT:

Proof of Publication for Public Workshop and Hearing

NOTICE OF PUBLIC HEARING

16595984

**NOTICE OF PUBLIC WORKSHOP AND PUBLIC HEARING
PLACER COUNTY
AIR POLLUTION CONTROL DISTRICT
PROPOSED 2015 TRIENNIAL PROGRESS REPORT**

Placer County Air Pollution Control District staff has prepared a draft 2015 Triennial Progress Report in order to comply with a requirement of the California Clean Air Act (CCAA) to assess the progress made towards attaining state air quality standards in Placer County. This report

- describes the historical trends in ambient air quality levels,
- provides information of the emission inventories in Placer County,
- summarizes the progress of emissions reductions, and
- concludes the overview of air quality planning progress from 2012 to 2014 in Placer County

On Thursday, September 24, 2015, at 1:30 PM, the Placer County Air Pollution Control District will hold a public workshop for the proposed 2015 Triennial Progress Report. The workshop is to be held at the Placer County Air Pollution Control District Office, 110 Maple Street, Auburn, California.

On Thursday, October 8, 2015, at their regular meeting beginning at 2:30 PM, the Placer County Air Pollution Control District Board of Directors will hold a public hearing to receive comments and consider the adoption of the 2015 Triennial Progress Report. The hearing is to be held at the Placer County Board of Supervisors Chambers, 175 Fulweiler Avenue, Auburn, California.

By this notice, all interested parties are advised of the availability of the proposed report and are invited to comment on it. A copy of the proposed 2015 Triennial Progress Report is available for public review on the District's web site at www.placer.ca.gov/apcd or at the Air Pollution Control District office at 110 Maple Street, Auburn, CA 95603, 8:00 AM to 5:00 PM, Monday through Friday. Written comments should be submitted by September 25, 2015, and addressed to Thomas J. Christofk, Air Pollution Control Officer, at the District office, located at 110 Maple Street, Auburn, CA 95603. For questions, please call Ms. Ann Hobbs at (530) 745-2327.
PUBLISHED IN AUBURN JOURNAL: SEPTEMBER 6, 2015.

The above space is reserved for Court/County Filed Date Stamp

**PROOF OF PUBLICATION
(2015.5 C.C.P.)**

**STATE OF CALIFORNIA
County of Placer**

I am a citizen of the United States and employed by a publication in the County aforesaid. I am over the age of eighteen years, and not a party to the mentioned matter. I am the principal clerk of **The Auburn Journal**, a newspaper of general circulation, in the **City of Auburn**, which is printed and published in the **County of Placer**. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the **County of Placer**, on the date of May 26, 1952 (Case Number 17407). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

SEPTEMBER 6

I certify, under penalty of perjury, that the foregoing is true and correct.



Terry Clark

Dated in Auburn, California

SEPTEMBER 6, 2015

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