

San Joaquin Valley Unified Air Pollution Control District

2017 Annual Demonstration Report

SIP-Creditability of Emission Reductions Generated through Incentive Programs

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EXECUTIVE SUMMARY

The San Joaquin Valley Unified Air Pollution Control District (District) currently operates one of the largest and most well-respected incentive programs in California. Since 1992, the District's incentive programs have provided over \$688 million in incentive funds. This has been matched by cost-sharing on the part of participating businesses, public agencies, and residents, who together have invested over \$526 million, for a total public/private investment of well over \$1.2 billion in low and zero emissions equipment and operations. These combined efforts have accelerated the adoption of cleaner technologies (beyond that achieved by stringent regulations alone) achieved over 117,000 tons of lifetime emission reductions, improved air quality and public health, and progressed the San Joaquin Valley (Valley) towards attainment of increasingly stringent federal air quality standards. In addition to District-administered incentive programs, the California Air Resources Board (ARB) and the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) also implement highly effective incentive programs, further reducing emissions in the Valley.

Although incentive programs result in real air quality benefits, the emission reductions resulting from voluntary incentive programs have generally not been quantified for or provided credit in attainment plans to meet federal Clean Air Act (CAA) requirements. District Rule 9610 (State Implementation Plan Credit for Emission Reductions Generated through Incentive Programs) serves as an administrative mechanism for crediting emission reductions achieved in the Valley through incentive programs for use in state implementation plans (SIPs). The future year emission reductions claimed in District SIPs through Rule 9610 are to be quantified through annual demonstration reports, such as this Annual Demonstration Report.

The emission reductions quantified and claimed for SIP credit as part of this report are accounted for in Table 1 and table 2 below and include reductions of oxides of nitrogen (NO_x), particulate matter (PM), and reactive organic gases (ROG). The SIP creditable emissions reductions noted below were achieved through the implementation of 1,747 projects. Extensive documentation of these reductions, related SIP commitments, and other Rule 9610 requirements are included in the remainder of this report and in supporting data provided in the Annual Demonstration Report Data Sheet that accompanies this report.

On Thursday April 9, 2015, EPA finalized a limited approval and limited disapproval of Rule 9610 as a revision to the California SIP¹. The associated Technical Support Document² contained recommendations for implementation for the Manual of Procedures (MOP) and the Annual Demonstration Report. The District evaluated these recommendations and incorporated them throughout this Annual Demonstration Report as appropriate.

¹ EPA. 40 CFR Part 52. *Revision to the California State Implementation Plan; San Joaquin Valley Unified Air Pollution Control District; Quantification of Emission Reductions From Incentive programs* Retrieved on June 19, 2014 from <http://www.gpo.gov/fdsys/pkg/FR-2014-05-19/pdf/2014-11481.pdf>.

² EPA. *EPA's Notice of Proposed Rulemaking for the California State Implementation Plan San Joaquin Valley Unified Air Pollution Control District's Rule 9610, State Implementation Plan Credit for Emission Reductions Generated through Incentive Programs*. Retrieved on June 19, 2014 from <http://www.regulations.gov/>.

Table 1 summarizes the total SIP-creditable incentive-based emission reductions generated through incentive programs, expressed in tons per year and tons per day, claimed in the 2017 Annual Demonstration Report. The data also includes 75 District projects that were implemented during the timeframe covered under the 2016 report and 155 NRCS Projects that were implemented during the timeframe covered under the 2013 – 2016 reports but were not included in that data set.

Table 1: Total SIP-Creditable Incentive-Based Emission Reductions Generated Through Incentive Programs

	Current Reporting Period					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NOx	PM	ROG	NOx	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00
2010	4.31	0.15	0.52	0.01	0.00	0.00
2011	4.29	0.16	0.56	0.01	0.00	0.00
2012	8.07	0.32	1.10	0.02	0.00	0.00
2013	8.71	0.36	1.21	0.02	0.00	0.00
2014	9.33	0.39	1.31	0.03	0.00	0.00
2015	41.38	1.98	5.64	0.11	0.01	0.02
2016	405.82	17.88	42.31	1.11	0.05	0.12
2017	437.42	19.13	45.82	1.20	0.05	0.13
2018	437.42	19.13	45.82	1.20	0.05	0.13
2019	437.42	19.13	45.82	1.20	0.05	0.13
2020	433.11	18.98	45.30	1.19	0.05	0.12
2021	386.61	18.98	45.26	1.06	0.05	0.12
2022	378.01	18.75	44.67	1.04	0.05	0.12
2023	377.37	18.71	44.56	1.03	0.05	0.12
2024	376.75	18.67	44.46	1.03	0.05	0.12
2025	344.70	17.08	40.13	0.94	0.05	0.11
2026	36.06	1.41	3.67	0.10	0.00	0.01

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Table 2 summarizes the cumulative total SIP-creditable incentive-based emission reductions generated through incentive programs, expressed in tons per year and tons per day, claimed in the 2013 -2017 Annual Demonstration Reports.

Table 2: Cumulative Total SIP-Creditable Incentive-Based Emission Reductions Generated Through Incentive Programs

	Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NOx	PM	ROG	NOx	PM	ROG
2009	1098.99	35.78	116.17	3.01	0.10	0.32
2010	2655.71	82.02	237.29	7.28	0.22	0.65
2011	4112.25	141.11	364.96	11.27	0.39	1.00
2012	5803.80	210.33	477.41	15.90	0.58	1.31
2013	6695.21	248.03	571.71	18.34	0.68	1.57
2014	6485.17	243.20	563.11	17.77	0.67	1.54
2015	6519.79	252.21	619.82	17.86	0.69	1.70
2016	6375.76	248.19	660.50	17.47	0.68	1.81
2017	5511.14	215.23	657.13	15.10	0.59	1.80
2018	5346.61	208.38	650.09	14.65	0.57	1.78
2019	4620.79	191.69	582.53	12.66	0.53	1.60
2020	3692.05	163.27	484.50	10.12	0.45	1.33
2021	2884.92	131.10	375.99	7.90	0.36	1.03
2022	2223.95	101.17	282.32	6.09	0.28	0.77
2023	1622.00	74.45	202.86	4.44	0.20	0.56
2024	1041.71	48.13	126.22	2.85	0.13	0.35
2025	436.22	21.20	51.63	1.20	0.06	0.14
2026	127.58	5.53	15.17	0.35	0.02	0.04

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I. ANNUAL DEMONSTRATION REPORT ELEMENTS

This District-prepared report will demonstrate the quantity of emission reductions achieved through SIP-creditable incentive programs. District Rule 9610 includes several requirements be met in order to demonstrate that the claimed incentive-based emission reductions are SIP-creditable. The elements described in Section 4.0 of Rule 9610 that this 2017 Annual Demonstration Report includes are summarized in Table 3.

Table 3: Annual Demonstration Report Requirements

Element	Where satisfied
Description of guidelines used, how the guidelines ensure that the claimed emission reductions are SIP-creditable, and a list of any procedures being used for the first time under the rule	Section II of this report
Quantification of emission reductions generated through incentive programs, summarized by pollutant and by years and including: <ul style="list-style-type: none"> • Cost-effectiveness • Funding amount • Incentive program guideline • Project type 	Section VI of this report
Adjustments to reductions claimed in prior annual demonstration reports	NA
Identification of SIP commitments in District adopted SIP(s) which the District has satisfied in whole or in part through Rule 9610, including identification and quantification of, and remedies for, any shortfalls	Section III of this report
Project information, including the following, as applicable: <ul style="list-style-type: none"> • Project identification number • Project location • Project type • Project life • Implementation date • Funding provided by the District, NRCS, or ARB • Guidelines used • Quantified emission reductions per year, and aggregated over the project life, by pollutant • Description of baseline and new equipment • Additional details as needed 	Appendices A and B of this report, Manual of Procedures, and Annual Demonstration Report Data Sheet
Summary of monitoring and enforcement activities for the reporting period for incentive programs for which SIP-creditable emission reductions are being claimed, including: <ul style="list-style-type: none"> • Identification of project audits, usage reports, inspections, and other monitoring activities • List of projects that do not satisfy contractual requirements and associated enforcement actions/remedies 	Section IV of this report
Incentive Program Evaluation: retrospective assessment of the incentive program performance and recommendations, if any, for future enhancements	Section V of this report

Annual Demonstration Report Process

The Draft Annual Demonstration Report is released to the public for review and comment. Upon close of the comment period all comments received are addressed accordingly. The APCO then presents the Draft Annual Demonstration Report to the District Governing Board for review followed by submittal to ARB and EPA for concurrence prior to the August 31 deadline. The public has an additional opportunity to comment on the draft report at the Governing Board public hearing. All previous versions of the Annual Demonstration Report, the Rule and the Manual of Procedures are available on the District's website.

Recordkeeping Requirements

Section 6.0 of Rule 9610 requires all documents created and/or used in implementing the requirements of Section 4.0 shall be kept and maintained as required by the applicable incentive program guidelines. Consistent with the California Public Records Act and other related requirements, such records shall be made available for public review. The public may request records through the District's Public Records Release Request, available on the District website at:

http://www.valleyair.org/General_info/public_records_release_request.htm. However, the records related to implementation of the USDA NRCS Combustion Systems Improvement of Mobile Engines incentive program are prohibited from mandatory disclosure pursuant to the Food, Conservation, and Energy Act of 2008 (7 U.S.C. § 8791).

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II. INCENTIVE PROGRAM GUIDELINES

A. SIP-Creditable Incentive Program Guidelines

Pursuant to Section 4.1 of Rule 9610, the annual demonstration report shall contain a list of any incentive program guidelines that are being used to claim SIP credit under this rule. There were no new guidelines being used for the first time to claim SIP credit under the administrative mechanism created by Rule 9610.

Section 3.1 of Rule 9610 identifies pre-approved incentive program guidelines from which the District can claim credit for incentive-based emission reductions. These guidelines include:

- ARB Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) Guidelines for incentive projects funded by either the Carl Moyer Program or non Carl Moyer funding sources, for the project types listed in table 4.

Table 4: Carl Moyer Program Project Types by Component

		2005 Guidelines (approved 11/17/2005)	2008 Guidelines (approved 3/27/2008)	2011 Guidelines (approved 4/28/2011)
Component	Component Option	Chapter	Chapter	Chapter
On-Road Heavy-Duty Vehicle (On-Road)	New Vehicle Purchase	1	3	4
	Repower	1	3	4
	Retrofit	1	3	4
On-Road Heavy-Duty Vehicles (On-Road)	Fleet Modernization Replacement	2	4	5
Off-Road Compression-Ignition Equipment (Off-Road)	Vehicle Replacement	n/a	7	9
	Engine Repower	5	5	7
	Engine Retrofit	5	5	7
Portable and Stationary Agricultural Sources (Ag Engine)	Repower	10	10	10
	New Purchase	10	10	10
	Engine Retrofit	10	10	10

- ARB Proposition 1B Goods Movement Emission Reduction Program (Proposition 1B) Guidelines for Heavy-Duty Diesel Trucks, for the project types listed in table 5.

Table 5: Proposition 1B Program Project Types by Component

		2008 Guidelines (approved 02/28/2008)	2010 Guidelines (approved 03/25/2010)	2013 Guidelines (approved 01/25/2013)
Component	Component Option	Appendix	Appendix	Appendix
On-Road Prop 1B	Repower	A	A	A
	Replacement (Vehicle Replacement)	A	A	A
	PM retrofit	A	A	A
	PM + NOx Retrofit	A	A	A

- NRCS Conservation Practice Standard 372 - Combustion System Improvement (approved September 2010); Conservation Practice Standard 723 – Combustion System Air Emission Management (approved May 2009); NRCS General Manual, Title 450, Part 401 – Conservation Practice Standards (approved October 18, 2009); NRCS General Manual, Title 450, Part 407 – Documentation, Certification, and Spot Checking (approved October 17, 2009); Conservation Practice Standard 372 Specification (approved September 2010); NRCS Interim Conservation Practice Standard 723 – Combustion System Air Emission management (approved May 2009); and associated NRCS Program Combustion System Improvement of Mobile Engines Guidelines for incentive projects funded by EQIP funds and accompanying calculation, emission factors, and destruction certification worksheets.

The summaries of SIP-creditable incentive-based emission reductions claimed under Section 3.1 of Rule 9610 are included in Section VI of this annual demonstration report, and the detailed information for each project is presented in the Annual Demonstration Report Data Sheet that accompanies this report. To identify the specific guideline reference applicable to an individual project in the data sheet, reference the “Applicable Guideline”, “Component” and “Component Option” fields from the data sheet to the corresponding list of pre-approved guidelines identified in the tables above.

B. Description of SIP-Creditable Program Guidelines

Sections B(1) through B(4) below describe the specific incentive program guidelines identified in Rule 9610 that were used to reduce emissions and calculate the emission reductions included in this annual demonstration report. These guidelines are developed and periodically revised through a public process with opportunity for public review and commenting. In cases where more than one version of an incentive program guideline was used for a given incentive project, the specific version is identified and included within the detailed project information provided in the Annual Demonstration Report Data Sheet.

1. ARB Carl Moyer Memorial Air Quality Standards Attainment Program Guidelines

The Carl Moyer Program is a grant program that funds the incremental cost of cleaner-than-required engines and equipment. Adopted in 1999 by ARB, this program was created through a public process and provides incentives to help obtain early or extra emission reductions, especially from emission sources in environmental justice communities and areas disproportionately impacted by air pollution with a primary objective of obtaining cost-effective and surplus emission reductions.

The Carl Moyer Program has been successfully implemented through the cooperative efforts of ARB and air districts in California. As directed by the California Health and Safety Code, ARB's role is to oversee the Carl Moyer Program by managing program funds, developing and maintaining guidelines, and determining cost-effectiveness methodologies. Air districts use the Carl Moyer Program Guidelines to select, fund, and monitor projects in their jurisdiction by providing grants to public and private entities.

The Carl Moyer Program guidelines include robust administrative requirements to ensure that emission reductions are enforceable and are achieved throughout the life of a project. The District has used the Carl Moyer Program Guidelines to develop the practices that are currently in place to ensure all EPA integrity principles of Surplus, Quantifiable, Enforceable, and Permanent are met. The following is a summary of how the Carl Moyer Program Guidelines meet each SIP-credibility criterion:

Surplus

The Carl Moyer Program Guidelines ensure that projects are surplus to regulations by only allowing projects to be selected that are not required by any federal, state, or local regulation, memorandum of agreement/understanding with a regulatory agency, settlement agreement, mitigation requirement, or other legal mandate. For example, the guidelines have accounted for each adopted regulation to determine the compliance dates of any affected engines and emission benefits claimed by each regulation have been determined. Minimum project lives are established in each component to ensure that the program does not fund actions taken to comply with regulatory deadlines. The minimum project life requirement also ensures the overall cost effectiveness of the program and that the emission reductions are real for the life of the project.

In some cases, a split project life methodology is utilized to properly account for all possible emission reductions while still ensuring that the emission reductions being claimed are surplus. In the case of split project life calculations, the first calculation captures the surplus between the baseline (tier 1 or tier 2) technology and a new tier 4 for the length of time until the rule compliance deadline. The second calculation captures the surplus from tier 4 (compliance requirement baseline) to electric for the remainder of the project life. Projects that are subject to the split life calculation methodology typically have a total project life of ten (10) years.

The District has utilized a split project life for tier 1 and tier 2 diesel agricultural irrigation pumps being replaced with new electric motors. These diesel engines are required by the District's Rule 4702 to upgrade to a tier 4 diesel engine by 12/31/2013. The project life is split between the surplus time for Rule 4702 (baseline to tier 4) and the remainder of the allowable 10 years for the reduced technology to the electric motor (tier 4 to electric).

The summary below provides more detail about how the 2011 Carl Moyer Program Guidelines ensure that the SIP-credibility integrity principle of "Surplus" is fulfilled:

- *Requirement that emission reductions generated by incentive programs are not required by other regulation*
 - (Moyer Guidelines Chapter 2, Project Criteria A, H, I, MM).
- *Protocols for quantifying maximum project life and maximum emission reductions which account for upcoming regulatory deadlines for a given source category*
 - (Moyer Guidelines Chapter 2, Project Criteria B, I and MM).
- *Assurance that baseline equipment was in use*
 - (Moyer Guidelines Chapter 3, Section Z.6(B) and AA.2.).
- *Assurance that new/upgraded equipment is not already accounted for in future-year inventories underlying a SIP attainment demonstration by natural fleet turnover, finite equipment life or incentives*
 - The definition of surplus in the Moyer guidelines requires that the emission reductions achieved are above and beyond those required under existing regulations that are incorporated into a SIP. As part of the SIP development process, ARB reviews the Moyer project mix to ensure that the amount of emission reductions credited to the program are not included in the future year inventories specific to each individual attainment demonstration.
- *Procedures that ensure that old equipment was used in the geographic area of interest*
 - (Moyer Guidelines, Chapter 2, Section S and Chapter 3, Section Z.6.(B)).

Quantifiable

The District evaluates the potential emission reductions that would be achieved by replacing the old equipment with the new equipment using the established calculation methodologies and emissions factors in the program guidelines. The calculation methodology, including calculation formulas, assumptions, emission factors and sample calculations are part of the Carl Moyer Program Guidelines and have been approved through a public process. To ensure that real, quantifiable emission reductions are achieved over the life of a project, the program guidelines require that emission control technologies be certified or verified by ARB (certification or verification by the EPA or International Maritime Organization may be allowed for some source categories for which ARB does not have a certification or verification program). The summary below provides more detail about how the 2011 Carl Moyer Program Guidelines ensure that the SIP-credibility integrity principle of “Quantifiable” is fulfilled:

- *Emissions data needed to calculate emission reductions must be publicly available, current, and accurate. This should include appropriate emission factors, load factors, and other conversion factors.*
 - Moyer Guidelines, Appendix D (Publicly Available) and Chapter 1, Section E.7 (Allows ARB Executive Officer to modify the Guidelines under a public process, to keep them effective and up-to-date.)
- *Guidelines include necessary formulas and instructions to calculate emission reductions based on above data, and explicit instructions to ensure appropriate data are used in calculations*
 - Moyer Guidelines, Appendix C (contains formulas and instructions)
 - Moyer Guidelines, Supplemental document, “Sample Calculations” (contains formulas and instructions)
 - Moyer Guidelines, Appendix C, Section B.5, and Supplemental document, “Sample Calculations” (contains explicit instructions regarding inputs)
- *Requirement to provide activity data sufficient to determine actual emission reductions*
 - Moyer Guidelines, Chapter 3, Section Z.6.(B)
- *Requirement to demonstrate the percentage of emission reductions that occur in the geographic area of interest, and that emission reductions are therefore SIP creditable*
 - Moyer Guidelines, Section S.
 - Moyer Guidelines, Section Z.6.(B)
- *Requirement to periodically audit completed projects to verify emission reduction projections are fulfilled*
 - Moyer Guidelines Chapter 2, Sections Z.10.
 - Moyer Guidelines Chapter 3, Sections EE.

Enforceable

Emission reductions and other required actions are enforceable if: they are independently verifiable; program violations and those liable are defined; information needed to determine emission reductions is available to the public; and they are practicably enforceable in accordance with other EPA guidance on practicable enforceability. The summary below provides more detail about how the 2011 Carl Moyer Program Guidelines ensure that the SIP-credibility integrity principle of “Enforceable” is fulfilled:

- *Require Grantees to provide all necessary recordkeeping and reporting needed to verify emission reductions*
 - Moyer Guidelines, Chapter 3, Section Z.9 and DD
- *Require inspections to ensure incentive program information is consistent with actual operating equipment*
 - Moyer Guidelines Chapter 3, Sections AA and BB.
- *Identify liable parties and liability associated with contract noncompliance*
 - Moyer Guidelines Chapter 3, Section Z.11.

Permanent

To ensure that the SIP-creditable emission reductions are permanent, actions such as pre-inspections and post-inspections of the new equipment and verification that the baseline equipment has been destroyed through the required process as described in the program guidelines are performed. The summary below provides more detail about how the 2011 Carl Moyer Program Guidelines ensure that the SIP-credibility integrity principle of “Permanent” is fulfilled:

- *Data needed to determine and track location of activity*
 - Moyer Guidelines, Chapter 3, Section DD
- *Provisions for ensuring that the project was completed, including the verification of disposition of baseline equipment.*
 - Moyer Guidelines Chapter 3, Sections AA and BB

A summary of emission reductions achieved through the use of the Carl Moyer Program Guidelines is included in Section VII of this report. The complete Carl Moyer Program Guidelines can be found online at: www.arb.ca.gov/msprog/moyer/guidelines/current.htm.

2. ARB Proposition 1B: Goods Movement Emission Reduction Program Guidelines

In November 2006, California voters approved Proposition 1B authorizing \$1 billion in bond funding to reduce air pollution associated with the movement of freight along California’s major trade corridors. Subsequent implementing legislation established standards and procedures for the expenditure of these funds. Governor Schwarzenegger’s Executive Order S-02-07 provides further direction to ensure accountability and transparency in administering bond-funded programs.

ARB developed the *Proposition 1B: Goods Movement Emission Reduction Program Guidelines for Implementation* (Proposition 1B Guidelines), through a public process in consultation with stakeholders, including: air districts, metropolitan planning organizations, port authorities, shipping lines, railroad companies, trucking companies, harbor craft owners, freight distributors, terminal operators, local port community advisory groups, community interest groups, and airports. The Proposition 1B Guidelines ensure that the District funds qualifying projects that achieve the following results:

- Reduce emissions and health risks;
- Incorporate simplicity and efficiency;
- Ensure cost effectiveness;
- Leverage other funding sources; and
- Provide transparency and accountability.

ARB, under direction from Executive Order S-02-07, established transparency and accountability measures for administering the bond funding. ARB has made all program materials including, but not limited to; guidelines, Board Resolutions, Notice of Funding Availability, summary tables, recommendations for funding, materials from public workshops, and completed applications submitted by local and state agencies available on their website.

The program is designed to supplement ARB's diesel regulations by funding early compliance or providing extra emission reductions beyond those required by current rules. The guidelines include robust administrative requirements to ensure that emission reductions are enforceable and are achieved throughout the life of a project. The District has used the Proposition 1B Guidelines to develop the practices that are currently in place to ensure all EPA integrity principles are met. The following is a summary of how the Proposition 1B Guidelines meet each SIP-credibility criterion:

Surplus

The Proposition 1B program supplements ARB's diesel regulations by funding early compliance or providing extra emission reductions beyond those required by current rules. The program guidelines require that the District ensure all trucks being considered to receive funding have had ARB verify compliance with the state's diesel regulations and further require that any trucks under contract with the District be noted as such in the state's online regulation reporting database. This ensures that the new truck will not be used towards compliance during the project life ensuring that the emission reductions are surplus. Chapter 6 Section E discusses the requirements that fleets remain in compliance with the Truck and Bus Regulation and that program funded equipment cannot be used towards compliance with the regulation.

Quantifiable

The District evaluates the potential reductions that would be achieved by replacing the old equipment with the new equipment using the Project Benefits Calculator created by ARB. The calculator is available to the public on ARB's website at <http://www.arb.ca.gov/bonds/gmbond/gmbond.htm> and is updated by ARB on a

regular basis. Chapter 2 Section C discusses Proposition 1B program emission reduction calculations.

Enforceable

The District has created enforceable contracts, based on requirements in the Proposition 1B Program Guidelines, which are signed by both District management and the Grantee to ensure that projects are fully accomplished and the integrity principles are met. The legally binding contracts include, but are not limited to, usage reporting requirements for the Grantee, operating location requirements for the new vehicle, the destruction requirements of the baseline equipment/engine, and an allowance for the District to conduct an audit of the project at any time during the project life. Appendix A of Proposition 1B Program guidelines details contract requirements for truck projects.

Permanent

To ensure that the SIP-creditable emission reductions are permanent, actions such as post-inspections of the new equipment and verification that the baseline equipment has been destroyed through the required process as described in the program guidelines are performed. Chapter 4 Section A of the Proposition 1B program discusses scrap and post inspection requirements.

A summary of emission reductions achieved through the use of the Proposition 1B Program Guidelines is included in Section VI of this report. The complete Proposition 1B Program Guidelines can be found online at:

<http://www.arb.ca.gov/bonds/gmbond/gmbond.htm>.

3. USDA NRCS Combustion Systems Improvement of Mobile Engines Incentive Program Guidelines

Under the Food Conservation and Energy Act of 2008, the USDA Secretary provides eligible producers with program support to address serious air quality concerns from agricultural operations and help meet regulatory requirements through the Environmental Quality Incentives Program (EQIP). The National Air Quality Initiative (NAQI, once referred to as "CIG-b") is a voluntary incentive program with the primary goal to achieve and maintain the health-based National Ambient Air Quality Standards (NAAQS) within designated non-attainment areas of California. Financial assistance is targeted to counties that have been identified as having significant air quality resource concerns by being designated as non-attainment for Ozone and/or Particulate Matter (PM10 / PM2.5). These areas experience air pollution levels that persistently exceed the NAAQS established by the CAA.

<http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ca/programs/financial/eqip/?cid=stelprdb1247012>

Given its experience in running similar incentive programs, the District provided assistance to NRCS in developing this new program. Through this program, NRCS provides incentive funds to assist farmers in replacing diesel powered agricultural equipment with the goal of ensuring the resulting emission reductions meet the SIP-

credibility criteria of being surplus, quantifiable, enforceable, and permanent. Since 2009, the NRCS program, in combination with the District's program, has provided over \$129 million in incentives for agricultural equipment replacement, with significant continued investment currently ongoing. Eligible participants are owners of land in agricultural or forest production or persons who are engaged in livestock, agriculture, or forest production on eligible land and that have a natural resource concern on the land.

Applications are accepted on a continuous basis with periodic application ranking cut-offs. The NRCS has specific expertise regarding agricultural practices and operations and works closely with agricultural stakeholders in reviewing applications for eligibility. Applications are ranked for funding based upon ranking criteria developed with input from Local Work Groups, Stakeholders, and the State Technical Advisory Committee (STAC). The ranking score of a project is based on multiple factors including but not limited to:

- Whether or not the project location is in an area that has an EPA NAAQS non-attainment designation for PM_{2.5}, PM₁₀, and/or Ozone and what type of designation that area has (for example "extreme" nonattainment).
- If there are currently any local or state agriculturally based air emission regulatory requirements for the area that the project is located.
- The emission level of the baseline equipment/engine and the emission factors of the new/replacement equipment/engine.
- The amount of NO_x, ROG, and PM that is projected to be reduced by funding the project.

The ranking criteria ensure that the projects with the greatest amount of reductions, resulting in the highest air quality benefit will be selected for funding.

NRCS has created robust administrative requirements based on those in the Carl Moyer Program Guidelines to ensure that emission reductions are enforceable, are achieved throughout the life of a project, and ensure all EPA integrity principles are met. These requirements are contained in Conservation Practice Standard (CPS) 372 – Combustion System Improvement and associated specifications and procedures. The following is a summary of how the NRCS Guidelines meet each SIP-credibility criterion:

Surplus

Under the NAQI, page 3 of the CA-NRCS program guidelines specifies that SIP creditable emission reductions are "achieved from contracts or parts of contracts funded under the air quality initiative [that] are not required by any federal, state, or local regulation, settlement agreement, mitigation requirement, or other legal mandate." A rule or regulation does not currently exist for off-road mobile agricultural equipment, so the emission reductions resulting from replacing existing mobile off-road agricultural engines funded under the NAQI per CPS 372-Combustion Systems Improvement are surplus. The National Air Quality Initiative Programs Description is posted on-line at:

<http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ca/programs/financial/eqip/?cid=stelprdb1247003>.

The 2012 CA-NRCS program guidelines are posted on-line at:

http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_063865.pdf

Quantifiable

The District provided technical assistance to CA-NRCS in developing their calculation methodologies. The methodologies from the Carl Moyer Program are the basis for components included in CPS-372 and its supporting documents for the NAQI, including the CA-NRCS program guidelines. The District provided technical assistance to CA-NRCS in developing their calculation methodologies, which are consistent with the Carl Moyer Program. The NRCS Field Office Technical Guide places a ten-year lifespan for projects implemented under CPS 372 – Combustion System Improvement, which is also consistent with the Carl Moyer program. A conservation practice lifespan is the minimum time (in years) the implemented practice is expected to be fully functional for its intended purpose (NRCS General Manual, Title 450, Part 401.15)

<http://directives.sc.egov.usda.gov/viewerFS.aspx?hid=19430>. A list of California NRCS practice standard life-spans are posted on-line at:

<https://efotg.sc.egov.usda.gov/references/public/CA/Section-IV-INDEX-numerical-all-columns-5-6-16.xlsx>.

The emission reductions for each project, including projects with multiple old units for one new unit, are calculated using the methodologies outlined in the Carl Moyer Guidelines. All equipment engines are cross-referenced against an ARB executive order that verifies the emission of every equipment engine. The NRCS calculation worksheets and emission factors are posted on-line at:

<https://efotg.sc.egov.usda.gov/references/public/CA/372-spec-ca-11-14.doc>

Enforceable

The NRCS inspects equipment in proposals prior to contract development to verify the existing mobile off-road agricultural equipment is operational per CPS-372 specifications. Destruction of existing equipment is certified by the disposal operator and participant and date-stamped photos are provided. The Destruction Certification worksheet is posted on-line at:

https://efotg.sc.egov.usda.gov/efotg_locator.aspx

On an annual basis NRCS reviews at least 5% of all active projects. From these project reviews NRCS verifies that the new equipment is still operational.

<http://directives.sc.egov.usda.gov/RollupViewer.aspx?hid=25728>.

Per Subpart C, 512.22, participants have control of the land for the length of the proposed contract through deed, lease, or other written authorization. If the applicant does not own the land, the landowner must give written consent to install, operate, and maintain the practice through the lifespan of the practice. This is conducted through a partnership with the USDA Farm Service Agency, who is responsible for program eligibility support.

Subpart F covers Contract Administration and provides for recovering liquidated damages for certain deviations to a contract. Handling contract violations is addressed in Subpart H where violations of contract terms must be corrected by the participant within a reasonable period of time to comply. If the violation continues, the contract may be terminated and future program participation deferred.

Permanent

NRCS eligibility is based on the county that the tractor resides in; in this case, the tractor has to reside within one of the eight counties of the San Joaquin Valley. Under the NAQI, the NRCS prioritizes applications based on a county's non-attainment designation within California. Applications received from attainment areas are not eligible. Currently, only the emission reductions originating from within the eight San Joaquin Valley counties are seeking SIP credit under this proposal. The destruction of the existing mobile off-road engines and equipment are verified per CPS 372 specifications, posted on-line at:

<https://efotg.sc.egov.usda.gov/references/public/CA/372-spec-ca-11-14.doc>.

Destruction certification worksheets are posted on-line at:

https://efotg.sc.egov.usda.gov/references/public/CA/CA_Destruction_Certification_Worksheet.docx.

The NRCS also has a stipulation that the tractor has to be tied to the land where it is in use. This requires that the tractor be used 100% of the time in the San Joaquin Valley. Under the NAQI, NRCS staff verifies by site visit the operational condition of the existing mobile off-road agricultural equipment. Destruction of the existing equipment and emissions certification verifications are performed to determine contract compliance.

The Combustion Systems Improvement of Mobile Engines incentive program is unique from other incentive programs in that NRCS is explicitly prohibited from identifying Grantees by name under the Food, Conservation, and Energy Act of 2008 (7 U.S.C. § 8791). NRCS must maintain the confidentiality of information provided by an agricultural producer participating in the NRCS Combustion Systems Improvement of Mobile Engines incentive program. The information is exempt from mandatory disclosure and may not be used in judicial or administrative proceedings without the consent of the person involved. However, in March 2014, NRCS, EPA, the District and ARB signed the "Addendum to the December 2010 Statement of Principles Regarding the Approach to State Implementation Plan Creditability of Agricultural Equipment Replacement Incentive Programs Implemented by the USDA NRCS and the San Joaquin Valley Air Pollution Control District" (Addendum). The purpose of this Addendum is to identify information that NRCS will make available to EPA and the District, consistent with NRCS's statutory responsibilities under Section 1619 of the Farm Bill, to ensure that both EPA and the District can carry out their respective implementation responsibilities under the CAA and Rule 9610.

A summary of emission reductions achieved through the use of the NRCS Combustion System Improvement of Mobile Engines incentive program guidelines is included in Section VI of this report. The NRCS Combustion System Improvement of Mobile Engines incentive program can be found online at:

Practice Standard:

- CPS 372, Sept 2010: <https://efotg.sc.egov.usda.gov/references/public/CA/372-std-09-2010.pdf>
- Interim 723, May 2009: https://efotg.sc.egov.usda.gov/references/public/CA/CA-Interim-723-Combustion-Systems-AQ-Management_May_2009.pdf

CPS 372 Specifications:

- Nov 2014: <https://efotg.sc.egov.usda.gov/references/public/CA/372-spec-ca-11-14.doc>
- Aug 2013: <https://efotg.sc.egov.usda.gov/references/public/CA/372-spec-8-13.doc>
- Sept 2010: <https://efotg.sc.egov.usda.gov/references/public/CA/372-spec-09-10.doc>

CPS 372 O&M:

- Aug 2013: <https://efotg.sc.egov.usda.gov/references/public/CA/372B-OM-ca-8-13.doc>
- Sept 2010: <https://efotg.sc.egov.usda.gov/references/public/CA/372-OM-09-10.doc>

4. Guidelines Used Under Section 3.2 of Rule 9610

The Annual Demonstration Report employs Section 3.2 of the Rule 9610 by claiming SIP credit for incentive-based emission reductions from the ARB Carl Moyer Program Guidelines (2005, 2008, 2011) for locomotive alternative technology switchers and new electric forklift purchases. The summaries of these SIP-creditable incentive-based emission reductions claimed under Section 3.2 of Rule 9610 are included in Section VI of this annual demonstration report and the detailed information for each project is presented in the Annual Demonstration Report Data Sheet that accompanies this report.

The following discussion demonstrates that each such incentive program guideline provides for SIP-creditable emission reductions.

Locomotive Repower

Projects funded with the 2008 and 2011 Carl Moyer Program Guidelines followed all required steps to ensure SIP-credibility criteria were met as follows:

Surplus – There are currently no federal, state, or local rules or regulations pertaining to the emissions of locomotives in the state of California. Therefore, all incentive-based emission reductions are surplus.

Quantifiable – The Carl Moyer Guidelines provide calculation methodologies and emission factors for locomotive projects. These methodologies have been reviewed and adopted through a public process. All locomotive projects in this Annual Demonstration Report were quantified using these SIP-creditable calculation methodologies, as referenced on the Manual of Procedures website.

Enforceable – The District performed inspections pursuant to Carl Moyer Guideline requirements and satisfied enforceability requirements under Section 4.0 of Rule 9610. These inspections verified contractual requirements were followed thus ensuring projected emission reductions were achieved. These projects included legally binding contracts between the grantee and the District that identified the party or parties responsible for ensuring that the emission reductions were achieved. These contracts also obligated the grantee to provide all records needed to demonstrate the emissions reduced.

Permanent – Per contractual requirements, the cleaner locomotive is required to be operated for the duration of the project life.

Purchase of New Electric Forklifts

Projects funded with the 2008 Carl Moyer Program Guidelines followed all required steps to ensure SIP-credibility criteria were met, as follows:

Surplus – The current regulation for off-road mobile equipment has an exemption for agricultural-use vehicles. The forklifts that were funded are used solely for agricultural purposes, and therefore are surplus to the state regulation.

Quantifiable – The Carl Moyer Guidelines provide calculation methodologies and emission factors for forklift projects. These methodologies have been reviewed and adopted through a public process. All forklift projects in this report were quantified using these SIP-creditable calculation methodologies. This methodology assumes the baseline equipment to be a new diesel forklift. Therefore, new purchases of electric forklifts are calculated based on the difference in emissions between a new diesel forklift and a new electric forklift.

Enforceable – The District performed inspections pursuant to Carl Moyer Guideline requirements and satisfied enforceability requirements under Section 4.0 of Rule 9610. These inspections verified contractual requirements were followed thus ensuring projected emission reductions were achieved. These projects included legally binding contracts between the grantee and the District that identified the party or parties responsible for ensuring that the emission reductions were achieved. These contracts also obligated the grantee to provide all records needed to demonstrate the emissions reduced.

Permanent – Per contractual requirements, the new electric forklift is required to be operated for the duration of the project life.

III. RELEVANT SIP COMMITMENTS

Through Rule 9610, the District may rely on projections of SIP-creditable incentive-based emission reductions to satisfy federal CAA requirements, including the demonstration of attainment, Reasonable Further Progress, Rate of Progress, contingency measures, and/or black box reductions (Section 182(e)(5) of the CAA). For such SIP commitments, the District identifies specific amounts of SIP-creditable emission reductions by year in the relevant SIP. This annual demonstration report then identifies the SIP commitments included in District adopted SIPs (by year, pollutant, and magnitude) which the District has satisfied, in whole or in part, through SIP-creditable emission reductions. This annual demonstration report also identifies and quantifies any SIP commitment shortfalls and remedies for which incentives are used to address those shortfalls.

A. SIP Commitments

The following table is a summary of SIP commitments to reduce emissions for which the District intends to claim credit for using District Rule 9610 as the administrative mechanism. The magnitude of the emission reductions are expressed in tons per day (tpd).

Table 6: Relevant Commitments in District-adopted SIPs

District-adopted SIP	Adoption date	Requirement	Year	Pollutant	Magnitude
<i>2008 PM2.5 Plan</i>	6/20/13	Contingency ³	2015	NOx PM2.5	4.15 tpd 0.10 tpd
<i>2007 Ozone Plan</i>	9/27/07	ARB commitment to reduce ag equipment emissions ⁴	2017	NOx	5-10 tpd
<i>2013 Plan for the Revoked 1-Hour Ozone Standard</i>	9/19/13	Contingency ⁵	2018	NOx	3.5 tpd
<i>2016 Moderate Area Plan for the 2012 PM2.5 Standard⁶</i>	9/15/16	Contingency ⁷	2019	NOx	3.0 tpd
<i>2007 Ozone Plan</i>	4/30/07	"Black Box"	2023 ⁸	NOx	TBD

³ SJVUAPCD, *Quantification of Contingency Reductions for the 2008 PM2.5 Plan* (June 20, 2013). Retrieved July 2014 at http://www.valleyair.org/Board_meetings/GB/agenda_minutes/Agenda/2013/June/items/11.pdf

⁴ ARB, 2007 State Strategy Attachment B, pages 16-17 (September 27, 2007). Retrieved May 2013 at http://www.arb.ca.gov/planning/sip/2007sip/07-28_attachment_b.pdf

⁵ SJVUAPCD, 2013 Plan for the Revoked 1-Hour Ozone Standard (September 19, 2013), Chapter 4, page 4-9. Retrieved July 2014 at http://www.valleyair.org/Air_Quality_Plans/Ozone-OneHourPlan-2013.htm

⁶ **NOTE:** The District Governing Board adopted the *2016 Moderate Area Plan for the 2012 PM2.5 Standard* on 9/15/2016 and forwarded it to ARB for adoption and forwarding to EPA. As of July 17, 2017, ARB has not yet adopted or forwarded this attainment plan to EPA.

⁷ SJVUAPCD, *2016 Moderate Area Plan for the 2012 PM2.5 Standard* (September 15, 2016), Chapter 3, page 3-15. Retrieved July 17, 2017 at http://www.valleyair.org/Air_Quality_Plans/docs/PM25-2016/03.pdf

⁸ Per CAA §182(e)(5), the District is required to, in 2019, identify specific control measures that will achieve the emissions reductions necessary to fulfill the "black box" identified in Chapter 11, page 11-1. http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/16%20Chapter%2011%20April%202007.pdf

2008 PM_{2.5} Plan (Contingency Quantification, 2015): The District meets its 2008 PM_{2.5} Plan commitment to quantify an adequate amount of contingency emissions reductions, including SIP-creditable emissions reductions from incentive programs quantified in this report. On May 22, 2014, EPA approved a SIP revision to address CAA nonattainment area contingency measure requirements for the 1997 annual and 24-hour fine particulate matter (PM_{2.5}) NAAQS in the San Joaquin Valley.⁹ SIP-creditable incentive-based emission reductions accounted for by EPA in this proposed approval include on-road vehicle replacement projects that have been funded through the Prop 1B program and agricultural off-road vehicle replacement projects funded through the Carl Moyer Program. However, EPA then proposed to withdraw the approval of the 2008 PM_{2.5} Plan contingencies finding that the requirement had become moot because the District had already met the RFP requirements relevant to the 2008 PM_{2.5} Plan by the time of EPA's May 22, 2014 action.¹⁰ Then, on May 12, 2016, EPA took final action to withdraw its approval of the 2008 PM_{2.5} contingencies and disapproved the SIP submission¹¹ in response to a court case.¹²

2007 Ozone Plan (Agricultural Equipment, 2017): The District meets its 2007 Ozone Plan commitment to quantify an adequate amount of contingency emissions reductions, including SIP-creditable emissions reductions from incentive reductions quantified in this report.

The 2007 San Joaquin Valley 8-Hour Ozone SIP (2007 Ozone Plan), approved by EPA, contained a commitment by the ARB to present to their Board a regulation for off-road mobile agricultural equipment in 2013. The regulation would move California towards meeting ambient air quality standards for the Valley by utilizing the cleanest available technologies. Specifically, the approved SIP includes a goal to achieve emissions reductions of 5 to 10 tpd of NO_x from mobile agricultural equipment in the Valley by 2017 to accelerate progress toward attainment of the ozone standard. The attainment deadline is 2024, using data from 2021-2023. The ARB Office of Administrative Law (OAL) approved the rulemaking and filed it with the Secretary of State on October 8, 2014. The rulemaking became effective on January 1, 2015.¹³

Beginning in 2009, the District and NRCS, in partnership with agricultural stakeholders, launched incentive programs aimed at reducing emissions from agricultural equipment. These programs have been well-funded and have achieved significant emission

⁹ EPA, Approval and Promulgation of Implementation Plans; California; San Joaquin Valley; Contingency Measures for the 1997 PM_{2.5} Standards, 79 Fed. Reg. 99, pp. 29327 - 29351. (2014, May 22). (to be codified at 40 CFR Part 52). Retrieved July 2014 at <http://www.gpo.gov/fdsys/pkg/FR-2014-05-22/pdf/2014-11681.pdf>

¹⁰ EPA, Withdrawal of Approval and Disapproval of Air Quality Implementation Plans; California; San Joaquin Valley; Contingency Measures for the 1997 PM_{2.5} Standards. 80 Fed. Reg. 158, pp. 49190-49193. (2015, August 17). <https://www.gpo.gov/fdsys/pkg/FR-2015-08-17/pdf/2015-20240.pdf>

¹¹ EPA, Withdrawal of Approval and Disapproval of Air Quality Implementation Plans; California, San Joaquin Valley; Contingency Measures for the 1997 PM_{2.5} Standards; Final Rule. 81 Fed. Reg. 92, pp. 29498-29501 (2016, May 12). (to be codified at 40 CFR Part 52) <https://www.gpo.gov/fdsys/pkg/FR-2016-05-12/pdf/2016-11125.pdf>

¹² U.S. Court of Appeals for the Ninth Circuit (*Committee for a Better Arvin v. EPA*, 786 F.3d 1169 (9th Cir. 2015))

¹³ ARB, *State Implementation Plan Credit from Mobile Agricultural Equipment*. Resolution 12-42, Agenda Item No.: 13-9-7 (2013, October 25). <https://www.arb.ca.gov/regact/2013/sipmobileag2013/res13-42.pdf>

reductions since 2009. As documented in this report, projects implemented to date will achieve 16.98 tpd of NO_x reductions in 2017 (see table 9), making significant progress, and in fact, already exceeding the minimum of 5 tpd of NO_x commitment in the *2007 Ozone Plan*.

In addition to these already implemented projects, the District has already executed an additional \$24 million in contracts for 401 units, projecting to achieve an additional 0.72 tons of summertime NO_x/day in 2017. Additionally, NRCS has also executed approximately 183 units, projecting to achieve an additional 0.52 tons of summertime NO_x/day. Combined with implemented projects documented in this report, which are achieving a reduction of 13.74 tons of summertime NO_x/day, these projects are **expected to achieve 14.98 tpd of NO_x reductions in 2017**. The District and NRCS are continuing to invest significant additional funding to replace agricultural equipment, and the total emissions reductions achieved towards this commitment is continued to grow substantially in the next several years. This progress will be documented in future annual demonstration reports.

The agricultural equipment incentive-based emission reductions documented in this report have been summer-adjusted to allow for comparison with the *2007 Ozone Plan* commitment (based on summer ozone season), using the seasonal emissions inventory fractions included in the plan's emissions inventory as follows:

Table 7: 2007 Ozone Plan Agricultural Equipment Emissions Inventory Seasonal Fraction

Season	Seasonal Fraction
Winter	0.391
Summer	0.609

ARB Rulemaking: ARB's Regulation for State Implementation Plan Credit from Mobile Agricultural Equipment in the Valley was adopted by their Board in October 2013. The regulation provides a mechanism to ensure that the agriculture industry's voluntary participation in incentive programs in the Valley is recognized by the EPA. To meet EPA requirements, the emission reductions must be surplus, quantifiable, enforceable, and permanent. ARB's regulation defines the criteria and process that ARB will use to determine that the reductions from the use of incentives generated from federal, state, and local funds spent on qualifying mobile agricultural equipment projects are surplus, quantifiable, enforceable, and permanent and are therefore eligible for SIP credit.

2013 Plan for the Revoked 1-Hour Ozone Standard (Contingency Quantification, 2018): The District adopted this plan in September 2013 and included a commitment for 3.5 tpd of NO_x reductions from SIP-creditable incentives in 2018 to satisfy part of the requirement of attainment year contingency reductions. On April 5, 2016, EPA approved the District's *2013 Ozone Plan* with the exception of the contingency measures.¹⁴ On May

¹⁴ EPA. Clean Air Plans; 1-Hour and 1997 8-Hour Ozone Nonattainment Area Requirements; San Joaquin Valley, California; Final Rule. 81 Fed. Reg. 65, pp. 19492-19495. (2016, April 5). <https://www.gpo.gov/fdsys/pkg/FR-2016-04-05/pdf/2016-07668.pdf>

18, 2016, EPA determined that the Valley has attained the 1-hour Ozone standard.¹⁵ Pursuant to 40 CFR Part 51 Subpart AA §51.1118, upon a determination by the EPA that an area designated nonattainment for an ozone NAAQS has attained the NAAQS, the requirements for such area to submit attainment demonstrations and associated reasonably available control measures, reasonable further progress plans, contingency measures for failure to attain or make reasonable progress and other planning SIPs related to said NAAQS, shall be suspended until such time as the area is redesignated to attainment for that NAAQS or a redesignation substitute is approved as appropriate, at which time the requirements no longer apply.

That said, while this commitment is not approved into the SIP and the Valley has been designated by EPA as attainment for this standard, making fulfillment of this requirement no longer mandatory, this annual demonstration report includes the demonstration of having met plan commitments.

2016 Moderate Area Plan for the 2012 PM_{2.5} Standard (Contingency Quantification, 2019): The Valley is classified as Moderate non-attainment for the 2012 PM_{2.5} standard with an attainment deadline of 2021. The District adopted a Moderate area plan in September 2016 with an impracticability demonstration and request for reclassification, then forwarded it to ARB for adoption and submittal to EPA. However, at the October 20, 2016 Public Meeting, the Air Resources Board voted to table the action and directed ARB staff to return with additional measures to reduce mobile source emission in the pre-2025 timeline that is critical for the District and to work with the District to find additional measures to reduce directly emitted particulate matter from stationary sources. At the May 25, 2017 Public Meeting, the ARB staff returned to their Board with an update on additional outreach that has been conducted in coordination with the District, the process for developing an overall PM_{2.5} control strategy, and recommendations for identifying additional near-term reductions from stationary and mobile sources. As of July 17, 2017, the plan has not been adopted by ARB or forwarded to EPA for consideration as an amendment to the SIP.

The commitment to reduce 3.0 tpd of NO_x emissions are in a Governing Board-approved attainment plan, and as such, this annual demonstration report includes the requirement to demonstrate this plan commitment. The specific grant programs expected to provide the requisite emissions reductions, and related documentation are included in the Appendix C of the *2016 Moderate Plan*.¹⁶

2007 Ozone Plan (“Black Box” 2023): This commitment will be accounted for in future annual demonstration reports if necessary, since these reductions are necessary to be achieved in 2023.

¹⁵ EPA. Determination of Attainment of the 1-Hour Ozone National Ambient Air Quality Standard in the San Joaquin Valley Nonattainment Area in California; Proposed Rule. 81 Fed. Reg. 96, pp. 31206-31212. (2016, May 18). <https://www.gpo.gov/fdsys/pkg/FR-2016-05-18/pdf/2016-11630.pdf>

¹⁶ SJVAPCD. *2016 Moderate Area Plan for the 2012 PM_{2.5} Standard*. (2016, September 16) retrieved on 7/17/2017 from: http://www.valleyair.org/Air_Quality_Plans/PM25Plans2016.htm

2012 PM_{2.5} Plan (Contingency Quantification, 2020)¹⁷: The *2013 Annual Demonstration Report* included a commitment from the *2012 PM_{2.5} Plan* for 1.9 tpd of NO_x reductions for contingency in 2020. However, the attainment year contingency measure commitment from this plan no longer applies.

Subsequent to the District's adoption of that plan, the DC Circuit court ruled that EPA should have been implementing the PM_{2.5} NAAQS under CAA subpart 4 instead of subpart 1; EPA then classified all areas as Moderate nonattainment in June 2014¹⁸. Subsequently, the District prepared the *Supplemental Document: Subpart 4 Requirements (Supplemental Document)* in September 2014 demonstrating how the combination of the *2012 PM_{2.5} Plan* and the *Supplemental Document* already satisfy Subpart 4 requirements and requesting that the District be reclassified to Serious nonattainment through a demonstration that attainment by the Moderate attainment deadline of 2015 was impracticable. This documentation was submitted to EPA on November 6, 2014. On January 13, 2015, EPA proposed to approve the *2012 PM_{2.5} Plan* and *Supplemental Document*, and EPA proposed to reclassify the District as a Serious nonattainment area for the 2006 PM_{2.5} NAAQS. EPA reclassified the Valley to Serious nonattainment effective February 19, 2016. The District's plan addressing the 2006 PM_{2.5} NAAQS as a Serious nonattainment area is due to EPA by August 19, 2017. As part of this new plan, the District will have to demonstrate sufficient contingency measures for its Serious attainment year, and may commit to Rule 9610 reductions to satisfy part of that requirement.

B. Progress/Achievement of SIP Commitments

The following is a summary of progress made towards meeting SIP commitments submitted to EPA. Table 8 provides a summary of the progress organized by attainment plan and demonstration due date.

2008 PM_{2.5} Plan (Contingency Quantification, 2015): The projects and associated emissions reductions identified in Appendices A and B of EPA's, "Technical Support Document for EPA's Notice of Proposed Rulemaking for the California State Implementation Plan San Joaquin Valley Unified Air Pollution Control District's Rule 9610, State Implementation Plan Credit for Emission Reductions Generated through Incentive Programs," (TSD Project List) made available on May 19, 2014 and incorporated by reference, and claimed below for 2015 SIP commitments for the *2008 PM_{2.5} Plan*, have been analyzed and verified as being current and active projects with no contractual violations, as documented by the District's monitoring activities described in section IV of this report. The TSD Project List is available at the District's website at www.valleyair.org. Based on usage surveys received, at the time of this report, these agricultural off-road

¹⁷ SJVUAPCD, 2012 PM_{2.5} Plan (December 20, 2012). Retrieved May 2013 at <http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/09%20Chapter%209%20RACM%20RFP%20Contingency.pdf>

¹⁸ EPA. 79 Fed. Reg. 105, pp. 31566-31782. *Identification of Nonattainment Classification and Deadlines for Submission of State Implementation Plan Provisions for the 1997 Fine Particle (PM_{2.5}) National Ambient Air Quality Standard (NAAQS) and 2006 PM_{2.5} NAAQS*, codified at 40 CFR Chapter 1. Retrieved 7/21/2014 from <http://www.gpo.gov/fdsys/pkg/FR-2014-06-02/pdf/2014-10395.pdf>.

vehicle replacement projects were reporting an average usage at 96% of the contracted amount and the on-road vehicle replacement projects were reporting an average usage at 101% of their contracted amounts. This very low rate of noncompliance does not impact the District's emission reduction estimates for the projects identified in the Project List. The emissions reductions associated with those projects are on track and the District anticipates the 4.15 tpd NO_x emission reductions and the 0.110 tpd PM_{2.5} reductions will be achieved through 2015.

Documents related to the projects being claimed for SIP credit can be obtained through the District's Public Records Request process. All requests for copies of public records must be made in writing. Requests will be processed in the order in which they are received. A Public Records Request Form can obtain by calling the District's Public Records Coordinator at (559) 230-6000. A form is also available on the District's web page at http://www.valleyair.org/General_info/public_records_release_request.htm. Requests may be submitted by facsimile to (559) 230-6061, or by mail to Public Records Request, 1990 East Gettysburg Avenue, Fresno, CA 93726-0244, or by email to public.records.coordinator@valleyair.org. A complete listing of instructions on how to obtain documents can be found at http://www.valleyair.org/General_info/pubdocs/PRRFormInstructions09-17-07.pdf

2007 Ozone Plan (Agricultural Equipment, 2017):

The projects and associated emissions reductions identified in this Annual Demonstration Report satisfy the requirements for the emissions reductions commitments in the District's *2007 Ozone Plan*.

Documents related to the projects being claimed for SIP credit can be obtained through the District's Public Records Request process. All requests for copies of public records must be made in writing. Requests will be processed in the order in which they are received. A Public Records Request Form can obtain by calling the District's Public Records Coordinator at (559) 230-6000. A form is also available on the District's web page at http://www.valleyair.org/General_info/public_records_release_request.htm. Requests may be submitted by facsimile to (559) 230-6061, or by mail to Public Records Request, 1990 East Gettysburg Avenue, Fresno, CA 93726-0244, or by email to public.records.coordinator@valleyair.org. A complete listing of instructions on how to obtain documents can be found at http://www.valleyair.org/General_info/pubdocs/PRRFormInstructions09-17-07.pdf

Table 8: Summary of Progress Made towards EPA Approved SIP Commitments

SIP Commitment	Incentive Program	Reductions (tpd)
2008 PM2.5 Plan: 4.15 tpd of NOx in 2015 0.10 tpd of PM2.5 in 2015	<i>All data for NOx, 2015. See Section I for more information.</i>	
	Agricultural Off-road vehicle replacement projects funded through "The Carl Moyer Program Guidelines," approved April 28, 2011, Chapter 9	1.33 tpd NOx 0.06 tpd PM2.5
	On-road vehicle replacement projects funded through "Proposition 1B: Goods Movement Emission Reduction Program, Final Guidelines for Implementation," adopted February 28, 2008, Appendix A, Vehicle Replacements and "Proposition 1B: Goods Movement Emission Reduction Program, Final 2010 Guidelines for Implementation," adopted March 25, 2010, Appendix A, Vehicle Replacements	3.78 tpd NOx 0.15 tpd PM2.5
	TOTAL (in 2015)	5.11 tpd NOx 0.21 tpd PM2.5
	Commitment met? YES	
2007 Ozone Plan: 5-10 tpd of NOx from ag equipment in 2017	<i>All data for NOx, 2017. See Section I for more information.</i>	
	District Ag Equipment Replacement Program (Moyer)	5.23*
	NRCS Combustion System Improvement	8.51*
	TOTAL	13.74*
	Percentage of commitment met to date	275%
	Commitment met? YES	

Table 9 provides a summary of progress made towards SIP commitments that are under review and may be a focus in future reports at which time approval from EPA has been obtained.

Table 9: Summary of Progress Made Towards Future SIP Commitments

SIP Commitment	Incentive Program	Reductions (tpd)
2013 Plan for the Revoked 1-hour Ozone Standard: 3.5 tpd of NOx in 2018	Agricultural Off-road vehicle replacement and agricultural irrigation pump projects funded through the Carl Moyer Program	7.42** tpd NOx
	Commitment met? YES	
2016 Moderate Area Plan for the 2012 PM2.5 Standard ¹⁹ : 3.0 tpd of NOx in 2019	Carl Moyer Heavy-Duty Vehicle Replacement (2011 Moyer Guidelines) – Off-Road Equipment	4.27 tpd NOx
	Commitment met? YES	
2007 Ozone Plan Black Box	To be demonstrated in future annual reports (by 2019), since these reductions are for 2023	

*Adjusted for summer-time emissions inventory, 2007 Ozone Plan

**Adjusted for summer-time emissions inventory

SIP Commitment Shortfalls

There are no shortfalls at this time; therefore, there are no remedy actions to be taken.

¹⁹ **NOTE:** The District Governing Board adopted the 2016 Moderate Area Plan for the 2012 PM2.5 Standard on 9/15/2016 and forwarded it to ARB for adoption and forwarding to EPA. As of July 17, 2017, ARB has not yet adopted or forwarded this attainment plan to EPA.

IV. MONITORING AND ENFORCEMENT ACTIVITIES

Pursuant to Section 4.6 of Rule 9610 this annual demonstration report includes a summary of monitoring and enforcement activities that were conducted during the reporting period from 05/14/2015 – 05/20/2016. Monitoring is performed on all projects in the form of pre-inspections prior to contract, post-inspections prior to payment and annual usage surveys filled out by the grantee for the life of the project.

Inspections are performed by District staff and include visual verification and photographically document equipment information such as but not limited to:

- Make, model, and model year of the engine and/or vehicle or equipment,
- Vehicle, equipment, and/or engine identification and serial numbers,
- Operational condition of vehicle, equipment, and engine

The District reviews all inspection information to ensure that the submitted information is true and accurate prior to contracting a new project and prior to payment of reimbursement requests from grantees. The table below illustrates the number of pre-inspection and post-inspection that were conducted during the reporting period.

Table 10: Incentive Program Project Inspections

Year	Pre-Inspections	Post-Inspections
2009	924	147
2010	790	887
2011	1144	966
2012	2298	1372
2013	2184	1533
2014	2034	1240
2015	521	1329
2016	1028	1021
2017	996	441

District incentive project contractual agreements specify that Grantees must provide data to the District on an annual basis for the duration of their contract period. The required data includes usage data (mileage, hours of operation, percent utilization within the District, etc). The usage data is analyzed by the District to ensure that the incentive projects are achieving the projected emission reductions. The table below illustrates the quantity of usage report surveys distributed from the District to Grantees and the quantity of Grantee completed usage report surveys returned to the District through May 20, 2016.

Table 11: Incentive Program Annual Usage Reports

Year	Usage Report Surveys Distributed to Grantees	Completed Usage Report Surveys Returned to the District
2011	3245	2948
2012	3426	3668
2013	4591	4033
2014	5421	4931
2015	5553	4631
2016	5683	5782
2017	2344	2404

The District maintains a robust process of collecting and analyzing annual usage data for incentive projects from grantees (e.g. – annual mileage, fuel usage, hours of operation, etc.) This information is collected for the duration of the project life of each individual project. Annual usage of individual projects can vary due to a variety of factors. For example, current drought conditions in the Valley significantly affect the use of agricultural irrigation pump engines causing usage to vary due to increased or decreased pumping needs, crop changes, surface water delivery, etc. Since annual variations can change over the course of the project life, any shortages/overages from the projected use on a yearly basis will likely be resolved when usage is quantified at the end of the project life. The District closely monitors and analyzes annual usage for each project over their respective project lives to ensure that the projects are achieving their expected overall usage and associated emission reductions. Annual usage reports are distributed to Grantees and received from Grantees on a daily basis throughout the year. Because of the variability in the number of annual reports distributed and received during the reporting period, the number of reports distributed and received will differ. For Example, a number of annual reports distributed towards the end of the 2016 reporting period were not received back by the District by the cut-off date for this report. These annual reports will be accounted for in the 2017 Annual Demonstration Report. To date, the overall annual usage associated with the project categories included in this report are performing as expected, meeting approximately 90% of their claimed annual usage. The District will continue to monitor annual usage and make any adjustments to claimed emission reductions in the future, as necessary.

A. Monitoring and Enforcement Activities Related to Projects included on the TSD Project List

Beginning in 2015, the District is conducting audits of specific projects included on the TSD Project List, including on-site inspections. These audits will include a random sample of 5% of the projects on the TSD List. Summaries of the audit results will be reported in future Annual Demonstration Report. Projects selected for auditing are reviewed to ensure contract terms are fulfilled; emission reduction calculations are verified and project information is confirmed against the District database for accuracy. An inspection is conducted for each project to verify that the equipment, vehicle or

practice is still owned (or in practice) by the Grantee and operational in the same piece of equipment and/or intended use as was contracted. Inspections also verify engine/equipment serial numbers, operational condition and verification of functioning odometer, hour meter/usage device, fuel receipts, or electronic monitoring unit. If deficiencies are discovered as part of an incentive project audit, the District utilizes several remedies, including:

Deficiency: Underreporting usage on one or more annual report

Potential Remedies: Extending project implementation phase
Analyzing average usage over project implementation phase
Demanding return of funds from Grantee

Deficiency: Non-submittal of annual reports

Potential Remedies: Demanding return of funds from Grantee
Excluding Grantee from future incentive programs

Deficiency: Grantee no longer owns equipment

Potential Remedies: Assign contract to new equipment owner
Demanding return of funds from Grantee

2016-2017 FY TSD Specific Audit Findings

During the course of the TSD Project List audits, the projects listed in table 10 below were identified as non-performing due to no longer owning the equipment due to repossession. Do to this non-performance, the associated emission reductions, originally reported in the 2013 Annual Demonstration Report, have not been realized or cannot be verified. Therefore, they are being removed from the Annual Demonstration Report.

Table 12: Non-Performing Projects

Project Number	Unit #	Applicable Guideline	Component Option	Project Life (years)	Implementation Year	NOx tons/day	PM tons/day
P-0463-A	11	Prop 1B 2008	Vehicle Replacement	5	2011	0.001	0.0001
P-0463-A	13	Prop 1B 2008	Vehicle Replacement	5	2011	0.001	0.0001
P-0610-A	11	Prop 1B 2008	Vehicle Replacement	5	2011	0.003	0.0001
P-0610-A	14	Prop 1B 2008	Vehicle Replacement	5	2011	0.002	0.0001
P-0610-A	31	Prop 1B 2008	Vehicle Replacement	5	2011	0.003	0.0001
P-0610-A	37	Prop 1B 2008	Vehicle Replacement	5	2011	0.002	0.0001
P-0610-A	40	Prop 1B 2008	Vehicle Replacement	5	2011	0.002	0.0001

P-0610-A	49	Prop 1B 2008	Vehicle Replacement	5	2011	0.003	0.0001
P-0610-A	53	Prop 1B 2008	Vehicle Replacement	5	2011	0.003	0.0001
P-0610-A	67	Prop 1B 2008	Vehicle Replacement	5	2011	0.003	0.0001
P-0314-A	1	Prop 1B 2008	Vehicle Replacement	5	2011	0.004	0.0001
C-14254-A	1	Prop 1B 2010	Vehicle Replacement	5	2012	0.001	0.0000
C-14326-A	1	Prop 1B 2010	Vehicle Replacement	5	2012	0.003	0.0001
C-14326-A	2	Prop 1B 2010	Vehicle Replacement	5	2012	0.001	0.0001
C-14348-A	5	Prop 1B 2010	Vehicle Replacement	5	2012	0.001	0.0001
C-14348-A	10	Prop 1B 2010	Vehicle Replacement	5	2012	0.001	0.0000

The projects listed in Table 13 below will replace the non-performing projects so that the equivalent emissions reductions are realized. These projects have been verified to be in compliance with their contractual agreements, have achieved the associated reductions for 2015, and were originally reported in the 2015 Annual Demonstration Report.

Table 13: Replacement Projects for Non-Performing Projects

Project Number	Unit #	Applicable Guideline	Component Option	Project Life (years)	Implementation Year	NOx tons/day	PM tons/day
C-22719-A	1	Carl Moyer 2011	Vehicle Replacement	10	2014	0.0043	0.0002
C-23202-A	1	Carl Moyer 2011	Vehicle Replacement	10	2014	0.0052	0.0002
C-23473-A	1	Carl Moyer 2011	Vehicle Replacement	10	2014	0.0044	0.0002
C-23474-A	1	Carl Moyer 2011	Vehicle Replacement	10	2014	0.0069	0.0003
C-24148-A	1	Carl Moyer 2011	Vehicle Replacement	10	2014	0.0022	0.0001
C-24243-A	1	Carl Moyer 2011	Vehicle Replacement	10	2014	0.0024	0.0002
C-24562-A	1	Carl Moyer 2011	Vehicle Replacement	10	2014	0.0012	0.0001
C-23642-A	1	Carl Moyer 2011	Vehicle Replacement	10	2014	0.0071	0.0003

B. Carl Moyer Program Specific Monitoring and Enforcement Activities

Project specific audits are conducted in addition to the monitoring and enforcement activities mentioned above. The project specific audits are conducted between November and December each calendar year and cover all Carl Moyer Program projects that have been implemented and are at least one year into their contracted project life but have not concluded their contracted project life. Projects selected for audit review consist of a 5% random sample of active projects or 30 projects (whichever is less) and all projects that are at least 6 months past due with their most recent annual usage survey. These audits follow procedures set forth in the Carl Moyer Program Guidelines. Projects selected for auditing are reviewed to ensure contract terms are fulfilled; emission reduction calculations are verified and project information is confirmed against the District database for accuracy. An inspection is conducted for each project to verify that the equipment, vehicle or practice is still owned (or in practice) by the Grantee and operational in the same piece of equipment and/or intended use as was contracted. Inspections also verify

engine/equipment serial numbers, operational condition and verification of functioning odometer, hour meter/usage device, fuel receipts, or electronic monitoring unit.

If deficiencies are discovered as part of an incentive project audit, the District utilizes remedies identified in section IV(A) above

2013 – 2016 Calendar Year Carl Moyer Project Specific Audit:

The following table shows audited projects that were determined to be in violation of their contractual terms and the enforcement actions that were taken by the District. For the current 2017 report, there are no new projects to report.

Table 14: Carl Moyer Program Projects with Contractual Violations

Project Number	Annual Demonstration Report Year	Contractual Violation	Action Taken
C-2326	2013	Did not meet minimum usage requirements	Extended contract term 1 additional year
<i>N/A</i>	2014	<i>No projects to report</i>	
<i>N/A</i>	2015	<i>No projects to report</i>	
<i>N/A</i>	2016	<i>No projects to report</i>	
<i>N/A</i>	2017	<i>No projects to report</i>	

C. Proposition 1B Program Monitoring and Enforcement Activities

In January 2007, Governor Schwarzenegger signed Executive Order S-02-07 which highlighted the importance of transparency and accountability in administering over \$40 billion in bond funding approved by California voters in 2006. The Executive Order directs all State government entities responsible for expending bond proceeds to establish and document a three part accountability structure. In 2008 Department of Finance (DOF) approved the accountability plan that ARB developed for the Proposition 1B Program which includes:

- Front-end accountability, which defines the criteria for expending bond funds as well as the outcomes that the funds are intended to achieve.
- In-progress accountability, which documents actions to ensure projects are staying within scope and cost, and requires semi-annual reports to the Department of Finance.
- Follow up accountability, which requires Program review or fiscal audits to ensure expenditures achieved the intended outcomes and were consistent with legal requirements.

The District evaluates Proposition 1B equipment projects on an ongoing basis through desk reviews of reports and equipment project updates provided by equipment owners,

review of electronic monitoring unit data (as applicable), site inspections, equipment inspections, review of equipment maintenance and activity logs, and other measures deemed appropriate. In addition, equipment project contracts require that equipment owners permit the District, ARB, DOF, the Bureau of State Audits, or any authorize designees, access during normal business hours, to conduct ongoing evaluations for the purpose of monitoring the program. The following table shows audited projects that were determined to be in violation of their contractual terms and the enforcement actions that were taken by the District. For the current 2016 report, there are no new projects to report.

Table 15: Proposition 1B Program Projects with Contractual Violations

Project Number	Annual Demonstration Report Year	Contractual Violation	Action Taken
P-0346	2013	Did not purchase eligible equipment as stated in contract	District took legal action, received judgment by court for amount funded
N/A	2014	<i>No projects to report</i>	
N/A	2015	<i>No projects to report</i>	
P-0368-A	2016	<i>Units 18-20, 24. Equipment was no longer owned by applicant due to re-possession</i>	Projects were closed and associated reductions were removed from the cumulative totals in this report
P-0314-A	2013	<i>Unit 1 Annual Usage reports incomplete and/or missing. Unable to reach applicant, certified mail returned undeliverable.</i>	Sent to Legal for review and possible further action, associated reductions were removed from the cumulative totals in this report
P-0463-A	2013	<i>Units 11 & 13 Annual Usage reports incomplete and/or missing. Unable to reach applicant, certified mail returned undeliverable</i>	Sent to Legal for review and possible further action, associated reductions were removed from the cumulative totals in this report
C-14326-A	2013	<i>Units 1-2 Annual Usage reports incomplete and/or missing. Unable to reach applicant, certified mail returned undeliverable</i>	Sent to Legal for review and possible further action, associated reductions were removed from the cumulative totals in this report
P-0610-A	2013	<i>Units 11, 14, 31, 37, 40, 49, 53, & 67 Equipment was no longer owned by applicant due to re-possession</i>	Sent to Legal for review and possible further action, associated reductions were removed from the cumulative totals in this report

C-14254-A	2013	<i>Unit 1 Equipment was no longer owned by applicant due to re-possession</i>	Sent to Legal for review and possible further action, associated reductions were removed from the cumulative totals in this report
C-14348-A	2013	<i>Units 5 & 10, No annual usage reports received, Unable to locate applicant or associated business.</i>	Sent to Legal for review and possible further action, associated reductions were removed from the cumulative totals in this report

D. Combustion Systems Improvement of Mobile Engines Program Monitoring and Enforcement Activities

The USDA NRCS webpage at

http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ca/programs/financial/eqip/?cid=nrcs144p2_063958 summarizes program eligibility. The guidelines state the following: The

Grantee has control of the land for the length of the proposed contract through deed, lease, or other written authorization. If the Grantee does not own the land, the landowner must give written consent to install, operate, and maintain the practice through the lifespan of the practice. Engine improvements are covered under Conservation Practice Standard 372 – Combustion System Improvement, posted on-line in the NRCS Field Office Technical Guide (FOTG) at:

<http://efotg.sc.egov.usda.gov/references/public/CA/372-std-09-2010.pdf>. The CPS 372 practice life is 10 years as described on the FOTG spreadsheet at:

http://efotg.sc.egov.usda.gov/references/public/CA/List_of_Practices_Lifespans_2013-11_CA_Alpha.xlsx. NRCS incentive program contracts state that if the tractor is not retained for 10-years then the Grantee will owe a pro-rated amount back to the NRCS.

With regards to the identification of project audits, usage reports, inspections, and other project monitoring activities including enforcement actions as required to Section 4.6 of Rule 9610, the Combustion Systems Improvement of Mobile Engines incentive program is unique from other incentive programs in that NRCS is explicitly prohibited from identifying grantees by name.

Under section 1619 of the Food Conservation, and Energy Act of 2008, Congress has prohibited the Secretary of the USDA and any officer or employee of the USDA from disclosing “information provided by an agricultural producer or owner of agricultural land concerning the agricultural operation, farming or conservation practices, or the land itself, in order to participate in” a USDA program. 7 U.S.C. 8791. Any contractor or cooperator of the USDA is similarly prohibited from disclosing such information. There are several exceptions to this prohibition, including that USDA may disclose information if it is transformed into a statistical or aggregate form without naming any individual owner, operator or producer or a specific data gathering site.

Taking these statutory prohibitions into account, in March 2014, NRCS, EPA, ARB, and the District signed the “Addendum to the December 2010 Statement of Principles Regarding the Approach to State Implementation Plan Creditability of Agricultural Equipment Replacement Incentive Programs Implemented by the USDA Natural Resources Conservation Service and the San Joaquin Valley Air Pollution Control District” (2014 Addendum). The purpose of the 2014 Addendum is to identify information and documentation that NRCS will, consistent with its statutory responsibilities under 7 U.S.C. 8791, make publicly available to ensure that EPA and the District can carry out respective implementation responsibilities under the CAA and Rule 9610. Among other things, the 2014 Addendum states that NRCS will provide EPA and the District with an annual report that includes information regarding emission reductions achieved by individual EQIP projects and that will be certified by the NRCS California State Conservationist by March 31 of each year. Any information provided to the public specific to NRCS grant programs shall be in accordance with the 2014 Addendum.

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Table 16: Canceled NRCS Projects Previously Reported

Project Number	Annual Demonstration Report Year	Status	Related Emissions Reductions (total tons/year)
70	2013	Sold	1.49
97	2013	Sold	1.78
128	2013	Sold	1.56
165	2013	Sold	2.91
169	2013	Sold	1.82
229	2013	Sold	1.25
255	2013	Sold	1.65
257	2013	Sold	1.65
296	2013	Cancelled	1.34
302	2013	Sold	1.35
342	2013	Sold	2.03
365	2013	Sold	1.19
429	2013	Sold	2.13
479	2013	Sold	2.40
506	2013	Sold	0.95
517	2013	Sold	2.35
519	2013	Sold	1.12
577	2013	Destroyed	0.70
674	2013	Sold	2.28
676	2013	Unknown	1.86
723	2013	Sold	1.18
730	2013	Sold	1.69
870	2013	Sold	1.19
981	2014	Sold	2.44
993	2014	Sold	1.58

V. INCENTIVE PROGRAM EVALUATION

The District's incentive programs have been developed around several core principles, including cost-effectiveness, integrity, effective program administration, excellent customer service, the efficient use of District resources, fiscal transparency and public accountability. As a result of these focused efforts, the District has become a statewide leader in incentive programs with several elements of these programs being held as models for other air districts' incentive programs throughout California. In fact, the ARB routinely calls upon the District to administer statewide incentive programs on their behalf and on behalf of other local air districts. Recent examples include administering the Lower Emission School Bus Program on behalf of ARB and 18 other air districts, the statewide School Bus Retrofit Program and administering the Carl Moyer Program on behalf of two other air districts.

The District is regularly audited by independent outside agencies including professional accountancy corporations on behalf of the federal government, ARB, the California DOF and the California Bureau of State Audits.²⁰ These comprehensive and rigorous independent audits focus on every aspect of our incentive programs including District programmatic and fiscal controls. These audits are conducted to ensure that the public funds to which the District has been entrusted are spent appropriately and in the manner in which they were intended. The District welcomes these opportunities to gain valuable feedback regarding implementation of these critical programs. Periodic evaluations such as these are important tools that the District uses to ensure continuous improvement in operation of these core emission reduction strategies. Towards that end, the District's incentive programs were audited by ARB and DOF in 2011, including a thorough review of several of the District's largest and most complex incentive programs totaling more than \$215 million over a four year period. The audits focused on the District's implementation of the following programs:

- Carl Moyer Memorial Air Quality Standards Attainment Program,
- Air Quality Improvement Program,
- Proposition 1B: Goods Movement Emission Reduction Program,
- Proposition 1B: Lower Emission School Bus Program, and
- Federal Diesel Emission Reductions Act School Bus Program

These audits included an extensive desk review of specific projects, a thorough review of District internal programmatic and fiscal policies and procedures, and field validation of projects to ensure that the expected emission reductions were being achieved in practice. Overall, the results of the audits confirmed that the District's incentive programs are fiscally sound and are "efficiently and effectively achieving their emission reduction objectives." ARB's audit report concluded that the District is meeting or exceeding all requirements for the expenditure of funds and commended the District for administering the Proposition 1B Lower Emission School Bus Program on behalf of 18 other local air districts. However, the District is continually identifying opportunities to refine its incentive programs and improve the operational efficiency and effectiveness.

²⁰ The most recent audits of District administered incentive programs can be found online at http://www.arb.ca.gov/msprog/moyer/audits/2011/san_joaquin_valley.htm

VI. SUMMARY OF EMISSION REDUCTIONS AND COST EFFECTIVENESS

The SIP-creditable incentive-based emission reductions represented in this Annual Demonstration Report are from incentive projects implemented 05/21/2016 through 5/21/2017. The data also includes 75 District projects that were implemented during the timeframe covered under the 2016 report and 155 NRCS Projects that were implemented during the timeframe covered under the 2013 – 2016 reports but were not included in that data set. The data represented in these tables will continue to be updated through each annual demonstration report as more projects are implemented each year. Although the purpose of District Rule 9610 is to claim SIP credit for incentive-based emission reductions in the Valley through incentive programs administered by the District, NRCS, or ARB, this Annual Demonstration Report only claims SIP credit for those programs administered by the District and NRCS. Future annual demonstration reports may include programs administered by ARB. For the detailed data used to create the following summary tables, refer to the associated Annual Demonstration Report Data Sheet, available electronically with this annual demonstration report.

Program Summaries

The following table summarizes the total SIP-creditable incentive-based emission reductions generated through incentive programs, expressed in tons per year and tons per day, claimed in this Annual Demonstration Report. This summary includes SIP-creditable incentive-based emission reductions claimed through incentive program guidelines identified in Sections 3.1 and 3.2 of Rule 9610.

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Table 17: Total SIP-Creditable Incentive-Based Emission Reductions Generated Through Incentive Programs

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	1098.99	35.78	116.17	3.01	0.10	0.32
2010	4.31	0.15	0.52	0.01	0.00	0.00	2655.71	82.02	237.29	7.28	0.22	0.65
2011	4.29	0.16	0.56	0.01	0.00	0.00	4112.25	141.11	364.96	11.27	0.39	1.00
2012	8.07	0.32	1.10	0.02	0.00	0.00	5803.80	210.33	477.41	15.90	0.58	1.31
2013	8.71	0.36	1.21	0.02	0.00	0.00	6695.21	248.03	571.71	18.34	0.68	1.57
2014	9.33	0.39	1.31	0.03	0.00	0.00	6485.17	243.20	563.11	17.77	0.67	1.54
2015	41.38	1.98	5.64	0.11	0.01	0.02	6519.79	252.21	619.82	17.86	0.69	1.70
2016	405.82	17.88	42.31	1.11	0.05	0.12	6375.76	248.19	660.50	17.47	0.68	1.81
2017	437.42	19.13	45.82	1.20	0.05	0.13	5511.14	215.23	657.13	15.10	0.59	1.80
2018	437.42	19.13	45.82	1.20	0.05	0.13	5346.61	208.38	650.09	14.65	0.57	1.78
2019	437.42	19.13	45.82	1.20	0.05	0.13	4620.79	191.69	582.53	12.66	0.53	1.60
2020	433.11	18.98	45.30	1.19	0.05	0.12	3692.05	163.27	484.50	10.12	0.45	1.33
2021	386.61	18.98	45.26	1.06	0.05	0.12	2884.92	131.10	375.99	7.90	0.36	1.03
2022	378.01	18.75	44.67	1.04	0.05	0.12	2223.95	101.17	282.32	6.09	0.28	0.77
2023	377.37	18.71	44.56	1.03	0.05	0.12	1622.00	74.45	202.86	4.44	0.20	0.56
2024	376.75	18.67	44.46	1.03	0.05	0.12	1041.71	48.13	126.22	2.85	0.13	0.35
2025	344.70	17.08	40.13	0.94	0.05	0.11	436.22	21.20	51.63	1.20	0.06	0.14
2026	36.06	1.41	3.67	0.10	0.00	0.01	127.58	5.53	15.17	0.35	0.02	0.04

Tables 18 and 19 below are the subsets of the summary provided in Table 17. Table 18 identifies emission reductions claimed through incentive program guidelines pursuant to Section 3.1 of Rule 9610. Table 19 identifies emission reductions claimed through incentive program guidelines pursuant to Section 3.2 of Rule 9610.

Table 18: Emission Reductions Claimed through use of Incentive Program Guidelines Pursuant to Section 3.1

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	1098.99	35.78	116.17	3.01	0.10	0.32
2010	4.31	0.15	0.52	0.01	0.00	0.00	2655.71	82.02	237.29	7.28	0.22	0.65
2011	4.29	0.16	0.56	0.01	0.00	0.00	4112.25	141.11	364.96	11.27	0.39	1.00
2012	8.07	0.32	1.10	0.02	0.00	0.00	5803.80	210.33	477.41	15.90	0.58	1.31
2013	8.71	0.36	1.21	0.02	0.00	0.00	6695.21	248.03	571.71	18.34	0.68	1.57
2014	9.33	0.39	1.31	0.03	0.00	0.00	6485.17	243.20	563.11	17.77	0.67	1.54
2015	41.38	1.98	5.64	0.11	0.01	0.02	6519.79	252.21	619.82	17.86	0.69	1.70
2016	405.82	17.88	42.31	1.11	0.05	0.12	6375.76	248.19	660.50	17.47	0.68	1.81
2017	437.42	19.13	45.82	1.20	0.05	0.13	5511.14	215.23	657.13	15.10	0.59	1.80
2018	437.42	19.13	45.82	1.20	0.05	0.13	5346.61	208.38	650.09	14.65	0.57	1.78
2019	437.42	19.13	45.82	1.20	0.05	0.13	4620.79	191.69	582.53	12.66	0.53	1.60
2020	433.11	18.98	45.30	1.19	0.05	0.12	3692.05	163.27	484.50	10.12	0.45	1.33
2021	386.61	18.98	45.26	1.06	0.05	0.12	2884.92	131.10	375.99	7.90	0.36	1.03
2022	378.01	18.75	44.67	1.04	0.05	0.12	2223.95	101.17	282.32	6.09	0.28	0.77
2023	377.37	18.71	44.56	1.03	0.05	0.12	1622.00	74.45	202.86	4.44	0.20	0.56
2024	376.75	18.67	44.46	1.03	0.05	0.12	1041.71	48.13	126.22	2.85	0.13	0.35
2025	344.70	17.08	40.13	0.94	0.05	0.11	436.22	21.20	51.63	1.20	0.06	0.14
2026	36.06	1.41	3.67	0.10	0.00	0.01	127.58	5.53	15.17	0.35	0.02	0.04

Table 19: Emission Reductions Claimed through use of Incentive Program Guidelines Pursuant to Section 3.2.1

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	-	-	-	-	-	-	16.71	0.56	1.60	0.05	0.00	0.00
2010	-	-	-	-	-	-	16.71	0.56	1.60	0.05	0.00	0.00
2011	-	-	-	-	-	-	22.36	0.90	1.95	0.06	0.00	0.01
2012	-	-	-	-	-	-	82.80	3.91	8.28	0.23	0.01	0.02
2013	-	-	-	-	-	-	87.93	4.04	8.47	0.24	0.01	0.02
2014	-	-	-	-	-	-	87.98	4.05	8.47	0.24	0.01	0.02
2015	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2016	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2017	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2018	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2019	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2020	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2021	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2022	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2023	-	-	-	-	-	-	102.03	4.37	9.32	0.28	0.01	0.03
2024	-	-	-	-	-	-	85.27	3.81	7.71	0.23	0.01	0.02
2025	-	-	-	-	-	-	14.08	0.33	0.85	0.04	0.00	0.00

1. Locomotive projects are contracted with a 20 year project life and Forklifts are contracted with a 10 year project life

Cost Effectiveness

The table below is a summary of the overall cost effectiveness (expressed as dollars per ton of emissions reduced), including incentive contributions, and total lifetime emission reductions, for District-administered incentive programs claimed in this annual demonstration report that utilized the Carl Moyer and Proposition 1B incentive program guidelines as identified in Sections 3.1 and 3.2 of Rule 9610. Because each incentive program guideline calculates cost effectiveness differently, the cost-effectiveness represented in Table 20 was calculated by first determining the cost effectiveness for each individual project and then averaging that number for all projects accounted for.

Table 20: Summary of District-Administered Incentive Programs

Project Type	Incentive Contribution Provided	Grantee Investment	Total Emissions Reductions (Lifetime tons)	Cost Effectiveness (\$/tons)
Off-Road Mobile Equipment Replacement/Repower/Retrofit ¹	\$20,812,622.54	\$30,877,928.34	2778.165	\$7,491.50
Agricultural Pump Repower ¹	\$541,084.31	\$515,107.82	91.31	\$5,925.79
New Electric Agricultural Pump ¹	\$227,136.45	\$1,003,945.53	29.87	\$7,604.17
Trucks Replacement ¹	\$3,605,232.88	\$4,728,886.65	344.334	\$10,470.16
Locomotives Repower ²	\$0.00	\$0.00	0.00	\$0.00
New Off-Road Mobile Equipment ^{2,3}	\$0.00	\$0.00	0.00	\$0.00

1. SIP-creditable incentive-based emission reductions claimed through incentive program guidelines identified in Section 3.1 of Rule 9610.

2. SIP-creditable incentive-based emission reductions claimed through incentive program guidelines identified in Section 3.2 of Rule 9610.

3. New Off-Road Mobile Equipment is specific to the new purchase of electric large spark ignition (LSI) forklifts.

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Carl Moyer Incentive Program Guidelines

The following set of tables summarizes the emission reductions claimed in the SIP under Rule 9610 for incentive programs administered by the District using the Carl Moyer Incentive Program Guidelines. Table 21 summarizes the total SIP-creditable incentive-based emission reductions claimed under Sections 3.1 and 3.2 of Rule 9610. Tables 22 through 25 summarize the emission reductions claimed in the SIP from incentive program guidelines identified in Section 3.1 of Rule 9610, while Table 26 summarizes emission reductions claimed in the SIP for locomotive alternative technology switcher projects and new electric forklift purchases, pursuant to Section 3.2 of the rule.

Table 21: Total Claimed SIP-Creditable Incentive-Based Emission Reductions Using the Carl Moyer Guidelines Pursuant to Section 3.1 and Section 3.2

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	865.21	22.52	96.41	2.37	0.06	0.26
2010	0.00	0.00	0.00	0.00	0.00	0.00	1179.70	31.19	124.29	3.23	0.09	0.34
2011	0.00	0.00	0.00	0.00	0.00	0.00	1568.04	46.24	170.21	4.30	0.13	0.47
2012	0.00	0.00	0.00	0.00	0.00	0.00	2105.25	69.28	236.50	5.77	0.19	0.65
2013	0.00	0.00	0.00	0.00	0.00	0.00	2626.55	90.80	295.16	7.20	0.25	0.81
2014	0.00	0.00	0.00	0.00	0.00	0.00	1971.03	81.41	258.71	5.40	0.22	0.71
2015	0.00	0.00	0.00	0.00	0.00	0.00	2119.97	90.28	281.55	5.81	0.25	0.77
2016	231.84	9.60	24.83	0.64	0.03	0.07	2325.05	100.34	307.02	6.37	0.27	0.84
2017	259.26	10.74	28.05	0.71	0.03	0.08	2272.38	97.94	303.38	6.23	0.27	0.83
2018	259.26	10.74	28.05	0.71	0.03	0.08	2218.91	95.61	296.34	6.08	0.26	0.81
2019	259.26	10.74	28.05	0.71	0.03	0.08	1969.62	87.59	248.53	5.40	0.24	0.68
2020	259.26	10.74	28.05	0.71	0.03	0.08	1907.28	84.87	243.75	5.23	0.23	0.67
2021	259.26	10.74	28.05	0.71	0.03	0.08	1712.71	76.33	216.98	4.69	0.21	0.59
2022	256.16	10.67	28.00	0.70	0.03	0.08	1393.85	60.90	169.47	3.82	0.17	0.46
2023	256.16	10.67	28.00	0.70	0.03	0.08	1051.65	45.79	125.65	2.88	0.13	0.34
2024	256.16	10.67	28.00	0.70	0.03	0.08	672.19	28.73	76.87	1.84	0.08	0.21
2025	256.16	10.67	28.00	0.70	0.03	0.08	323.11	13.60	36.14	0.89	0.04	0.10
2026	33.60	1.30	3.39	0.09	0.00	0.01	33.60	1.30	3.39	0.09	0.00	0.01

Table 22: SIP-Creditable Incentive-Based Emission Reductions for Off-Road Compression-Ignition Equipment Replacement Claimed Pursuant to Section 3.1

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	0.00	0.00	0.00	0.00	0.00	0.00	170.33	7.73	25.47	0.47	0.02	0.07
2012	0.00	0.00	0.00	0.00	0.00	0.00	469.96	22.81	72.08	1.29	0.06	0.20
2013	0.00	0.00	0.00	0.00	0.00	0.00	778.93	37.26	113.80	2.13	0.10	0.31
2014	0.00	0.00	0.00	0.00	0.00	0.00	1045.82	50.83	152.58	2.87	0.14	0.42
2015	0.00	0.00	0.00	0.00	0.00	0.00	1268.58	60.89	181.90	3.48	0.17	0.50
2016	212.45	9.00	23.13	0.58	0.02	0.06	1532.03	72.41	212.08	4.20	0.20	0.58
2017	242.31	10.19	26.29	0.66	0.03	0.07	1561.89	73.60	215.25	4.28	0.20	0.59
2018	242.31	10.19	26.29	0.66	0.03	0.07	1561.89	73.60	215.25	4.28	0.20	0.59
2019	242.31	10.19	26.29	0.66	0.03	0.07	1559.94	73.58	215.11	4.27	0.20	0.59
2020	242.31	10.19	26.29	0.66	0.03	0.07	1556.03	73.51	214.89	4.26	0.20	0.59
2021	242.31	10.19	26.29	0.66	0.03	0.07	1385.70	65.78	189.42	3.80	0.18	0.52
2022	239.21	10.12	26.24	0.66	0.03	0.07	1082.97	50.63	142.76	2.97	0.14	0.39
2023	239.21	10.12	26.24	0.66	0.03	0.07	774.06	36.21	101.18	2.12	0.10	0.28
2024	239.21	10.12	26.24	0.66	0.03	0.07	509.07	22.64	62.40	1.39	0.06	0.17
2025	239.21	10.12	26.24	0.66	0.03	0.07	290.21	12.64	33.30	0.80	0.03	0.09
2026	29.86	1.19	3.16	0.08	0.00	0.01	29.86	1.19	3.16	0.08	0.00	0.01

Table 23: SIP-Creditable Incentive-Based Emission Reductions for Off-Road Compression-Ignition Equipment Repower and Retrofit Claimed Pursuant to Section 3.1

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	57.54	1.57	6.30	0.16	0.00	0.02
2010	0.00	0.00	0.00	0.00	0.00	0.00	108.86	4.12	12.41	0.30	0.01	0.03
2011	0.00	0.00	0.00	0.00	0.00	0.00	158.88	6.38	19.36	0.44	0.02	0.05
2012	0.00	0.00	0.00	0.00	0.00	0.00	209.04	8.05	25.51	0.57	0.02	0.07
2013	0.00	0.00	0.00	0.00	0.00	0.00	227.46	8.77	27.87	0.62	0.02	0.08
2014	0.00	0.00	0.00	0.00	0.00	0.00	252.91	9.69	31.24	0.69	0.03	0.09
2015	0.00	0.00	0.00	0.00	0.00	0.00	265.86	10.10	32.82	0.73	0.03	0.09
2016	5.62	0.22	0.67	0.02	0.00	0.00	223.23	9.13	28.24	0.61	0.03	0.08
2017	7.07	0.23	0.77	0.02	0.00	0.00	177.10	6.82	22.69	0.49	0.02	0.06
2018	7.07	0.23	0.77	0.02	0.00	0.00	127.08	4.56	15.74	0.35	0.01	0.04
2019	7.07	0.23	0.77	0.02	0.00	0.00	77.29	2.88	9.57	0.21	0.01	0.03
2020	7.07	0.23	0.77	0.02	0.00	0.00	60.76	2.20	7.53	0.17	0.01	0.02
2021	7.07	0.23	0.77	0.02	0.00	0.00	60.76	2.20	7.53	0.17	0.01	0.02
2022	7.07	0.23	0.77	0.02	0.00	0.00	60.35	2.20	7.53	0.17	0.01	0.02
2023	7.07	0.23	0.77	0.02	0.00	0.00	57.62	2.10	7.15	0.16	0.01	0.02
2024	7.07	0.23	0.77	0.02	0.00	0.00	24.71	0.89	2.95	0.07	0.00	0.01
2025	7.07	0.23	0.77	0.02	0.00	0.00	8.86	0.31	0.98	0.02	0.00	0.00
2026	1.45	0.01	0.11	0.00	0.00	0.00	1.45	0.01	0.11	0.00	0.00	0.00

Table 24: SIP-Creditable Incentive-Based Emission Reductions for Repower of Agricultural Pumps Engines Claimed Pursuant to Section 3.1

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	790.60	20.38	88.49	2.17	0.06	0.24
2010	0.00	0.00	0.00	0.00	0.00	0.00	1036.20	25.64	109.36	2.84	0.07	0.30
2011	0.00	0.00	0.00	0.00	0.00	0.00	1190.57	30.22	122.05	3.26	0.08	0.33
2012	0.00	0.00	0.00	0.00	0.00	0.00	1307.24	33.46	128.73	3.58	0.09	0.35
2013	0.00	0.00	0.00	0.00	0.00	0.00	1489.44	39.63	142.78	4.08	0.11	0.39
2014	0.00	0.00	0.00	0.00	0.00	0.00	530.19	15.52	63.33	1.45	0.04	0.17
2015	0.00	0.00	0.00	0.00	0.00	0.00	413.29	13.41	53.43	1.13	0.04	0.15
2016	11.35	0.32	0.53	0.03	0.00	0.00	395.04	12.86	52.77	1.08	0.04	0.14
2017	7.46	0.25	0.49	0.02	0.00	0.00	358.65	11.58	51.52	0.98	0.03	0.14
2018	7.46	0.25	0.49	0.02	0.00	0.00	355.19	11.50	51.43	0.97	0.03	0.14
2019	7.46	0.25	0.49	0.02	0.00	0.00	157.99	5.20	9.95	0.43	0.01	0.03
2020	7.46	0.25	0.49	0.02	0.00	0.00	133.66	4.07	8.34	0.37	0.01	0.02
2021	7.46	0.25	0.49	0.02	0.00	0.00	117.39	3.41	7.50	0.32	0.01	0.02
2022	7.46	0.25	0.49	0.02	0.00	0.00	112.00	3.18	7.16	0.31	0.01	0.02
2023	7.46	0.25	0.49	0.02	0.00	0.00	88.09	2.64	5.65	0.24	0.01	0.02
2024	7.46	0.25	0.49	0.02	0.00	0.00	34.62	1.15	2.30	0.09	0.00	0.01
2025	7.46	0.25	0.49	0.02	0.00	0.00	8.78	0.30	0.56	0.02	0.00	0.00
2026	2.29	0.10	0.12	0.01	0.00	0.00	2.29	0.10	0.12	0.01	0.00	0.00

Table 25: SIP-Creditable Incentive-Based Emission Reductions for Purchase of New Electric Agricultural Pump Motors Claimed Pursuant to Section 3.1

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	0.00	0.00	0.00	0.00	0.00	0.00	17.57	0.85	0.91	0.05	0.00	0.00
2011	0.00	0.00	0.00	0.00	0.00	0.00	25.54	0.99	1.37	0.07	0.00	0.00
2012	0.00	0.00	0.00	0.00	0.00	0.00	35.86	1.04	1.88	0.10	0.00	0.01
2013	0.00	0.00	0.00	0.00	0.00	0.00	42.45	1.08	2.21	0.12	0.00	0.01
2014	0.00	0.00	0.00	0.00	0.00	0.00	53.78	1.30	3.06	0.15	0.00	0.01
2015	0.00	0.00	0.00	0.00	0.00	0.00	69.80	1.47	4.05	0.19	0.00	0.01
2016	2.42	0.07	0.50	0.01	0.00	0.00	72.31	1.54	4.57	0.20	0.00	0.01
2017	2.42	0.07	0.50	0.01	0.00	0.00	72.31	1.54	4.57	0.20	0.00	0.01
2018	2.42	0.07	0.50	0.01	0.00	0.00	72.31	1.54	4.57	0.20	0.00	0.01
2019	2.42	0.07	0.50	0.01	0.00	0.00	72.31	1.54	4.57	0.20	0.00	0.01
2020	2.42	0.07	0.50	0.01	0.00	0.00	54.74	0.69	3.66	0.15	0.00	0.01
2021	2.42	0.07	0.50	0.01	0.00	0.00	46.77	0.55	3.20	0.13	0.00	0.01
2022	2.42	0.07	0.50	0.01	0.00	0.00	36.45	0.50	2.69	0.10	0.00	0.01
2023	2.42	0.07	0.50	0.01	0.00	0.00	29.86	0.46	2.36	0.08	0.00	0.01
2024	2.42	0.07	0.50	0.01	0.00	0.00	18.52	0.24	1.51	0.05	0.00	0.00
2025	2.42	0.07	0.50	0.01	0.00	0.00	2.51	0.07	0.52	0.01	0.00	0.00
2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 26: SIP-Creditable Incentive-Based Emission Reductions for Locomotives and New Electric Forklift Purchase Claimed Pursuant to Section 3.21

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	-	-	-	-	-	-	16.71	0.56	1.60	0.05	0.00	0.00
2010	-	-	-	-	-	-	16.71	0.56	1.60	0.05	0.00	0.00
2011	-	-	-	-	-	-	22.36	0.90	1.95	0.06	0.00	0.01
2012	-	-	-	-	-	-	82.80	3.91	8.28	0.23	0.01	0.02
2013	-	-	-	-	-	-	87.93	4.04	8.47	0.24	0.01	0.02
2014	-	-	-	-	-	-	87.98	4.05	8.47	0.24	0.01	0.02
2015	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2016	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2017	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2018	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2019	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2020	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2021	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2022	-	-	-	-	-	-	102.09	4.38	9.32	0.28	0.01	0.03
2023	-	-	-	-	-	-	102.03	4.37	9.32	0.28	0.01	0.03
2024	-	-	-	-	-	-	85.27	3.81	7.71	0.23	0.01	0.02
2025	-	-	-	-	-	-	14.08	0.33	0.85	0.04	0.00	0.00

1. Locomotive projects are contracted with a 20 year project life and Forklifts are contracted with a 10 year project life

Proposition 1B Incentive Program Guidelines

The following table is a summary of incentive-based emission reductions claimed in the SIP from incentive programs administered by the District using the Proposition 1B incentive program guidelines, as identified in Section 3.1 of Rule 9610.

Table 27: SIP-Creditable Incentive-Based Emission Reductions for On-Road Trucks

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	91.80	8.35	0.00	0.25	0.02	0.00
2010	0.00	0.00	0.00	0.00	0.00	0.00	668.19	20.76	0.00	1.83	0.06	0.00
2011	0.00	0.00	0.00	0.00	0.00	0.00	1170.35	41.17	0.00	3.21	0.11	0.00
2012	0.00	0.00	0.00	0.00	0.00	0.00	1986.48	72.93	0.00	5.44	0.20	0.00
2013	0.00	0.00	0.00	0.00	0.00	0.00	2095.95	77.49	0.00	5.74	0.21	0.00
2014	0.00	0.00	0.00	0.00	0.00	0.00	2351.60	72.73	0.00	6.44	0.20	0.00
2015	0.00	0.00	0.00	0.00	0.00	0.00	1968.05	61.07	0.00	5.39	0.17	0.00
2016	46.52	0.00	0.00	0.13	0.00	0.00	1508.28	39.50	0.00	4.13	0.11	0.00
2017	48.24	0.00	0.00	0.13	0.00	0.00	693.87	8.83	0.00	1.90	0.02	0.00
2018	48.24	0.00	0.00	0.13	0.00	0.00	582.81	4.31	0.00	1.60	0.01	0.00
2019	48.24	0.00	0.00	0.13	0.00	0.00	248.26	0.55	0.00	0.68	0.00	0.00
2020	48.24	0.00	0.00	0.13	0.00	0.00	48.24	0.00	0.00	0.13	0.00	0.00
2021	1.72	0.00	0.00	0.00	0.00	0.00	1.72	0.00	0.00	0.00	0.00	0.00
2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2025	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

NRCS Combustion Systems Improvement of Mobile Equipment Incentive Program Guidelines

The following table provides a summary of the SIP-creditable incentive-based emission reductions claimed in the SIP for incentive projects administered by the NRCS, as identified in Section 3.1 of Rule 9610.

Table 28: SIP-Creditable Incentive-Based Emission Reductions for Agricultural Equipment

	Current Reporting Period						Cumulative Reporting					
	Emissions Reduced (tons per year)			Emissions Reduced (tons per day)			Emissions Reduced (tons per year)			Emissions Reduced (tons per day)		
	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG	NO _x	PM	ROG
2009	0.00	0.00	0.00	0.00	0.00	0.00	141.98	4.91	19.76	0.39	0.01	0.05
2010	4.31	0.15	0.52	0.01	0.00	0.00	807.82	30.07	113.00	2.21	0.08	0.31
2011	4.29	0.16	0.56	0.01	0.00	0.00	1373.86	53.70	194.75	3.76	0.15	0.53
2012	8.07	0.32	1.10	0.02	0.00	0.00	1712.07	68.12	240.91	4.69	0.19	0.66
2013	8.71	0.36	1.21	0.02	0.00	0.00	1972.71	79.74	276.55	5.40	0.22	0.76
2014	9.33	0.39	1.31	0.03	0.00	0.00	2174.84	89.06	304.40	5.96	0.24	0.83
2015	41.38	1.98	5.64	0.11	0.01	0.02	2431.24	100.85	338.27	6.66	0.28	0.93
2016	127.46	8.28	17.48	0.35	0.02	0.05	2541.89	108.35	353.47	6.96	0.30	0.97
2017	129.92	8.39	17.77	0.36	0.02	0.05	2544.35	108.46	353.76	6.97	0.30	0.97
2018	129.92	8.39	17.77	0.36	0.02	0.05	2544.35	108.46	353.76	6.97	0.30	0.97
2019	129.92	8.39	17.77	0.36	0.02	0.05	2402.37	103.55	334.00	6.58	0.28	0.92
2020	125.61	8.39	17.25	0.34	0.02	0.05	1736.53	78.39	240.75	4.76	0.21	0.66
2021	125.63	8.39	17.21	0.34	0.02	0.05	1170.49	54.76	159.01	3.21	0.15	0.44
2022	121.86	8.39	16.67	0.33	0.02	0.05	830.10	40.27	112.85	2.27	0.11	0.31
2023	121.22	8.39	16.56	0.33	0.02	0.05	570.34	28.66	77.21	1.56	0.08	0.21
2024	120.60	8.39	16.46	0.33	0.02	0.05	369.51	19.39	49.36	1.01	0.05	0.14
2025	88.54	8.39	12.13	0.24	0.02	0.03	113.11	7.60	15.49	0.31	0.02	0.04
2026	2.46	8.39	0.29	0.01	0.02	0.00	2.46	0.11	0.29	0.01	0.00	0.00

Case-By-Case Determinations

The following table provides a summary of the SIP-creditable incentive-based emission reductions for incentive projects that have been approved through a case-by-case process as identified in section 3.2.2 of Rule 9610. ARB may approve such projects project or other program element if this approval would not adversely impact achievement of real, surplus, quantifiable, enforceable, and cost-effective emission reductions, would not significantly reduce program transparency, and is not prohibited by statute.

These case-by-case decisions are based on CMP Guidelines and supplementary guidance (including emails and mail-outs) in effect on the date of the decision. Detailed information on case-by-case determinations can be reviewed at http://www.arb.ca.gov/msprog/moyer/case_by_case/case_by_case.htm

Table 29: Summary of Case-By-Case Determinations

Project Number	ARB Reference ID	ARB Moyer CBC Determination Category	9610 Annual Demonstration Report Year	Reason for CBC	Emissions Reductions NOx (Annual tons)	Emissions Reductions PM (Annual tons)
C-7478-A	2011-35	Off-Road Engines and Equipment	2013	New engine horsepower greater than 125% of the old engine	.44	.01
C-7477-A	2011-35	Off-Road Engines and Equipment	2013	New engine horsepower greater than 125% of the old engine	.74	.02
C-7859-A	2012-39	Off-Road Engines and Equipment	2013	New equipment was powered by an engine certified under the flexibility provision	.47	.03
C-8692-A	2012-39	Off-Road Engines and Equipment	2013	New equipment was powered by an engine certified under the flexibility provision	1.16	.04
C-8371-A	2012-42	Off-Road Engines and Equipment	2013	New equipment was powered by an engine certified under the flexibility provision	1.19	.04

The CBC determinations listed in table 25 did not have an impact on the projects projected emission reductions. On October 30, 2013 ARB adopted changes to the 2011 Carl Moyer Guidelines that allow both the flexibility engines and new

engines that are greater than 125% horsepower increase from the old engine to be funded without the need for a CBC. This change can be reviewed in ARB Mailout #MSC 13-27 at: http://www.arb.ca.gov/msprog/moyer/advisories_005/advisories_005.htm. Furthermore, these projects constitute 0.011 tpd of NOx and are not needed to meet the EPA approved SIP commitment for the 2008 PM2.5 Plan.

Appendix A
District Incentive Program Project Information

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-34487-A	1	Agricultural Tractor	Diesel	1981	127	Tier 0	2010	185	Tier 3	500		6000	10	Fresno
C-47421-A	1	Agricultural Tractor	Diesel	1981	84	Tier 0	2011	97	Tier 3	300			10	San Joaquin
C-32599-A	1	Wheel Loader	Diesel	1990	138	Tier 0	2014	154	Tier 4 Phase In/Alternate NOx	700		3500	10	Merced
C-32390-A	1	Agricultural Tractor	Diesel	1990	67	Tier 0	2016	85	Tier 4 Final	400		1160	10	Fresno
C-31690-A	1	Wheel Loader	Diesel	1984	100	Tier 0	2016	141	Tier 4 Final	2190		13140	10	Kings
C-31035-A	1	Wheel Loader	Diesel	1999	170	Tier 1	2015	154	Tier 4 Final	900		3500	10	Kings
C-33520-A	1	Agricultural Tractor	Diesel	1973	121	Tier 0	2014	113	Tier 4 Phase In/Alternate NOx	250		1000	10	Fresno
C-31150-A	1	Wheel Loader	Diesel	1981	95	Tier 0	2015	74	Tier 4 Final	1460		3200	10	Tulare
C-30805-A	1	Agricultural Tractor	Diesel	1987	81	Tier 0	2011	87	Tier 4 Interim	300			10	San Joaquin
C-29864-A	1	Other Agricultural Equipment	Diesel	1987	71	Tier 0	2015	74	Tier 4 Final	677		3384	10	San Joaquin
C-38568-A	1	Wheel Loader	Diesel	1983	80	Tier 0	2015	74	Tier 4 Final	2000		6000	10	Tulare
C-38286-A	1	Loader	Diesel	1987	69	Tier 0	2016	96	Tier 4 Final	300			10	Stanislaus
C-47601-A	1	Agricultural Tractor	Diesel	1987	213	Tier 0	2016	115	Tier 4 Final	600			10	Tulare
C-45132-A	1	Agricultural Tractor	Diesel	2005	86	Tier 2	2016	106	Tier 4 Final	1200			10	Madera
C-45157-A	1	Agricultural Tractor	Diesel	2006	79	Tier 2	2016	98	Tier 4 Final	1200			10	Merced

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-45131-A	1	Agricultural Tractor	Diesel	2006	79	Tier 2	2016	98	Tier 4 Final	1200			10	Madera
C-46421-A	1	Agricultural Tractor	Diesel	2006	98	Tier 2	2016	98	Tier 4 Final	1200			10	Merced
C-26210-A	1	Agricultural Tractor	Diesel	1989	72	Tier 0	2016	84	Tier 4 Final	560		1400	10	Stanislaus
C-45133-A	1	Agricultural Tractor	Diesel	2006	86	Tier 2	2016	106	Tier 4 Final	1200			10	Madera
C-45170-A	1	Agricultural Tractor	Diesel	2006	86	Tier 2	2016	98	Tier 4 Final	1200			10	Merced
C-45130-A	1	Agricultural Tractor	Diesel	2006	86	Tier 2	2016	98	Tier 4 Final	1200			10	Madera
C-40790-A	1	Agricultural Tractor	Diesel	1993	84	Tier 0	2016	106	Tier 4 Phase In/Alternate NOx	1000		3000	10	Fresno
C-45167-A	1	Agricultural Tractor	Diesel	2007	86	Tier 2	2016	106	Tier 4 Final	1200			10	Merced
C-45168-A	1	Agricultural Tractor	Diesel	2007	86	Tier 2	2016	115	Tier 4 Final	1200			10	Madera
C-45171-A	1	Agricultural Tractor	Diesel	2007	98	Tier 2	2016	115	Tier 4 Final	1200			10	Madera
C-45136-A	1	Agricultural Tractor	Diesel	2007	86	Tier 2	2016	115	Tier 4 Final	1200			10	Merced
C-45175-A	1	Agricultural Tractor	Diesel	2007	98	Tier 2	2016	115	Tier 4 Final	1200			10	Merced
C-30909-A	1	Agricultural Tractor	Diesel	1996	74	Tier 0	2015	97	Tier 4 Final	400		1600	10	Stanislaus
C-26212-A	1	Agricultural Tractor	Diesel	1982	73	Tier 0	2016	84	Tier 4 Final	510		1020	10	Stanislaus
C-31047-A	1	Agricultural Tractor	Diesel	1978	84	Tier 0	2016	98	Tier 4 Final	900			10	Merced

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-39797-A	1	Agricultural Tractor	Diesel	1981	72	Tier 0	2016	98	Tier 4 Final	375			10	Stanislaus
C-45366-A	1	Forklift	Diesel	1987	52	Tier 0	2016	106	Tier 4 Phase In/Alternate NOx	300			10	Tulare
C-31268-A	1	Back Hoe	Diesel	1980	60	Tier 0	2016	96	Tier 4 Final	300			10	Merced
C-26211-A	1	Agricultural Tractor	Diesel	1981	65	Tier 0	2016	84	Tier 4 Final	647		1165	10	Stanislaus
C-27172-A	1	Swathers	Diesel	1998	108	Tier 0	2016	74	Tier 4 Final	400		1700	10	Kern
C-43130-A	1	Agricultural Tractor	Diesel	1978	80	Tier 0	2016	106	Tier 4 Phase In/Alternate NOx	750			10	Fresno
C-39394-A	1	Agricultural Tractor	Diesel	1999	100	Tier 1	2016	106	Tier 4 Phase In/Alternate NOx	250			10	Tulare
C-38575-A	1	Agricultural Tractor	Diesel	1992	81	Tier 0	2016	98	Tier 4 Phase In/Alternate NOx	300			10	Merced
C-34177-A	1	Agricultural Tractor	Diesel	1984	81	Tier 0	2016	106	Tier 3	400		900	10	Merced
C-32487-A	1	Agricultural Tractor	Diesel	2000	89	Tier 1	2016	106	Tier 4 Phase In/Alternate NOx	800		2000	10	Kings
C-44899-A	1	Agricultural Tractor	Diesel	1978	80	Tier 0	2016	106	Tier 4 Phase In/Alternate NOx	550			10	Fresno
C-27636-A	1	Agricultural Tractor	Diesel	1997	83	Tier 0	2011	105	Tier 3	300		800	10	Fresno
C-39795-A	1	Agricultural Tractor	Diesel	1992	91	Tier 0	2011	95	Tier 3	800		1000	10	Tulare
C-45669-A	1	Wheel Loader	Diesel	2004	194	Tier 2	2014	194	Tier 4 Final	1750			10	Kern
C-38030-A	1	Agricultural Tractor	Diesel	1979	101	Tier 0	2015	130	Tier 4 Final	700			10	Fresno

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-29376-A	1	Agricultural Tractor	Diesel	1978	80	Tier 0	2011	105	Tier 3	350		1050	10	Merced
C-45503-A	1	Agricultural Tractor	Diesel	2005	210	Tier 2	2014	236	Tier 4 Final	900			10	Fresno
C-47280-A	1	Wheel Loader	Diesel	1997	125	Tier 0	2015	162	Tier 4 Final	1200			10	Kern
C-30188-A	1	Agricultural Tractor	Diesel	1996	127	Tier 0	2014	236	Tier 4 Final	500		6000	10	Merced
C-38736-A	1	Agricultural Tractor	Diesel	2004	89	Tier 1	2011	95	Tier 3	825		3500	10	Fresno
C-38956-A	1	Agricultural Tractor	Diesel	1998	88	Tier 1	2011	95	Tier 3	500		2500	10	Fresno
C-37819-A	1	Agricultural Tractor	Diesel	2000	64	Tier 1	2011	95	Tier 3	1200		4200	10	Kern
C-37815-A	1	Agricultural Tractor	Diesel	2001	88	Tier 1	2011	95	Tier 3	1200		4800	10	Kern
C-37797-A	1	Agricultural Tractor	Diesel	1997	99	Tier 0	2011	105	Tier 3	300			10	Stanislaus
C-31491-A	1	Agricultural Tractor	Diesel	1996	103	Tier 0	2011	105	Tier 3	800		4000	10	Madera
C-33524-A	1	Agricultural Tractor	Diesel	1987	72	Tier 0	2011	105	Tier 3	500			10	San Joaquin
C-31486-A	1	Agricultural Tractor	Diesel	1996	100	Tier 0	2011	105	Tier 3	704		3600	10	Madera
C-43975-A	1	Agricultural Tractor	Diesel	1998	120	Tier 1	2015	158	Tier 4 Final	2200			10	Fresno
C-30222-A	1	Agricultural Tractor	Diesel	1995	80	Tier 0	2015	95	Tier 3	700		2000	10	San Joaquin
C-30460-A	1	Bale Wagon	Diesel	1996	160	Tier 0	2011	173	Tier 3	1130		5650	10	Merced

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-27397-A	1	Agricultural Tractor	Diesel	1984	400	Tier 0	2015	236	Tier 4 Final	2400		38400	10	Madera
C-35522-A	1	Agricultural Tractor	Diesel	1981	132	Tier 0	2014	256	Tier 4 Final	500		1200	10	Merced
C-29936-A	1	Agricultural Tractor	Diesel	1997	260	Tier 1	2016	256	Tier 4 Final	750		3750	10	Fresno
C-31582-A	1	Swathers	Diesel	2001	110	Tier 1	2015	210	Tier 4 Final	1500		4350	10	Tulare
C-31498-A	1	Wheel Loader	Diesel	1997	150	Tier 1	2014	194	Tier 4 Final	2000			10	Merced
C-32159-A	1	Agricultural Tractor	Diesel	1976	103	Tier 0	2016	130	Tier 4 Final	1200		4800	10	Tulare
C-41233-A	1	Agricultural Tractor	Diesel	1969	72	Tier 0	2016	173	Tier 4 Final	800		3500	10	Merced
C-24650-A	1	Agricultural Tractor	Diesel	1989	156	Tier 0	2016	162	Tier 4 Final	500		2000	10	Stanislaus
C-33039-A	1	Agricultural Tractor	Diesel	1992	120	Tier 0	2016	130	Tier 4 Final	900		5400	10	Tulare
C-28000-A	1	Agricultural Tractor	Diesel	2002	175	Tier 1	2016	236	Tier 4 Final	1500		22500	10	Kings
C-27999-A	1	Agricultural Tractor	Diesel	2002	181	Tier 1	2016	236	Tier 4 Final	1500		22500	10	Kings
C-35935-A	1	Agricultural Tractor	Diesel	1995	120	Tier 0	2016	173	Tier 4 Final	800			10	Merced
C-33313-A	1	Wheel Loader	Diesel	1997	150	Tier 1	2016	194	Tier 4 Final	1500		10500	10	Madera
C-31058-A	1	Agricultural Tractor	Diesel	1990	99	Tier 0	2016	138	Tier 4 Final	7500			10	Tulare
C-29857-A	1	Wheel Loader	Diesel	2000	135	Tier 1	2016	162	Tier 4 Final	3650		14600	10	Merced

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-32093-A	1	Combine	Diesel	2000	525	Tier 1	2015	721	Tier 4 Final	1000		24000	10	San Joaquin
C-38566-A	1	Agricultural Tractor	Diesel	1975	84	Tier 0	2016	106	Tier 4 Phase In/Alternate NOx	250		1400	10	Kings
C-37901-A	1	Ag Forage Harvester	Diesel	2001	525	Tier 2	2015	626	Tier 4 Final	694		16278	10	Kern
C-29937-A	1	Agricultural Tractor	Diesel	1983	370	Tier 0	2016	420	Tier 4 Final	1050		13500	10	Tulare
C-46711-A	1	Harvester	Diesel	2002	601	Tier 2	2016	626	Tier 4 Final	700			10	Stanislaus
C-37902-A	1	Agricultural Tractor	Diesel	1965	47	Tier 0	2011	87	Tier 3	175		500	10	Fresno
C-41353-A	1	Agricultural Tractor	Diesel	1989	97	Tier 0	2016	115	Tier 4 Final	300			10	Merced
C-40511-A	1	Agricultural Tractor	Diesel	1975	38	Tier 0	2015	49	Tier 4 Final	350			10	Fresno
C-32714-A	1	Wheel Loader	Diesel	1997	130	Tier 1	2015	154	Tier 4 Final	1800		4680	10	Kings
C-30465-A	1	Wheel Loader	Diesel	1988	104	Tier 0	2015	131	Tier 4 Final	1800		2400	10	Stanislaus
C-34583-A	1	Wheel Loader	Diesel	2000	147	Tier 1	2015	184	Tier 4 Final	1600		5600	10	Tulare
C-29439-A	1	Wheel Loader	Diesel	1998	130	Tier 1	2015	154	Tier 4 Final	1200		2760	10	Stanislaus
C-34178-A	1	Wheel Loader	Diesel	1987	182	Tier 0	2015	236	Tier 4 Final	1600		8300	10	Merced
C-47420-A	1	Agricultural Tractor	Diesel	1979	84	Tier 0	2011	97	Tier 3	300			10	San Joaquin
C-46590-A	1	Agricultural Tractor	Diesel	1966	120	Tier 0	2011	97	Tier 3	600			10	San Joaquin

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-47356-A	1	Agricultural Tractor	Diesel	1974	140	Tier 0	2011	97	Tier 3	900			10	San Joaquin
C-31941-A	1	Wheel Loader	Diesel	1996	158	Tier 0	2015	161	Tier 4 Final	800		2000	10	Merced
C-46997-A	1	Wheel Loader	Diesel	2002	134	Tier 1	2016	161	Tier 4 Final	2000			10	San Joaquin
C-28002-A	1	Wheel Loader	Diesel	1998	145	Tier 1	2016	161	Tier 4 Final	1500		4500	10	Tulare
C-32330-A	1	Wheel Loader	Diesel	1970	110	Tier 0	2015	131	Tier 4 Final	1050		6825	10	Fresno
C-47722-A	1	Wheel Loader	Diesel	2003	150	Tier 2	2016	165	Tier 4 Final	2000			10	Merced
C-33403-A	1	Wheel Loader	Diesel	1999	157	Tier 1	2016	161	Tier 4 Final	1500		5100	10	Stanislaus
C-34070-A	1	Wheel Loader	Diesel	1979	100	Tier 0	2016	161	Tier 4 Final	2190		7227	10	Merced
C-26379-A	1	Wheel Loader	Diesel	1992	138	Tier 0	2016	161	Tier 4 Final	1200			10	Stanislaus
C-45449-A	1	Wheel Loader	Diesel	1995	158	Tier 0	2016	184	Tier 4 Final	1300			10	Tulare
C-37677-A	1	Agricultural Tractor	Diesel	1998	150	Tier 1	2014	173	Tier 4 Final	1870			10	Kern
C-46389-A	1	Agricultural Tractor	Diesel	2003	255	Tier 2	2016	256	Tier 4 Final	1825			10	San Joaquin
C-37680-A	1	Agricultural Tractor	Diesel	2002	300	Tier 1	2014	282	Tier 4 Final	1805			10	Kern
C-30329-A	1	Wheel Loader	Diesel	1993	103	Tier 0	2015	158	Tier 4 Final	2190		15330	10	Merced
C-45016-A	1	Wheel Loader	Diesel	1991	138	Tier 0	2014	173	Tier 4 Phase In/Alternate NOx	1440			10	Stanislaus

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-31025-A	1	Agricultural Tractor	Diesel	1977	63	Tier 0	2014	103	Tier 4 Phase In/Alternate NOx	350		400	10	Fresno
C-38832-A	1	Agricultural Tractor	Diesel	1983	94	Tier 0	2015	114	Tier 4 Final	1000			10	Stanislaus
C-29441-A	1	Agricultural Tractor	Diesel	1966	113	Tier 0	2015	108	Tier 4 Final	1200		6600	10	Madera
C-29378-A	1	Agricultural Tractor	Diesel	1996	95	Tier 0	2011	112	Tier 3	600		900	10	Tulare
C-29776-A	1	Agricultural Tractor	Diesel	1954	86	Tier 0	2014	103	Tier 4 Phase In/Alternate NOx	800		1375	10	Stanislaus
C-28086-A	1	Agricultural Tractor	Diesel	1964	76	Tier 0	2014	103	Tier 4 Phase In/Alternate NOx	400		350	10	Stanislaus
C-26454-A	1	Agricultural Tractor	Diesel	2001	31	Tier 1	2014	100	Tier 4 Phase In/Alternate NOx	353		187	10	Merced
C-45750-A	1	Agricultural Tractor	Diesel	1999	92	Tier 1	2015	106	Tier 4 Final	775			10	Tulare
C-29374-A	1	Agricultural Tractor	Diesel	1978	84	Tier 0	2014	103	Tier 4 Phase In/Alternate NOx	300			10	Stanislaus
C-28065-A	1	Agricultural Tractor	Diesel	1956	93	Tier 0	2014	103	Tier 4 Phase In/Alternate NOx	300		1500	10	Merced
C-30746-A	1	Agricultural Tractor	Diesel	1994	74	Tier 0	2014	103	Tier 4 Phase In/Alternate NOx	250		500	10	San Joaquin
C-26403-A	1	Agricultural Tractor	Diesel	1963	96	Tier 0	2014	103	Tier 4 Phase In/Alternate NOx	500		1500	10	Merced
C-31046-A	1	Agricultural Tractor	Diesel	1974	96	Tier 0	2014	103	Tier 4 Phase In/Alternate NOx	300		4800	10	Stanislaus
C-45753-A	1	Agricultural Tractor	Diesel	1998	88	Tier 1	2015	106	Tier 4 Final	650			10	Tulare
C-35933-A	1	Agricultural Tractor	Diesel	1977	63	Tier 0	2011	108	Tier 3	225		940	10	Fresno

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-47735-A	1	Agricultural Tractor	Diesel	1988	88	Tier 0	2016	106	Tier 4 Final	500			10	Stanislaus
C-29771-A	1	Wheel Loader	Diesel	1974	100	Tier 0	2016	106	Tier 4 Final	100			10	San Joaquin
C-32036-A	1	Agricultural Tractor	Diesel	1973	121	Tier 0	2016	106	Tier 4 Final	407		2500	10	Merced
C-45751-A	1	Agricultural Tractor	Diesel	2001	85	Tier 1	2016	93	Tier 4 Final	610			10	Tulare
C-38295-A	1	Agricultural Tractor	Diesel	1984	81	Tier 0	2016	106	Tier 4 Phase In/Alternate NOx	300			10	Stanislaus
C-45743-A	1	Agricultural Tractor	Diesel	2004	85	Tier 2	2016	108	Tier 4 Final	610			10	Tulare
C-29935-A	1	Agricultural Tractor	Diesel	1979	84	Tier 0	2016	108	Tier 4 Final	500		1500	10	Fresno
C-42467-A	1	Agricultural Tractor	Diesel	1995	72	Tier 0	2016	106	Tier 4 Final	200		250	10	Tulare
C-27174-A	1	Swathers	Diesel	1993	96	Tier 0	2016	74	Tier 4 Final	400		1500	10	Kern
C-44863-A	1	Harvester	Diesel	2005	601	Tier 2	2014	626	Tier 4 Final	1200			10	Kings
C-26449-A	1	Ag Forage Harvester	Diesel	2002	601	Tier 2	2014	626	Tier 4 Final	1200		30000	10	Kings
C-26448-A	1	Ag Forage Harvester	Diesel	2000	510	Tier 2	2014	626	Tier 4 Final	1200		30000	10	Kings
C-26452-A	1	Ag Forage Harvester	Diesel	2001	601	Tier 2	2014	626	Tier 4 Final	1200		30000	10	Kings
C-26450-A	1	Ag Forage Harvester	Diesel	2005	601	Tier 2	2014	626	Tier 4 Final	1200		30000	10	Kings
C-26451-A	1	Ag Forage Harvester	Diesel	2000	601	Tier 2	2014	626	Tier 4 Final	1200		30000	10	Kings

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-45064-A	1	Combine	Diesel	2002	601	Tier 2	2015	626	Tier 4 Final	800			10	Kern
C-45065-A	1	Harvester	Diesel	2002	601	Tier 2	2015	626	Tier 4 Final	800			10	Kern
C-45006-A	1	Harvester	Diesel	2001	601	Tier 2	2015	626	Tier 4 Final	950			10	Kern
C-46126-A	1	Harvester	Diesel	2002	601	Tier 2	2015	626	Tier 4 Final	950			10	Kern
C-28920-A	1	Ag Forage Harvester	Diesel	1998	496	Tier 1	2016	617	Tier 4 Final	550		8800	10	Kern
C-45368-A	1	Agricultural Tractor	Diesel	1994	99	Tier 0	2015	105	Tier 4 Final	500			10	Fresno
C-45865-A	1	Agricultural Tractor	Diesel	1998	79	Tier 1	2015	74	Tier 4 Final	1825			10	San Joaquin
C-30363-A	1	Agricultural Tractor	Diesel	1975	58	Tier 0	2015	60	Tier 4 Final	250		2000	10	Tulare
C-37190-A	1	Agricultural Tractor	Diesel	1984	97	Tier 0	2015	70	Tier 4 Final	1000		4000	10	Fresno
C-26770-A	1	Agricultural Tractor	Diesel	1994	97	Tier 0	2015	70	Tier 4 Final	250		1000	10	Tulare
C-37189-A	1	Agricultural Tractor	Diesel	1979	102	Tier 0	2015	70	Tier 4 Final	1000		4000	10	Fresno
C-32480-A	1	Wheel Loader	Diesel	1999	205	Tier 1	2015	174	Tier 4 Final	3000		14000	10	Tulare
C-30652-A	1	Agricultural Tractor	Diesel	1974	52	Tier 0	2015	55	Tier 4 Final	150		300	10	Tulare
C-38803-A	2	Loader	Diesel	2003	100	Tier 2	2016	109	Tier 4 Final	600		1000	10	Stanislaus
C-31267-A	1	Wheel Loader	Diesel	1994	120	Tier 0	2014	154	Tier 4 Phase In/Alternate NOx	2500			10	San Joaquin

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-30418-A	1	Agricultural Tractor	Diesel	2001	283	Tier 1	2013	260	Tier 4 Phase In/Alternate NOx	1500		15000	10	Merced
C-46773-A	1	Agricultural Tractor	Diesel	2003	331	Tier 2	2013	320	Tier 4 Phase In/Alternate NOx	3650			10	Fresno
C-46603-A	1	Grape Harvester	Diesel	2003	99	Tier 1	2011	130	Tier 3	300			10	Kern
C-34488-A	1	Cotton Picker	Diesel	1997	260	Tier 1	2010	185	Tier 3	500			10	Fresno
C-45015-A	1	Wheel Loader	Diesel	1979	114	Tier 0	2014	154	Tier 4 Phase In/Alternate NOx	1000			10	Stanislaus
C-45014-A	1	Wheel Loader	Diesel	1969	80	Tier 0	2014	154	Tier 4 Phase In/Alternate NOx	1000			10	Stanislaus
C-31842-A	1	Agricultural Tractor	Diesel	1997	32	Tier 0	2015	33	Tier 4 Final	1000		500	10	Fresno
C-45227-A	1	Agricultural Tractor	Diesel	1998	33	Tier 0	2014	49	Tier 4 Final	1200			10	Kings
C-45220-A	1	Agricultural Tractor	Diesel	2004	50	Tier 1	2014	49	Tier 4 Final	1200			10	Kings
C-26455-A	1	Agricultural Tractor	Diesel	2001	31	Tier 1	2014	37	Tier 4 Final	178		129	10	Merced
C-26456-A	1	Agricultural Tractor	Diesel	2001	31	Tier 1	2014	37	Tier 4 Final	144		116	10	Merced
C-31506-A	1	Agricultural Tractor	Diesel	1983	46	Tier 0	2014	52	Tier 4 Final	150		150	10	Stanislaus
C-27787-A	1	Agricultural Tractor	Diesel	2002	40	Tier 1	2015	49	Tier 4 Final	350		350	10	Stanislaus
C-41047-A	1	Agricultural Tractor	Diesel	1974	55	Tier 0	2012	59	Tier 4 Interim	650			10	Stanislaus
C-43844-A	1	Agricultural Tractor	Diesel	1969	47	Tier 0	2015	52	Tier 4 Final	250			10	Fresno

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-43831-A	1	Agricultural Tractor	Diesel	1979	45	Tier 0	2015	52	Tier 4 Final	250			10	Fresno
C-30804-A	1	Agricultural Tractor	Diesel	1972	46	Tier 0	2015	58	Tier 4 Final	400			10	Stanislaus
C-31643-A	1	Agricultural Tractor	Diesel	1965	54	Tier 0	2015	58	Tier 4 Final	900		2700	10	Fresno
C-30775-A	1	Agricultural Tractor	Diesel	1988	63	Tier 0	2015	58	Tier 4 Final	300		800	10	San Joaquin
C-38838-A	1	Back Hoe	Diesel	1978	68	Tier 0	2015	62	Tier 4 Final	250			10	Tulare
C-30877-A	1	Agricultural Tractor	Diesel	1981	126	Tier 0	2015	58	Tier 4 Final	650		2600	10	Tulare
C-38653-A	1	Agricultural Tractor	Diesel	2002	48	Tier 1	2016	61	Tier 4 Final	600		1000	10	Stanislaus
C-31703-A	1	Agricultural Tractor	Diesel	1989	43	Tier 0	2016	58	Tier 4 Final	300		3000	10	Merced
C-31704-A	1	Agricultural Tractor	Diesel	1989	43	Tier 0	2016	58	Tier 4 Final	250		2500	10	Merced
C-26266-A	1	Agricultural Tractor	Diesel	1980	45	Tier 0	2016	52	Tier 4 Final	470		705	10	Merced
C-37035-A	1	Agricultural Tractor	Diesel	1997	39	Tier 0	2016	58	Tier 4 Final	800			10	Fresno
C-48608-A	1	Agricultural Tractor	Diesel	1975	38	Tier 0	2016	48	Tier 4 Final	400			10	San Joaquin
C-40381-A	1	Agricultural Tractor	Diesel	1989	88	Tier 0	2011	90	Tier 3	300		1500	10	Fresno
C-33521-A	1	Agricultural Tractor	Diesel	1983	67	Tier 0	2015	73	Tier 4 Final	500		1000	10	Fresno
C-29371-A	1	Wheel Loader	Diesel	1984	63	Tier 0	2015	73	Tier 4 Final	500		2000	10	San Joaquin

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-33522-A	1	Agricultural Tractor	Diesel	1987	80	Tier 0	2015	73	Tier 4 Final	500		1000	10	Fresno
C-32601-A	1	Wheel Loader	Diesel	1988	101	Tier 0	2015	73	Tier 4 Final	1200			10	Fresno
C-46116-A	1	Agricultural Tractor	Diesel	1966	58	Tier 0	2016	74	Tier 4 Final	1440			10	San Joaquin
C-32190-A	1	Agricultural Tractor	Diesel	1988	96	Tier 0	2015	73	Tier 4 Final	350		875	10	San Joaquin
C-30145-A	1	Agricultural Tractor	Diesel	1973	91	Tier 0	2016	74	Tier 4 Final	350		1750	10	Fresno
C-40395-A	1	Agricultural Tractor	Diesel	1963	45	Tier 0	2016	65	Tier 4 Final	600		1500	10	Merced
C-39470-A	1	Agricultural Tractor	Diesel	1978	80	Tier 0	2016	73	Tier 4 Final	150		600	10	Stanislaus
C-32191-A	1	Agricultural Tractor	Diesel	1989	96	Tier 0	2016	73	Tier 4 Final	420		1050	10	San Joaquin
C-38835-A	1	Agricultural Tractor	Diesel	1998	95	Tier 1	2016	73	Tier 4 Final	900			10	Tulare
C-38028-A	1	Agricultural Tractor	Diesel	1972	63	Tier 0	2016	73	Tier 4 Final	180		200	10	Stanislaus
C-41052-A	1	Agricultural Tractor	Diesel	1962	61	Tier 0	2016	73	Tier 4 Final	150		750	10	Stanislaus
C-30238-A	1	Agricultural Tractor	Diesel	1979	72	Tier 0	2016	73	Tier 4 Final	150		300	10	Fresno
C-33314-A	1	Agricultural Tractor	Diesel	1976	77	Tier 0	2016	73	Tier 4 Final	200		250	10	Fresno
C-37482-A	1	Agricultural Tractor	Diesel	2000	283	Tier 1	2016	375	Tier 4 Final	1200		5100	10	Kings
C-37483-A	1	Agricultural Tractor	Diesel	1999	275	Tier 1	2016	375	Tier 4 Final	975		4000	10	Kings

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-36615-A	1	Agricultural Tractor	Diesel	1999	275	Tier 1	2016	375	Tier 4 Final	750		2800	10	Kings
C-37039-A	1	Agricultural Tractor	Diesel	2000	283	Tier 1	2016	375	Tier 4 Final	1150		5414	10	Kings
C-36606-A	1	Agricultural Tractor	Diesel	1999	275	Tier 1	2016	375	Tier 4 Final	750		3200	10	Kings
C-37040-A	1	Agricultural Tractor	Diesel	1999	283	Tier 1	2016	375	Tier 4 Final	925		3915	10	Kings
C-37041-A	1	Agricultural Tractor	Diesel	2000	283	Tier 1	2016	375	Tier 4 Final	1200		4603	10	Kings
C-37481-A	1	Agricultural Tractor	Diesel	1999	283	Tier 1	2016	375	Tier 4 Final	1250		5700	10	Kings
C-30845-A	1	Agricultural Tractor	Diesel	2000	360	Tier 1	2016	400	Tier 4 Final	580		6795	10	Kern
C-30856-A	1	Agricultural Tractor	Diesel	1999	425	Tier 1	2016	400	Tier 4 Final	322		3500	10	Kern
C-36610-A	1	Agricultural Tractor	Diesel	1999	275	Tier 1	2016	375	Tier 4 Final	750		3000	10	Kings
C-30846-A	1	Agricultural Tractor	Diesel	2000	425	Tier 1	2015	540	Tier 4 Final	616		6850	10	Kern
C-30848-A	1	Agricultural Tractor	Diesel	2000	425	Tier 1	2015	540	Tier 4 Final	458		5550	10	Kern
C-30340-A	1	Agricultural Tractor	Diesel	1972	145	Tier 0	2013	115	Tier 4 Phase In/Alternate NOx	250		1150	10	Madera
C-22339-A	1	Agricultural Tractor	Diesel	1978	73	Tier 0	2013	115	Tier 4 Phase In/Alternate NOx	350		1400	10	Fresno
C-35624-A	1	Agricultural Tractor	Diesel	2002	112	Tier 1	2013	115	Tier 4 Phase In/Alternate NOx	419		2097	10	Fresno
C-28007-A	1	Agricultural Tractor	Diesel	1989	186	Tier 0	2014	125	Tier 4 Phase In/Alternate NOx	800		8000	10	Kings

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-32485-A	1	Agricultural Tractor	Diesel	1997	120	Tier 0	2014	125	Tier 4 Phase In/Alternate NOx	600		4080	10	Fresno
C-30337-A	1	Wheel Loader	Diesel	1990	120	Tier 0	2015	97	Tier 4 Phase In/Alternate NOx	1600		6400	10	Tulare
C-31651-A	1	Agricultural Tractor	Diesel	2000	114	Tier 1	2014	125	Tier 4 Phase In/Alternate NOx	458		2400	10	Madera
C-31480-A	1	Agricultural Tractor	Diesel	1997	269	Tier 1	2014	125	Tier 4 Phase In/Alternate NOx	500		6000	10	Kings
C-30192-A	1	Wheel Loader	Diesel	1978	170	Tier 0	2014	125	Tier 4 Phase In/Alternate NOx	1000		5000	10	Kings
C-30728-A	1	Agricultural Tractor	Diesel	1976	151	Tier 0	2014	125	Tier 4 Phase In/Alternate NOx	400		2400	10	Fresno
C-26268-A	1	Agricultural Tractor	Diesel	1996	102	Tier 0	2014	125	Tier 4 Phase In/Alternate NOx	300		1350	10	Fresno
C-32596-A	1	Agricultural Tractor	Diesel	1968	115	Tier 0	2014	125	Tier 4 Phase In/Alternate NOx	400		2000	10	Fresno
C-30543-A	1	Agricultural Tractor	Diesel	2000	114	Tier 1	2014	125	Tier 4 Phase In/Alternate NOx	1133		4532	10	Madera
C-38743-A	1	Agricultural Tractor	Diesel	1990	97	Tier 0	2014	125	Tier 4 Phase In/Alternate NOx	700		4200	10	Fresno
C-38735-A	1	Agricultural Tractor	Diesel	1996	95	Tier 0	2014	115	Tier 4 Phase In/Alternate NOx	1500		6000	10	Fresno
C-38737-A	1	Agricultural Tractor	Diesel	1999	88	Tier 1	2014	115	Tier 4 Phase In/Alternate NOx	350		1400	10	Fresno
C-38740-A	1	Agricultural Tractor	Diesel	2002	100	Tier 1	2016	115	Tier 4 Phase In/Alternate NOx	500		2500	10	Fresno
C-38739-A	1	Agricultural Tractor	Diesel	2002	100	Tier 1	2016	115	Tier 4 Phase In/Alternate NOx	600		3000	10	Fresno
C-38741-A	1	Agricultural Tractor	Diesel	1993	108	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	1000		6000	10	Fresno

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-30457-A	1	Agricultural Tractor	Diesel	1992	95	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	400		2000	10	Madera
C-32265-A	1	Agricultural Tractor	Diesel	1996	99	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	734		3669	10	Fresno
C-30459-A	1	Agricultural Tractor	Diesel	2002	106	Tier 1	2016	125	Tier 4 Phase In/Alternate NOx	400		2000	10	Madera
C-34491-A	1	Agricultural Tractor	Diesel	1981	108	Tier 0	2016	125	Tier 3	1000		10000	10	Fresno
C-34492-A	1	Agricultural Tractor	Diesel	1981	132	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	1000		10000	10	Fresno
C-30415-A	1	Agricultural Tractor	Diesel	1990	137	Tier 0	2016	115	Tier 3	600		3600	10	Tulare
C-46307-A	1	Agricultural Tractor	Diesel	1997	120	Tier 1	2016	125	Tier 4 Phase In/Alternate NOx	2200			10	Merced
C-39891-A	1	Agricultural Tractor	Diesel	1964	110	Tier 0	2016	125	Tier 3	400		1850	10	Fresno
C-33525-A	1	Agricultural Tractor	Diesel	1995	99	Tier 0	2016	125	Tier 3	915		2340	10	Fresno
C-30414-A	1	Agricultural Tractor	Diesel	1998	120	Tier 1	2016	115	Tier 3	600		3600	10	Tulare
C-46709-A	1	Agricultural Tractor	Diesel	2005	113	Tier 2	2016	125	Tier 4 Phase In/Alternate NOx	700			10	Madera
C-46712-A	1	Agricultural Tractor	Diesel	1979	156	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	1231			10	Madera
C-44321-A	1	Agricultural Tractor	Diesel	2000	104	Tier 1	2016	125	Tier 4 Phase In/Alternate NOx	600			10	Madera
C-30725-A	1	Agricultural Tractor	Diesel	1985	100	Tier 0	2016	115	Tier 4 Phase In/Alternate NOx	1000		5000	10	Kern
C-44320-A	1	Agricultural Tractor	Diesel	1999	104	Tier 1	2016	125	Tier 4 Phase In/Alternate NOx	600			10	Madera

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-35934-A	1	Agricultural Tractor	Diesel	1982	108	Tier 0	2016	125	Tier 3	350		1000	10	Madera
C-45502-A	1	Agricultural Tractor	Diesel	2004	113	Tier 2	2016	125	Tier 4 Phase In/Alternate NOx	900			10	Fresno
C-46762-A	1	Agricultural Tractor	Diesel	1995	156	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	1000			10	Fresno
C-27844-A	1	Agricultural Tractor	Diesel	1968	76	Tier 0	2016	125	Tier 3	350		1400	10	Merced
C-31152-A	1	Wheel Loader	Diesel	1994	131	Tier 0	2016	97	Tier 4 Phase In/Alternate NOx	2500		2000	10	Tulare
C-27842-A	1	Agricultural Tractor	Diesel	2000	108	Tier 1	2016	125	Tier 3	400		1600	10	Merced
C-27169-A	1	Agricultural Tractor	Diesel	1998	89	Tier 1	2016	115	Tier 3	1000		4000	10	Kings
C-32339-A	1	Agricultural Tractor	Diesel	1988	88	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	300		870	10	Fresno
C-32333-A	1	Agricultural Tractor	Diesel	1984	90	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	300		1110	10	Fresno
C-32338-A	1	Agricultural Tractor	Diesel	1985	90	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	300		1110	10	Fresno
C-32340-A	1	Agricultural Tractor	Diesel	1988	88	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	300		870	10	Fresno
C-32337-A	1	Agricultural Tractor	Diesel	1981	98	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	300		1170	10	Fresno
C-32336-A	1	Agricultural Tractor	Diesel	1988	88	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	300		870	10	Fresno
C-32335-A	1	Agricultural Tractor	Diesel	1983	54	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	300		570	10	Fresno
C-32334-A	1	Agricultural Tractor	Diesel	2000	78	Tier 1	2016	125	Tier 4 Phase In/Alternate NOx	300		840	10	Fresno

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-32331-A	1	Agricultural Tractor	Diesel	1987	88	Tier 0	2016	125	Tier 4 Phase In/Alternate NOx	300		1170	10	Fresno
C-25012-A	1	Agricultural Tractor	Diesel	1995	72	Tier 0	2016	130	Tier 4 Phase In/Alternate NOx	500		1430	10	Kern
C-41615-A	1	Agricultural Tractor	Diesel	1994	120	Tier 0	2016	145	Tier 4 Final	450			10	Kern
C-22255-B	2	Agricultural Wheel Tractor	Diesel	1996	102	Tier 0	2016	120	Tier 4 Final	490			10	Stanislaus
C-38955-A	1	Agricultural Tractor	Diesel	1994	97	Tier 0	2016	130	Tier 4 Final	1418		7000	10	Fresno
C-36459-A	1	Agricultural Tractor	Diesel	1993	210	Tier 0	2015	195	Tier 4 Final	350		3500	10	Kings
C-22280-B	2	Agricultural Tractor	Diesel	1978	97	Tier 0	2015	155	Tier 4 Final	367			10	Stanislaus
C-27200-A	1	Agricultural Tractor	Diesel	1995	120	Tier 0	2016	155	Tier 4 Final	333		1000	10	Fresno
C-38951-A	1	Agricultural Tractor	Diesel	1989	153	Tier 0	2016	175	Tier 4 Final	825		4900	10	Fresno
C-38950-A	1	Agricultural Tractor	Diesel	1989	153	Tier 0	2016	175	Tier 4 Final	1600		9500	10	Fresno
C-32486-A	1	Agricultural Tractor	Diesel	1984	60	Tier 0	2016	66	Tier 4 Final	800		2800	10	Fresno
C-45369-A	1	Agricultural Tractor	Diesel	1995	97	Tier 0	2015	105	Tier 4 Final	500			10	Fresno
C-45370-A	1	Agricultural Tractor	Diesel	1990	97	Tier 0	2015	105	Tier 4 Final	500			10	Fresno
C-32063-A	1	Wheel Loader	Diesel	1997	96	Tier 0	2015	188	Tier 4 Final	2500		10000	10	Merced
C-49100-A	1	Wheel Loader	Diesel	1989	116	Tier 0	2015	153	Tier 4 Final	800			10	Stanislaus
C-27027-A	1	Wheel Loader	Diesel	2003	159	Tier 2	2016	188	Tier 4 Final	1200		3600	10	Merced

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-40583-A	1	Wheel Loader	Diesel	1975	160	Tier 0	2016	153	Tier 4 Final	850		4300	10	Fresno
C-24308-B	2	Agricultural Wheel Tractor	Diesel	1961	61	Tier 0	2014	99	Tier 3	250			10	Merced
C-42879-A	1	Agricultural Tractor	Diesel	1971	76	Tier 0	2014	99	Tier 4 Phase In/Alternate NOx	500		2850	10	Fresno
C-42878-A	1	Agricultural Tractor	Diesel	1979	80	Tier 0	2014	99	Tier 4 Phase In/Alternate NOx	375		2850	10	Fresno
C-45371-A	1	Agricultural Tractor	Diesel	1986	48	Tier 0	2015	67	Tier 4 Final	500			10	Fresno
C-37193-A	1	Agricultural Tractor	Diesel	1981	77	Tier 0	2015	74	Tier 4 Final	151		389	10	Fresno
C-32200-A	1	Forklift	Diesel	2003	75	Tier 1	2015	74	Tier 4 Final	650		2730	10	Fresno
C-32199-A	1	Forklift	Diesel	2003	75	Tier 1	2015	74	Tier 4 Final	485		2037	10	Fresno
C-29377-A	1	Agricultural Tractor	Diesel	1990	97	Tier 0	2011	110	Tier 3	600		900	10	Tulare
C-39364-A	1	Agricultural Tractor	Diesel	1974	58	Tier 0	2015	67	Tier 4 Final	600			10	Fresno
C-27672-A	1	Agricultural Tractor	Diesel	2002	94	Tier 1	2011	99	Tier 3	575		2301	10	San Joaquin
C-27499-A	1	Agricultural Tractor	Diesel	2002	94	Tier 1	2011	99	Tier 3	394		1577	10	San Joaquin
C-30648-A	1	Agricultural Tractor	Diesel	1981	98	Tier 0	2011	99	Tier 3	250		825	10	Fresno
C-31641-A	1	Agricultural Tractor	Diesel	1987	88	Tier 0	2011	99	Tier 3	150		600	10	Kings
C-45057-A	1	Agricultural Tractor	Diesel	2002	89	Tier 1	2011	99	Tier 3	900			10	Fresno

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-30042-A	1	Agricultural Tractor	Diesel	1989	88	Tier 0	2011	99	Tier 3	1500		4500	10	Fresno
C-30044-A	1	Agricultural Tractor	Diesel	1989	88	Tier 0	2011	99	Tier 3	1500		4500	10	Fresno
C-30015-A	1	Agricultural Tractor	Diesel	2002	98	Tier 1	2011	101	Tier 3	800		3200	10	Fresno
C-45060-A	1	Agricultural Tractor	Diesel	1999	89	Tier 1	2011	99	Tier 3	900			10	Fresno
C-24857-A	1	Agricultural Tractor	Diesel	1981	72	Tier 0	2011	101	Tier 3	200		12786	10	Fresno
C-39039-A	1	Agricultural Tractor	Diesel	1996	104	Tier 0	2011	99	Tier 3	250			10	Tulare
C-39395-A	1	Agricultural Tractor	Diesel	1995	120	Tier 0	2011	99	Tier 3	510			10	Tulare
C-39407-A	1	Agricultural Tractor	Diesel	1981	85	Tier 0	2011	99	Tier 3	142			10	Tulare
C-39397-A	1	Agricultural Tractor	Diesel	1996	104	Tier 0	2011	99	Tier 3	186			10	Tulare
C-45046-A	1	Agricultural Tractor	Diesel	2002	115	Tier 1	2011	99	Tier 3	900			10	Fresno
C-36891-A	1	Agricultural Tractor	Diesel	1973	68	Tier 0	2011	93	Tier 3	700		2000	10	Fresno
C-31840-A	1	Agricultural Tractor	Diesel	1973	180	Tier 0	2011	99	Tier 3	750			10	San Joaquin
C-30811-A	1	Agricultural Tractor	Diesel	1979	84	Tier 0	2012	100	Tier 4 Phase In/Alternate NOx	400		1600	10	Fresno
C-28674-A	1	Agricultural Tractor	Diesel	1994	81	Tier 0	2013	105	Tier 4 Phase In/Alternate NOx	550		1400	10	Fresno
C-25050-A	1	Agricultural Tractor	Diesel	1974	125	Tier 0	2014	115	Tier 4 Phase In/Alternate NOx	500		2000	10	Madera

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-31436-A	1	Agricultural Tractor	Diesel	1981	194	Tier 0	2014	115	Tier 4 Phase In/Alternate NOx	250		11000	10	Madera
C-27983-A	1	Agricultural Tractor	Diesel	1992	104	Tier 0	2016	115	Tier 3	300		1000	10	Fresno
C-29777-A	1	Agricultural Tractor	Diesel	1991	88	Tier 0	2014	115	Tier 4 Phase In/Alternate NOx	500		4000	10	Fresno
C-32393-A	1	Agricultural Tractor	Diesel	1996	46	Tier 0	2014	115	Tier 4 Phase In/Alternate NOx	166		100	10	Fresno
C-37192-A	1	Agricultural Tractor	Diesel	1971	110	Tier 0	2015	115	Tier 4 Phase In/Alternate NOx	350		1000	10	Stanislaus
C-36470-A	1	Almond Sweeper	Diesel	2001	80	Tier 1	2012	74	Tier 4 Interim	500		2000	10	Kern
C-25830-A	1	Agricultural Tractor	Diesel	1991	87	Tier 0	2012	74	Tier 4 Interim	300		1200	10	Madera
C-30416-A	1	Agricultural Tractor	Diesel	1992	88	Tier 0	2015	115	Tier 3	898		4491	10	San Joaquin
C-42463-A	1	Agricultural Tractor	Diesel	1998	81	Tier 1	2015	100	Tier 3	300		840	10	Fresno
C-29440-A	1	Agricultural Tractor	Diesel	1982	84	Tier 0	2015	85	Tier 3	175		2000	10	Fresno
C-27198-A	1	Agricultural Tractor	Diesel	1979	72	Tier 0	2015	85	Tier 3	150		450	10	Fresno
C-34066-A	1	Agricultural Tractor	Diesel	1997	110	Tier 1	2015	115	Tier 3	750		7500	10	Madera
C-30239-A	1	Agricultural Tractor	Diesel	1992	88	Tier 0	2015	100	Tier 3	342		1008	10	San Joaquin
C-35513-A	1	Agricultural Tractor	Diesel	1992	91	Tier 0	2015	115	Tier 3	275		1100	10	Fresno
C-21835-A	1	Agricultural Tractor	Diesel	1980	98	Tier 0	2015	115	Tier 3	750			10	Kings

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-31837-A	1	AG Tractor Crawler	Diesel	1985	80	Tier 0	2015	100	Tier 3	300		1200	10	Stanislaus
C-38203-A	1	Agricultural Tractor	Diesel	1981	101	Tier 0	2015	115	Tier 3	150		750	10	Madera
C-30341-A	1	Agricultural Tractor	Diesel	1982	98	Tier 0	2015	115	Tier 3	350		1400	10	Madera
C-31190-A	1	Agricultural Tractor	Diesel	1998	95	Tier 1	2015	115	Tier 3	650		2600	10	Fresno
C-37695-A	1	Agricultural Tractor	Diesel	1994	95	Tier 0	2015	115	Tier 3	200		700	10	Fresno
C-27785-A	1	Agricultural Tractor	Diesel	1987	97	Tier 0	2015	115	Tier 3	150		500	10	Fresno
C-29778-A	1	Agricultural Tractor	Diesel	1999	99	Tier 1	2016	115	Tier 3	500		4000	10	Fresno
C-39483-A	1	Agricultural Tractor	Diesel	1990	95	Tier 0	2016	115	Tier 3	200		500	10	Merced
C-30638-A	1	Agricultural Tractor	Diesel	1990	81	Tier 0	2016	115	Tier 3	900		800	10	Fresno
C-35941-A	1	Wheel Loader	Diesel	1978	114	Tier 0	2016	124	Tier 4 Final	3110		13000	10	Fresno
C-30016-A	1	Agricultural Tractor	Diesel	1966	114	Tier 0	2016	120	Tier 3	419		2097	10	Fresno
C-43734-A	1	Agricultural Tractor	Diesel	1976	73	Tier 0	2016	115	Tier 3	800			10	Madera
C-28178-A	1	Agricultural Tractor	Diesel	1974	94	Tier 0	2014	115	Tier 4 Phase In/Alternate NOx	600		3600	10	Fresno
C-28006-A	1	Agricultural Tractor	Diesel	1988	72	Tier 0	2016	85	Tier 4 Final	400		1200	10	Fresno
C-27985-A	1	Agricultural Tractor	Diesel	1999	102	Tier 1	2016	115	Tier 3	1300		3900	10	Tulare

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-32097-A	1	Agricultural Tractor	Diesel	1966	84	Tier 0	2016	100	Tier 4 Phase In/Alternate NOx	500		1000	10	Kings
C-32096-A	1	Agricultural Tractor	Diesel	1994	110	Tier 0	2016	135	Tier 4 Final	500		1500	10	Kings
C-32158-A	1	Back Hoe	Diesel	1973	80	Tier 0	2016	93	Tier 3	1200		2600	10	Madera
C-30803-A	1	Agricultural Tractor	Diesel	1976	73	Tier 0	2016	85	Tier 4 Final	300		800	10	Fresno
C-33889-A	1	Wheel Loader	Diesel	2002	114	Tier 1	2016	124	Tier 4 Final	1200		4000	10	Tulare
C-30842-A	1	Agricultural Tractor	Diesel	1995	103	Tier 0	2016	115	Tier 4 Final	400		1700	10	Fresno
C-42710-A	1	Agricultural Tractor	Diesel	1996	95	Tier 0	2016	115	Tier 4 Final	400			10	Fresno
C-31187-A	1	Agricultural Tractor	Diesel	1993	72	Tier 0	2016	115	Tier 4 Final	650		2275	10	Fresno
C-32482-A	1	Agricultural Tractor	Diesel	2000	64	Tier 1	2016	85	Tier 4 Final	600		1920	10	Fresno
C-30194-A	1	Agricultural Tractor	Diesel	1980	97	Tier 0	2016	100	Tier 4 Final	310		1548	10	Fresno
C-32194-A	1	Agricultural Tractor	Diesel	1996	81	Tier 0	2016	100	Tier 4 Final	500		2300	10	Fresno
C-31189-A	1	Agricultural Tractor	Diesel	1979	80	Tier 0	2016	115	Tier 4 Final	650		2275	10	Fresno
C-31188-A	1	Agricultural Tractor	Diesel	1980	45	Tier 0	2016	115	Tier 4 Final	650		1675	10	Fresno
C-24208-A	1	Agricultural Tractor	Diesel	1969	76	Tier 0	2016	85	Tier 4 Final	120		540	10	Fresno
C-30191-A	1	Agricultural Tractor	Diesel	1991	95	Tier 0	2016	120	Tier 4 Final	1500		2250	10	Kern

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-31192-A	1	Agricultural Tractor	Diesel	1995	95	Tier 0	2016	115	Tier 4 Final	650		2600	10	Fresno
C-45062-A	1	Agricultural Tractor	Diesel	2004	99	Tier 2	2016	115	Tier 4 Final	500			10	Kern
C-38963-A	1	Agricultural Tractor	Diesel	1980	108	Tier 0	2016	120	Tier 4 Final	500		3000	10	Fresno
C-30729-A	1	Agricultural Tractor	Diesel	1965	115	Tier 0	2016	120	Tier 4 Final	150		600	10	Kings
C-39038-A	1	Agricultural Tractor	Diesel	1996	120	Tier 0	2016	115	Tier 4 Final	960		2400	10	Tulare
C-23550-A	1	Agricultural Tractor	Diesel	1994	72	Tier 0	2016	100	Tier 4 Final	750		3375	10	Fresno
C-38744-A	1	Agricultural Tractor	Diesel	1978	108	Tier 0	2016	120	Tier 4 Final	500		3000	10	Fresno
C-23549-A	1	Agricultural Tractor	Diesel	1998	89	Tier 1	2016	115	Tier 4 Final	750		3375	10	Fresno
C-23548-A	1	Agricultural Tractor	Diesel	2002	98	Tier 1	2016	115	Tier 4 Final	750		3375	10	Fresno
C-40789-A	1	Agricultural Tractor	Diesel	1974	68	Tier 0	2016	115	Tier 4 Final	100		100	10	Fresno
C-41146-A	1	Agricultural Tractor	Diesel	1985	30	Tier 0	2016	115	Tier 4 Final	150		300	10	Fresno
C-37043-A	1	Agricultural Tractor	Diesel	1989	88	Tier 0	2016	115	Tier 4 Final	375		1975	10	Fresno
C-23551-A	1	Agricultural Tractor	Diesel	1996	60	Tier 0	2016	100	Tier 4 Final	750		3375	10	Fresno
C-44895-A	1	Agricultural Tractor	Diesel	1996	114	Tier 0	2016	115	Tier 4 Final	600			10	Fresno
C-45044-A	1	Agricultural Tractor	Diesel	2002	115	Tier 1	2016	115	Tier 4 Final	960			10	Fresno
C-46333-A	1	Agricultural Tractor	Diesel	2005	86	Tier 2	2016	115	Tier 4 Final	1000			10	Fresno
C-46331-A	1	Agricultural Tractor	Diesel	2005	86	Tier 2	2016	115	Tier 4 Final	1000			10	Fresno
C-39256-A	1	Agricultural Tractor	Diesel	1975	71	Tier 0	2016	115	Tier 4 Final	300			10	Fresno
C-46330-A	1	Agricultural Tractor	Diesel	2005	86	Tier 2	2016	115	Tier 4 Final	1000			10	Fresno
C-46320-A	1	Agricultural Tractor	Diesel	2005	86	Tier 2	2016	115	Tier 4 Final	1000			10	Fresno
C-46324-A	1	Agricultural Tractor	Diesel	2005	86	Tier 2	2016	115	Tier 4 Final	1000			10	Fresno
C-46335-A	1	Agricultural Tractor	Diesel	2007	89	Tier 2	2016	115	Tier 4 Final	1000			10	Fresno
C-46334-A	1	Agricultural Tractor	Diesel	2007	89	Tier 2	2016		Tier 4 Final	1000			10	Fresno
C-46332-A	1	Agricultural Tractor	Diesel	2003	89	Tier 1	2016	115	Tier 4 Final	1000			10	Fresno
C-46336-A	1	Agricultural Tractor	Diesel	2007	89	Tier 2	2016	115	Tier 4 Final	1000			10	Fresno
C-46329-A	1	Agricultural Tractor	Diesel	2005	86	Tier 2	2016	115	Tier 4 Final	1000			10	Fresno

Description Vehicle Replacement

Project #	Unit		Fuel Type	Baseline			New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project	
	ID	Primary Function		Yr	Old HP	Old Tier							Life (Yrs)	Location (County)
C-38745-A	1	Agricultural Tractor	Diesel	1978	108	Tier 0	2016	120	Tier 4 Final	450		2700	10	Fresno
C-39718-A	1	Agricultural Tractor	Diesel	1968	115	Tier 0	2016	135	Tier 4 Final	500			10	Fresno
C-32391-A	1	Agricultural Tractor	Diesel	1981	73	Tier 0	2016	100	Tier 4 Final	216		456	10	San Joaquin
C-34181-A	1	Almond Shaker	Diesel	1998	150	Tier 1	2010	185	Tier 3	625		2500	10	Kern
C-44745-A	1	Agricultural Tractor	Diesel	2005	225	Tier 2	2015	210	Tier 4 Final	500			10	Merced
C-32002-A	1	Wheel Loader	Diesel	1994	138	Tier 0	2015	163	Tier 4 Final	1092		4368	10	Tulare
C-34567-A	1	Wheel Loader	Diesel	1986	122	Tier 0	2015	186	Tier 4 Final	1400		5100	10	Merced
C-31583-A	1	Wheel Loader	Diesel	1996	138	Tier 0	2015	163	Tier 4 Final	2400		6000	10	Tulare
C-30187-A	1	Agricultural Tractor	Diesel	2001	147	Tier 1	2015	215	Tier 4 Final	1000		15000	10	Merced
C-45867-A	1	Wheel Loader	Diesel	1996	180	Tier 1	2015	186	Tier 4 Final	2920			10	San Joaquin
C-24488-A	1	Agricultural Tractor	Diesel	1996	114	Tier 0	2015	155	Tier 4 Final	426		852	10	Fresno
C-30911-A	1	Wheel Loader	Diesel	1989	136	Tier 0	2015	186	Tier 4 Final	2000		1000	10	Merced
C-30235-A	1	Wheel Loader	Diesel	1999	145	Tier 1	2016	186	Tier 4 Final	4000		12000	10	Stanislaus
C-34068-A	1	Wheel Loader	Diesel	1999	180	Tier 1	2016	186	Tier 4 Final	2100		10500	10	Madera
C-26178-A	1	Wheel Loader	Diesel	2000	142	Tier 1	2016	163	Tier 4 Final	1500		6000	10	Tulare
C-31062-A	1	Wheel Loader	Diesel	1989	120	Tier 0	2016	141	Tier 4 Final	2300		7000	10	Tulare
C-31943-A	1	Wheel Loader	Diesel	1984	105	Tier 0	2016	141	Tier 4 Final	700		2100	10	Stanislaus
C-30236-A	1	Wheel Loader	Diesel	1974	80	Tier 0	2016	163	Tier 4 Final	3000		7500	10	Stanislaus
C-39721-A	1	Wheel Loader	Diesel	1998	125	Tier 1	2016	163	Tier 4 Final	505			10	Fresno
C-30338-A	1	Wheel Loader	Diesel	1998	110	Tier 1	2016	141	Tier 4 Final	1500		6500	10	Tulare
C-27545-A	1	Agricultural Tractor	Diesel	2001	94	Tier 1	2016	155	Tier 4 Final	1200		8500	10	Stanislaus
C-30046-A	1	Wheel Loader	Diesel	2000	160	Tier 1	2016	186	Tier 4 Final	1300		6240	10	Fresno
C-24153-A	1	Wheel Loader	Diesel	2005	153	Tier 2	2016	163	Tier 4 Final	3000			10	Madera
C-30726-A	1	Wheel Loader	Diesel	1994	125	Tier 0	2016	163	Tier 4 Final	1800		5400	10	Fresno
C-39034-A	1	Wheel Loader	Diesel	1988	141	Tier 0	2016	163	Tier 4 Final	2200			10	Tulare
C-31942-A	1	Wheel Loader	Diesel	1980	132	Tier 0	2016	163	Tier 4 Final	800		2400	10	Madera
C-32329-A	1	Wheel Loader	Diesel	1969	100	Tier 0	2016	141	Tier 4 Final	1050		6825	10	Fresno
C-38652-A	1	Wheel Loader	Diesel	1979	114	Tier 0	2016	141	Tier 4 Final	1000		3000	10	San Joaquin
C-48611-A	1	Swathers	Diesel	2001	101	Tier 1	2016	235	Tier 4 Final	600			10	Merced
C-45866-A	1	Wheel Loader	Diesel	1995	180	Tier 0	2016	186	Tier 4 Final	2920			10	San Joaquin
C-28051-A	1	Wheel Loader	Diesel	1999	125	Tier 1	2016	186	Tier 4 Final	3000		15000	10	Kings

Description Vehicle Replacement

Project #	Unit		Fuel Type	Baseline			New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project	
	ID	Primary Function		Yr	Old HP	Old Tier							Life (Yrs)	Location (County)
C-29566-A	1	Agricultural Tractor	Diesel	1973	151	Tier 0	2016	155	Tier 4 Final	800		9600	10	Merced
C-38964-A	1	Agricultural Tractor	Diesel	1993	240	Tier 0	2016	250	Tier 4 Final	850		8500	10	Fresno
C-46596-A	1	Wheel Loader	Diesel	2003	143	Tier 2	2016	163	Tier 4 Final	2400			10	Tulare
C-29773-A	1	Agricultural Tractor	Diesel	1999	175	Tier 1	2016	210	Tier 4 Final	1500		12000	10	Kings
C-30907-A	1	Agricultural Tractor	Diesel	1994	151	Tier 0	2016	195	Tier 4 Final	600		3000	10	Fresno
C-32038-A	1	Wheel Loader	Diesel	1999	157	Tier 1	2016	186	Tier 4 Final	2500		8500	10	Kern
C-29772-A	1	Agricultural Tractor	Diesel	1998	141	Tier 1	2016	175	Tier 4 Final	1500		10225	10	Kings
C-29774-A	1	Agricultural Tractor	Diesel	1998	141	Tier 1	2016	175	Tier 4 Final	1500		10225	10	Kings
C-30234-A	1	Agricultural Tractor	Diesel	1999	275	Tier 1	2016	155	Tier 4 Final	1000		18000	10	Fresno
C-47014-A	1	Agricultural Tractor	Diesel	2005	135	Tier 2	2016	215	Tier 4 Final	1000			10	Fresno
C-39717-A	1	Agricultural Tractor	Diesel	1990	178	Tier 0	2016	215	Tier 4 Final	500			10	Fresno
C-46274-A	1	Loader	Diesel	1985	125	Tier 0	2016	186	Tier 4 Final	2190		6570	10	Fresno
C-44179-A	1	Wheel Loader	Diesel	1994	126	Tier 0	2016	186	Tier 4 Final	2500		7500	10	Stanislaus
C-47551-A	1	Wheel Loader	Diesel	2005	129	Tier 2	2016	163	Tier 4 Final	1500			10	Tulare
C-44192-A	1	Wheel Loader	Diesel	1980	100	Tier 0	2016	186	Tier 4 Final	2500		7500	10	Stanislaus
C-30362-A	1	Agricultural Tractor	Diesel	1981	56	Tier 0	2015	75	Tier 4 Final	600		2000	10	Madera
C-38953-A	1	Agricultural Tractor	Diesel	1980	45	Tier 0	2015	74	Tier 4 Final	500		2500	10	Fresno
C-30339-A	1	Agricultural Tractor	Diesel	1974	46	Tier 0	2015	75	Tier 4 Final	250		1150	10	Madera
C-38952-A	1	Agricultural Tractor	Diesel	1997	68	Tier 0	2015	74	Tier 4 Final	500		2500	10	Fresno
C-32106-A	1	Agricultural Tractor	Diesel	1972	68	Tier 0	2015	75	Tier 4 Final	500		1000	10	Kings
C-31186-A	1	Agricultural Tractor	Diesel	1999	32	Tier 1	2016	48	Tier 4 Final	325			10	Fresno
C-31185-A	1	Agricultural Tractor	Diesel	2002	32	Tier 1	2016	48	Tier 4 Final	325			10	Fresno
C-31181-A	1	Agricultural Tractor	Diesel	2002	32	Tier 1	2016	48	Tier 4 Final	325			10	Fresno
C-38954-A	1	Agricultural Tractor	Diesel	1992	60	Tier 0	2016	73	Tier 4 Final	500		2500	10	Fresno
C-31184-A	1	Agricultural Tractor	Diesel	1999	32	Tier 1	2016	48	Tier 4 Final	325			10	Fresno
C-32195-A	1	Agricultural Tractor	Diesel	2002	64	Tier 1	2016	74	Tier 4 Final	309		927	10	Fresno
C-32197-A	1	Agricultural Tractor	Diesel	2002	64	Tier 1	2016	74	Tier 4 Final	247		741	10	Fresno
C-32198-A	1	Agricultural Tractor	Diesel	2000	64	Tier 1	2016	74	Tier 4 Final	265		795	10	Fresno
C-39720-A	1	Agricultural Tractor	Diesel	1998	64	Tier 1	2016	67	Tier 4 Final	500			10	Fresno
C-32111-A	1	Agricultural Tractor	Diesel	1982	84	Tier 0	2016	73	Tier 4 Final	500		1000	10	Kings
C-32341-A	1	Agricultural Tractor	Diesel	1976	263	Tier 0	2014	295	Tier 4 Final	300		2700	10	Fresno

Description Vehicle Replacement

Project #	Unit	Primary Function	Fuel Type	Baseline Yr	Baseline		New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
	ID				Old HP	Old Tier								
C-21241-B	2	Agricultural Tractor	Diesel	1997	216	Tier 1	2015	370	Tier 4 Final	1250		8000	10	Fresno
C-30906-A	1	Agricultural Tractor	Diesel	1993	240	Tier 0	2016	320	Tier 4 Final	400			10	Fresno
C-21238-B	2	Agricultural Tractor	Diesel	1997	216	Tier 1	2016	270	Tier 4 Final	1000		8000	10	Fresno
C-32484-A	1	Agricultural Tractor	Diesel	1999	260	Tier 1	2016	295	Tier 4 Final	700		8260	10	Fresno
C-45821-A	1	Agricultural Tractor	Diesel	2002	283	Tier 1	2016	345	Tier 4 Final	1480		8000	10	Fresno
C-37903-A	1	Agricultural Tractor	Diesel	1976	214	Tier 0	2016	295	Tier 4 Final	700			10	Merced
C-31341-A	1	Agricultural Tractor	Diesel	1971	163	Tier 0	2016	245	Tier 4 Final	1500		2850	10	Kern
C-47729-A	1	Agricultural Tractor	Diesel	1976	146	Tier 0	2017	245	Tier 4 Final	485			10	Merced
C-27624-A	1	Agricultural Tractor	Diesel	2000	375	Tier 1	2015	470	Tier 4 Final	1000		19000	10	Merced
C-35944-A	1	Cotton Picker	Diesel	1997	250	Tier 0	2016	560	Tier 4 Final	719			10	Merced
C-44117-A	1	Cotton Picker	Diesel	2000	325	Tier 1	2016	560	Tier 4 Final	1200			10	Fresno
C-44116-A	1	Cotton Picker	Diesel	2000	325	Tier 1	2016	560	Tier 4 Final	1200			10	Fresno
C-37188-A	1	Agricultural Tractor	Diesel	1975	350	Tier 0	2016	420	Tier 4 Final	800		12000	10	Tulare
C-46522-A	1	Agricultural Tractor	Diesel	2004	421	Tier 2	2017	520	Tier 4 Final	740			10	Kern
C-46526-A	1	Agricultural Tractor	Diesel	2004	421	Tier 2	2017	520	Tier 4 Final	795			10	Kern
C-27642-A	1	Almond Sweeper	Diesel	1992	40	Tier 0	2012	47	Tier 4 Interim	200		425	10	Stanislaus
C-41144-A	1	Wheel Loader	Diesel	1980	93	Tier 0	2016	115	Tier 4 Final	2250		8500	10	Merced
C-33097-A	1	Wheel Loader	Diesel	1989	156	Tier 0	2014	173	Tier 4 Phase In/Alternate NOx	500		3500	10	Stanislaus

SJVAPCD Project Data 2017

Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
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[illegible]

SJVAPCD Project Data

Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
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No Projects To Report

SJVAPCD Project Data

Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
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No Projects To Report

SJVAPCD Project Data

Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
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No Projects To Report

SJVAPCD Project Data 2017[illegible]

Project Type Ag Engine

SJVAPCD Project Data 2017

Description New Electric Motor

[illegible]

Project Type Ag Engine

SJVAPCD Project Data 2017

Description Ag Diesel to Elec

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-33282-A	1	Pump	Diesel	1997	425	Tier 1	2014	400		2924			10	Kings
C-33282-A	2	Pump	Diesel	2001	325	Tier 1	2014	250		3099			10	Kings
C-34081-A	2	Pump	Diesel	2006	80	Tier 2	2016	50		800			1	San Joaquin
C-34081-A	2	Pump											9	San Joaquin
C-39316-A	1	Pump	Diesel	2004	375	Tier 2	2015	250		2500			1	Kern
C-39316-A	1	Pump											9	Kern
C-40177-A	1	Pump	Diesel	2005	110	Tier 2	2016	100		800			1	Madera
C-40177-A	1	Pump											9	Madera
C-40471-A	2	Pump	Diesel	2004	184	Tier 2	2016	150		1500			10	Fresno
C-40471-A	1	Pump	Diesel	2004	96	Tier 2	2016	150		2500			10	Fresno
C-40858-A	1	Pump	Diesel	2005	139	Tier 2	2016	125		1000			1	Merced
C-40858-A	1	Pump											9	Merced
C-45494-A	1	Pump	Diesel	2004	110	Tier 2	2016	100		1000			1	Madera
C-45494-A	1	Pump											9	Madera
C-36242-A	1	Pump	Diesel	2010	116	Tier 3	2014	75		1200			10	San Joaquin
C-38908-A	1	Pump	Diesel	2005	440	Tier 3	2015	400		3500			10	Kern
C-40700-A	1	Pump	Diesel	2013	250	Alt Nox	2015	200		1500			10	Kings
C-40701-A	1	Pump	Diesel	2012	250	Alt Nox	2015	250		1500			10	Tulare
C-41120-A	1	Pump	Diesel	2012	275	Interim	2015	200		2000			10	Kern
C-42131-A	1	Pump	Diesel	2008	110	Tier 3	2015	60		1250			10	San Joaquin
C-45496-A	1	Pump	Diesel	2010	260	Tier 3	2016	125		1000			10	Fresno
C-45496-A	2	Pump	Diesel	2010	173	Tier 3	2016	150		2500			10	Fresno
C-48062-A	1	Pump	Diesel	2005	630	Tier 3	2016	250		1500			10	Kern

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-43271-A	1	Agricultural	Diesel	1998	350		2011	500			12499		5	Tulare
C-43271-A	2	Agricultural	Diesel	2008	410								5	Tulare
C-41091-A	1	Agricultural	Diesel	1997	470		2016	550			96225		5	Fresno
C-41096-A	1	Agricultural	Diesel	1996	410		2013	500			37577		5	Fresno
C-41141-A	1	Hazardous Materials	Diesel	2003	525		2016	525			70646		5	Kings
C-41145-A	1	Aggregates	Diesel	2000	565		2015	550			55878		5	Stanislaus
C-41189-A	1	Agricultural	Diesel	2005	500		2011	560			22144		5	Fresno
C-41198-A	1	VAC Trailer	Diesel	1999	515		2015	455			41912		5	Fresno
C-41200-A	1	Aggregates	Diesel	2003	435		2012	425			104431		5	San Joaquin
C-41200-A	2	VAC Trailer	Diesel	2001	431		2011	425			53527		5	San Joaquin
C-41337-A	1	Agricultural	Diesel	2007	470		2011	560			86020		5	Kern
C-41458-A	1	Agricultural	Diesel	2003	550		2016	485			99908		5	Tulare
C-41619-A	1	Aggregates	Diesel	1998	525		2016	550			88531		5	San Joaquin
C-41696-A	1	Dairy	Diesel	1992	195		2015	250			30694		5	Kings
C-41698-A	1	Other	Diesel	2001	330		2012	455			62051		5	Tulare
C-41823-A	1	Agricultural	Diesel	1999	500		2011	560			64275		5	Tulare
C-41913-A	1	Agricultural Aerial Lift	Diesel	2005	500		2016	600			70117		5	Stanislaus
C-41915-A	1	Other	Diesel	1993	450		2011	560			22405		5	Merced
C-42059-A	1	Dairy	Diesel	2005	350		2014	485			57320		5	Kern
C-42077-A	1	Aggregates	Diesel	1994	466		2016	550			59301		5	San Joaquin
C-42095-A	1	Other Agricultural	Diesel	2006	470		2013	500			31735		5	San Joaquin
C-42122-A	1	Agricultural	Diesel	2001	450		2016	550			80874		5	Fresno
C-42220-A	1	Other	Diesel	1999	370		2015	485			41066		5	Kern
C-42261-A	1	Aggregates	Diesel	1997	500		2012	560			45718		5	San Joaquin
C-42291-A	1	Dump Truck	Diesel	1997	425		2012	560			58631		5	Alameda
C-42494-A	1	Aggregates	Diesel	1998	370		2016	550			52279		5	San Joaquin
C-42572-A	1	Aggregates	Diesel	2008	430		2016	500			87479		5	San Joaquin
C-42599-A	2	Agricultural	Diesel	2005	515		2016	500			117468		5	Kern
C-42604-A	1	Building or Construction Materials	Diesel	1987	475		2016	505			43070		5	San Joaquin
C-42606-A	1	Agricultural	Diesel	1998	400		2012	395			28507		5	San Joaquin

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-42607-A	1	Restaurant or Supermarket	Diesel	2003	435		2012	560			64094		5	Kern
C-42608-A	1	Hazardous Materials	Diesel	1996	450		2016	500			67686		5	Stanislaus
C-42614-A	1	Agricultural	Diesel	1998	550		2011	455			144478		5	San Joaquin
C-42618-A	1	Agricultural	Diesel	1998	410		2016	485			119108		5	Kern
C-42619-A	1	Building or Construction Materials	Diesel	2007	550		2015	450			60217		5	Tulare
C-42620-A	1	Agricultural	Diesel	2005	450		2016	560			105270		5	Tulare
C-42621-A	1	Other	Diesel	1991	300		2016	300			29828		5	Stanislaus
C-42651-A	1	Agricultural	Diesel	2002	330		2016	430			30939		5	Tulare
C-42672-A	1	Agricultural	Diesel	2001	500		2013	405			47871		5	Tulare
C-42688-A	1	Restaurant or Supermarket	Diesel	2003	430		2011	560			52305		5	Fresno
C-42694-A	1	Aggregates	Diesel	1997	475		2016	550			67449		5	Stanislaus
C-42724-A	1	Aggregates	Diesel	2000	470		2012	560			59155		5	San Joaquin
C-42727-A	1	Bulk Carrier	Diesel	1999	410		2016	525			113218		5	Fresno
C-42728-A	1	Bulk Carrier	Diesel	1994	410		2016	525			92935		5	Fresno
C-42798-A	1	Building or Construction Materials	Diesel	1993	470		2013	485			94697		5	Kings
C-42808-A	1	Restaurant or Supermarket	Diesel	2000	470		2012	560			37280		5	San Joaquin
C-42809-A	1	Agricultural	Diesel	2004	470		2012	560			50963		5	Kern
C-43037-A	1	Aggregates	Diesel	2007	427		2011	435			43675		5	San Joaquin
C-43045-A	1	Agricultural	Diesel	1996	500		2016	500			89484		5	Stanislaus
C-43086-A	1	Long Haul Trucking	Diesel	1994	470		2013	500			29499		5	Kern
C-43087-A	1	Other	Diesel	2006	355		2016	500			80678		5	San Joaquin
C-43088-A	1	Agricultural	Diesel	2007	450		2012	500			77490		5	Kern
C-43124-A	1	Bulk or Break Bulk	Diesel	2000	435		2016	550			111829		5	Fresno
C-43128-A	1	Agricultural	Diesel	2006	365		2011	485			58020		5	San Joaquin
C-43133-A	1	Agricultural	Diesel	2007	450		2011	500			144581		5	Tulare
C-43134-A	1	Agricultural	Diesel	2005	515		2016	525			105918		5	Tulare
C-43135-A	1	Restaurant or Supermarket	Diesel	2000	400		2013	505			110482		5	Merced
C-43136-A	1	Other	Diesel	1998	475		2016	550			64236		5	Stanislaus
C-43138-A	1	Agricultural	Diesel	2002	370		2011	560			52671		5	Tulare

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
C-43158-A	1	Hazardous Materials	Diesel	1997	435		2016	550			33142		5	San Joaquin
C-43159-A	1	Heavy Equipment or Metals	Diesel	1997	550		2016	525			31196		5	San Joaquin
C-43182-A	1	Building or Construction Materials	Diesel	2005	500		2016	505			65617		5	Kern
C-43191-A	1	Other	Diesel	2005	515		2012	560			38507		5	San Joaquin
C-43193-A	1	Other	Diesel	1991	515		2012	485			124025		5	Fresno
C-43194-A	1	Agricultural	Diesel	1998	450		2011	430			31005		5	Merced
C-43229-A	1	Other	Diesel	1992	470		2012	455			90397		5	Fresno
C-43324-A	1	Agricultural	Diesel	2005	525		2015	500			48429		5	San Joaquin
C-43325-A	1	Dairy	Diesel	2003	475		2013	455			84210		5	Fresno
C-43326-A	1	Dump Truck	Diesel	1998	431		2016	525			20428		5	Stanislaus
C-43333-A	1	Agricultural	Diesel	2002	470		2016	485			74474		5	Fresno
C-43334-A	1	Other	Diesel	2004	470		2013	505			99045		5	Stanislaus
C-44602-A	1	Aggregates	Diesel	2004	370		2016	400			28788		5	San Joaquin
C-44603-A	1	Aggregates	Diesel	2004	370		2016	400			23187		5	San Joaquin
C-44604-A	1	Aggregates	Diesel	2006	370		2016	400			39126		5	San Joaquin
C-44678-A	1	Aggregates	Diesel	2006	370		2016	400			56420		5	San Joaquin
C-44690-A	1	Aggregates	Diesel	2007	370		2016	400			55961		5	San Joaquin

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Appendix B
NRCS Combustion System Improvement Program Project Information

NRCS Project Data 2017

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
1142	3015	Tractor	Diesel	1975	69	Tier 0	2013	88	Tier 4 Alt Nox	250			10	Fresno
2014	4936	Tractor	Diesel	1995	81	Tier 0	2014	100	Tier 4 Alt Nox	100			10	San Joaquin
2015	4954	Tractor	Diesel	1985	108	Tier 0	2015	115	Tier 4 Alt Nox	700			10	San Joaquin
2016	4956	Tractor	Diesel	1972	123	Tier 0	2015	115	Tier 4 Alt Nox	250			10	San Joaquin
2017	2309	Tractor	Diesel	1990	171	Tier 0	2012	210	Tier 4 Alt Nox	850			10	Fresno
2018	1175	Tractor	Diesel	1972	108	Tier 0	2011	114	Tier 3	450			10	Fresno
2019	2314	Tractor	Diesel	1977	144	Tier 0	2011	173	Tier 3	800			10	Fresno
2020	2276	Tractor	Diesel	1980	77	Tier 0	2011	100	Tier 3	300			10	Fresno
2021	1002	Tractor	Diesel	1989	164	Tier 0	2011	205	Tier 4 Alt Nox	400			10	Kings
2022	5877	Tractor	Diesel	1990	75	Tier 0	2015	83	Tier 3	300			10	San Joaquin
2023	5968	Tractor	Diesel	1999	55	Tier 1	2015	57	Tier 4 Final	200			10	Kings
2024	5970	Tractor	Diesel	1995	81	Tier 0	2014	103	Tier 4 Alt Nox	500			10	Stanislaus
2025	5972	Tractor	Diesel	2001	98	Tier 1	2014	103	Tier 4 Alt Nox	400			10	San Joaquin
2026	5977	Tractor	Diesel	1959	64	Tier 0	2015	75	Tier 4 Final	1500			10	San Joaquin
2027	5979	Tractor	Diesel	1976	72	Tier 0	2015	90	Tier 4 Final	250			10	Fresno
2029	5981	Tractor	Diesel	1958	52	Tier 0	2015	57	Tier 4 Final	350			10	Fresno
2030	5983	Tractor	Diesel	1977	69	Tier 0	2014	85	Tier 4 Alt Nox	250			10	Fresno
2031	5985	Tractor	Diesel	1991	85	Tier 0	2015	106	Tier 4 Final	400			10	Tulare
2032	5987	Tractor	Diesel	1993	78	Tier 0	2015	71	Tier 4 Final	200			10	San Joaquin
2033	5802	Tractor	Diesel	1985	79	Tier 0	2014	85	Tier 4 Alt Nox	600			10	Stanislaus
2034	5800	Tractor	Diesel	1991	86	Tier 0	2014	125	Tier 4 Alt Nox	1000			10	Stanislaus
2035	5798	Tractor	Diesel	1992	94	Tier 0	2015	75	Tier 4 Final	225			10	Stanislaus
2036	5792	Tractor	Diesel	1982	98	Tier 0	2014	100	Tier 4 Alt Nox	300			10	Stanislaus
2037	5790	Tractor	Diesel	1998	102	Tier 1	2014	125	Tier 4 Alt Nox	1000			10	Stanislaus
2038	5796	Tractor	Diesel	1984	204	Tier 0	2015	115	Tier 4 Final	1000			10	Stanislaus
2039	5814	Tractor	Diesel	1985	53	Tier 0	2015	63	Tier 4 Final	200			10	Stanislaus
2040	5816	Tractor	Diesel	1988	73	Tier 0	2015	71	Tier 4 Final	380			10	Stanislaus
2041	5806	Tractor	Diesel	1987	80	Tier 0	2015	100	Tier 4 Final	1040			10	Stanislaus
2042	5804	Tractor	Diesel	1976	91	Tier 0	2015	110	Tier 4 Final	450			10	Stanislaus

NRCS Project Data 2017

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
2043	5810	Tractor	Diesel	2001	282	Tier 1	2015	252	Tier 4 Final	3500			10	Stanislaus
2044	5808	Tractor	Diesel	1978	98	Tier 0	2014	100	Tier 4 Alt Nox	350			10	Stanislaus
2045	5812	Tractor	Diesel	1997	99	Tier 0	2014	106	Tier 3	700			10	Stanislaus
2046	5824	Tractor	Diesel	1983	104	Tier 0	2014	100	Tier 4 Alt Nox	1000			10	San Joaquin
2047	5822	Tractor	Diesel	1981	108	Tier 0	2015	106	Tier 3	400			10	San Joaquin
2048	5820	Tractor	Diesel	1994	190	Tier 0	2014	220	Tier 4 Final	800			10	San Joaquin
2049	5818	Tractor	Diesel	1988	95	Tier 0	2014	100	Tier 4 Alt Nox	1500			10	San Joaquin
2050	5827	Tractor	Diesel	1955	68	Tier 0	2014	83	Tier 4 Alt Nox	450			10	San Joaquin
2051	5829	Tractor	Diesel	1974	84	Tier 0	2015	105	Tier 4 Alt Nox	450			10	San Joaquin
2052	5831	Tractor	Diesel	1968	150	Tier 0	2014	100	Tier 4 Alt Nox	700			10	San Joaquin
2053	5845	Tractor	Diesel	1955	80	Tier 0	2015	65	Tier 4 Final	50			10	Tulare
2054	5843	Tractor	Diesel	1972	94	Tier 0	2015	86	Tier 3	400			10	Tulare
2055	5841	Tractor	Diesel	1978	157	Tier 0	2015	150	Tier 4 Final	1000			10	Tulare
2056	5839	Tractor	Diesel	2000	120	Tier 1	2015	140	Tier 4 Final	1000			10	Tulare
2057	5837	Tractor	Diesel	1979	179	Tier 0	2014	180	Tier 4 Final	2000			10	Tulare
2058	5835	Tractor	Diesel	1999	92	Tier 1	2014	105	Tier 4 Alt Nox	500			10	Tulare
2059	5847	Tractor	Diesel	1991	73	Tier 0	2015	90	Tier 4 Final	150			10	Fresno
2060	5851	Tractor	Diesel	1967	122	Tier 0	2015	100	Tier 4 Final	1900			10	Fresno
2061	5849	Tractor	Diesel	1973	125	Tier 0	2015	1000	Tier 4 Final	1900			10	Fresno
2062	5853	Tractor	Diesel	1959	68	Tier 0	2015	55	Tier 4 Final	900			10	Fresno
2063	5855	Tractor	Diesel	1975	58	Tier 0	2015	65	Tier 4 Final	600			10	Fresno
2064	5857	Tractor	Diesel	1960	61	Tier 0	2015	55	Tier 4 Final	1900			10	Fresno
2065	5859	Tractor	Diesel	1970	63	Tier 0	2015	71	Tier 4 Final	350			10	San Joaquin
2066	5861	Tractor	Diesel	1989	88	Tier 0	2015	100	Tier 4 Alt Nox	350			10	San Joaquin
2067	5863	Tractor	Diesel	1989	88	Tier 0	2015	100	Tier 4 Alt Nox	350			10	San Joaquin
2068	5865	Tractor	Diesel	2003	81	Tier 1	2015	92	Tier 4 Alt Nox	1000			10	San Joaquin
2070	5870	Swather	Diesel	1999	110	Tier 1	2013	137	Tier 4 Alt Nox	1200			10	San Joaquin
2071	5872	Tractor	Diesel	1990	55	Tier 0	2015	63	Tier 4 Final	700			10	San Joaquin
2072	5881	Tractor	Diesel	1976	69	Tier 0	2015	71	Tier 4 Interim	250			10	San Joaquin

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Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
2073	5879	Tractor	Diesel	1976	77	Tier 0	2015	71	Tier 4 Interim	250			10	San Joaquin
2074	5883	Tractor	Diesel	1999	86	Tier 1	2015	101	Tier 3	600			10	San Joaquin
2075	5885	Tractor	Diesel	1983	90	Tier 0	2015	100	Tier 4 Final	500			10	San Joaquin
2076	5898	Tractor	Diesel	1975	70	Tier 0	2015	83	Tier 3	200			10	San Joaquin
2077	5896	Tractor	Diesel	1990	60	Tier 0	2015	75	Tier 4 Alt Nox	1500			10	San Joaquin
2078	5894	Tractor	Diesel	1978	162	Tier 0	2015	108	Tier 3	300			10	San Joaquin
2079	5892	Tractor	Diesel	1964	61	Tier 0	2015	57	Tier 4 Final	520			10	San Joaquin
2080	5890	Tractor	Diesel	1980	98	Tier 0	2015	101	Tier 3	550			10	San Joaquin
2081	5888	Tractor	Diesel	1977	70	Tier 0	2014	85	Tier 4 Alt Nox	2000			10	Kings
2082	5901	Loader	Diesel	1996	215	Tier 1	2015	200	Tier 4 Final	1680			10	Tulare
2083	5904	Tractor	Diesel	1989	161	Tier 0	2014	200	Tier 4 Final	1850			10	Tulare
2084	5906	Tractor	Diesel	1974	110	Tier 0	2015	93	Tier 4 Final	2600			10	Tulare
2085	5908	Tractor	Diesel	1978	210	Tier 0	2014	237	Tier 4 Final	2350			10	Tulare
2086	5910	Tractor	Diesel	1995	109	Tier 0	2015	100	Tier 4 Final	1400			10	Tulare
2087	5914	Tractor	Diesel	1985	81	Tier 0	2015	65	Tier 4 Final	350			10	Tulare
2088	5912	Tractor	Diesel	1972	67	Tier 0	2015	65	Tier 4 Final	400			10	Tulare
2089	5916	Tractor	Diesel	1977	187	Tier 0	2014	115	Tier 4 Alt Nox	425			10	Madera
2090	5918	Tractor	Diesel	1981	168	Tier 0	2016	115	Tier 4 Final	200			10	Madera
2091	5920	Tractor	Diesel	1983	81	Tier 0	2015	100	Tier 4 Final	400			10	Stanislaus
2092	5922	Tractor	Diesel	1988	81	Tier 0	2014	95	Tier 4 Alt Nox	1000			10	Stanislaus
2093	5924	Tractor	Diesel	1986	61	Tier 0	2015	55	Tier 4 Final	1500			10	Stanislaus
2094	5926	Tractor	Diesel	1983	50	Tier 0	2015	55	Tier 4 Final	400			10	Stanislaus
2095	5930	Tractor	Diesel	1965	61	Tier 0	2014	74	Tier 4 Final	300			10	Stanislaus
2096	5932	Tractor	Diesel	1995	91	Tier 0	2014	107	Tier 4 Alt Nox	400			10	Stanislaus
2097	5319	Tractor	Diesel	1990	81	Tier 0	2015	100	Tier 4 Alt Nox	275			10	San Joaquin
2098	5321	Tractor	Diesel	1991	102	Tier 0	2015	115	Tier 4 Alt Nox	900			10	San Joaquin
2099	5486	Tractor	Diesel	1973	61	Tier 0	2014	85	Tier 4 Alt Nox	200			10	San Joaquin
2100	5484	Tractor	Diesel	1981	108	Tier 0	2014	100	Tier 4 Alt Nox	300			10	San Joaquin
2101	5482	Tractor	Diesel	1978	96	Tier 0	2014	85	Tier 4 Alt Nox	150			10	San Joaquin

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Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
2102	5239	Other Agriculture	Diesel	1999	550	Tier 1	2014	685	Tier 3	1200			10	San Joaquin
2103	5312	Tractor	Diesel	1975	176	Tier 0	2015	115	Tier 4 Alt Nox	400			10	San Joaquin
2104	5150	Tractor	Diesel	1985	300	Tier 0	2014	150	Tier 4 Final	1000			10	San Joaquin
2105	4986	Tractor	Diesel	1991	108	Tier 0	2015	100	Tier 4 Final	960			10	San Joaquin
2106	5019	Tractor	Diesel	1985	130	Tier 0	2014	150	Tier 4 Alt Nox	700			10	San Joaquin
2107	5017	Tractor	Diesel	1980	165	Tier 0	2015	195	Tier 4 Final	1000			10	San Joaquin
2108	4996	Tractor	Diesel	1988	108	Tier 0	2014	100	Tier 4 Alt Nox	550			10	San Joaquin
2109	4998	Tractor	Diesel	1984	80	Tier 0	2014	100	Tier 4 Alt Nox	300			10	San Joaquin
2110	5179	Tractor	Diesel	1978	67	Tier 0	2014	63	Tier 4 Final	200			10	San Joaquin
2111	5165	Tractor	Diesel	1976	69	Tier 0	2015	83	Tier 3	1000			10	San Joaquin
2112	5163	Tractor	Diesel	1986	102	Tier 0	2014	115	Tier 4 Alt Nox	500			10	San Joaquin
2113	4934	Tractor	Diesel	1979	98	Tier 0	2014	100	Tier 4 Alt Nox	350			10	San Joaquin
2114	4942	Tractor	Diesel	1991	216	Tier 0	2014	170	Tier 4 Alt Nox	1095			10	San Joaquin
2115	4940	Tractor	Diesel	1991	216	Tier 0	2014	170	Tier 4 Alt Nox	1095			10	San Joaquin
2116	4938	Tractor	Diesel	1996	157	Tier 0	2014	170	Tier 4 Alt Nox	1095			10	San Joaquin
2117	4958	Tractor	Diesel	1992	104	Tier 0	2014	125	Tier 4 Alt Nox	750			10	San Joaquin
2118	4932	Tractor	Diesel	1981	126	Tier 0	2014	115	Tier 4 Alt Nox	300			10	San Joaquin
2119	4930	Tractor	Diesel	1972	174	Tier 0	2014	115	Tier 4 Alt Nox	200			10	San Joaquin
2120	4928	Tractor	Diesel	1955	95	Tier 0	2013	95	Tier 3	500			10	San Joaquin
2121	5099	Tractor	Diesel	1966	59	Tier 0	2014	71	Tier 4 Interim	150			10	San Joaquin
2122	5029	Tractor	Diesel	1989	96	Tier 0	2015	93	Tier 3	800			10	San Joaquin
2124	4960	Tractor	Diesel	1977	151	Tier 0	2015	114	Tier 4 Alt Nox	600			10	San Joaquin
2125	5021	Tractor	Diesel	1977	76	Tier 0	2014	85	Tier 4 Interim	200			10	San Joaquin
2126	4962	Tractor	Diesel	1970	63	Tier 0	2012	74	Tier 4 Interim	600			10	San Joaquin
2127	5023	Tractor	Diesel	1983	75	Tier 0	2012	88	Tier 4 Interim	180			10	San Joaquin
2128	4950	Tractor	Diesel	1988	63	Tier 0	2014	75	Tier 4 Interim	1200			10	San Joaquin
2129	4948	Tractor	Diesel	1988	63	Tier 0	2014	75	Tier 4 Interim	1200			10	San Joaquin
2130	4946	Tractor	Diesel	1989	63	Tier 0	2014	75	Tier 4 Interim	1200			10	San Joaquin
2131	4970	Tractor	Diesel	1989	63	Tier 0	2014	75	Tier 4 Interim	1200			10	San Joaquin

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Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
2132	4952	Tractor	Diesel	1988	63	Tier 0	2014	75	Tier 4 Interim	1200			10	San Joaquin
2133	4968	Tractor	Diesel	1989	63	Tier 0	2014	75	Tier 4 Interim	1200			10	San Joaquin
2134	4974	Tractor	Diesel	1989	63	Tier 0	2014	75	Tier 4 Interim	1200			10	San Joaquin
2135	4972	Tractor	Diesel	1989	63	Tier 0	2014	75	Tier 4 Interim	1200			10	San Joaquin
2136	4964	Tractor	Diesel	1991	70	Tier 0	2014	85	Tier 4 Alt Nox	1500			10	San Joaquin
2137	4966	Tractor	Diesel	1997	81	Tier 0	2013	100	Tier 4 Alt Nox	1400			10	San Joaquin
2138	5205	Tractor	Diesel	1991	97	Tier 0	2015	115	Tier 4 Alt Nox	500			10	San Joaquin
2139	5219	Tractor	Diesel	1994	88	Tier 0	2015	104	Tier 4 Alt Nox	500			10	San Joaquin
2140	5207	Tractor	Diesel	1997	95	Tier 0	2015	115	Tier 4 Alt Nox	1000			10	San Joaquin
2141	5215	Tractor	Diesel	1968	55	Tier 0	2015	63	Tier 4 Final	1000			10	San Joaquin
2142	5213	Tractor	Diesel	1973	73	Tier 0	2014	85	Tier 4 Final	1500			10	San Joaquin
2143	5209	Tractor	Diesel	1982	290	Tier 0	2015	310	Tier 4 Final	1000			10	San Joaquin
2144	5233	Tractor	Diesel	1970	126	Tier 0	2015	114	Tier 4 Alt Nox	950			10	San Joaquin
2145	5211	Tractor	Diesel	1967	61	Tier 0	2014	71	Tier 4 Final	400			10	San Joaquin
2146	5221	Tractor	Diesel	1983	81	Tier 0	2014	100	Tier 4 Alt Nox	1000			10	San Joaquin
2147	5223	Tractor	Diesel	1977	75	Tier 0	2014	85	Tier 4 Interim	500			10	San Joaquin
2148	5225	Tractor	Diesel	1977	75	Tier 0	2015	85	Tier 4 Interim	500			10	San Joaquin
2149	5231	Tractor	Diesel	1979	187	Tier 0	2015	125	Tier 4 Alt Nox	400			10	San Joaquin
2150	5991	Tractor	Diesel	1978	95	Tier 0	2014	115	Tier 4 Alt Nox	600			10	Fresno
2151	4944	Tractor	Diesel	1983	67	Tier 0	2014	75	Tier 4 Final	1095			10	San Joaquin
2152	5181	Tractor	Diesel	1983	80	Tier 0	2012	100	Tier 4 Alt Nox	200			10	San Joaquin
2153	5670	Tractor	Diesel	1973	76	Tier 0	2015	85	Tier 4 Final	1400			10	San Joaquin
2154	5965	Tractor	Diesel	1982	310	Tier 0	2015	360	Tier 4 Final	1200			10	Kern
2155	4561	Crawler Tractor or Dozer	Diesel	1967	120	Tier 0	2014	150	Tier 4 Alt Nox	500			10	San Joaquin
2156	5994	Tractor	Diesel	1970	105	Tier 0	2016	117	Tier 4 Final	400			10	Tulare
2157	2337	Tractor	Diesel	1966	115	Tier 0	2011	99	Tier 3	1250			10	Madera
2158	2290	Tractor	Diesel	1972	140	Tier 0	2012	155	Tier 3	300			10	Madera
2159	6000	Tractor	Diesel	1989	82	Tier 0	2016	100	Tier 4 Final	550			10	San Joaquin
2160	5998	Loader	Diesel	1995	158	Tier 0	2015	164	Tier 4 Final	1000			10	San Joaquin

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Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
2161	6002	Tractor	Diesel	1976	99	Tier 0	2015	100	Tier 4 Final	125			10	Tulare
2162	6005	Tractor	Diesel	1978	72	Tier 0	2016	85	Tier 4 Final	300			10	Merced
2163	6007	Loader	Diesel	1981	115	Tier 0	2016	153	Tier 4 Final	2100			10	Merced
2164	6009	Tractor	Diesel	1982	60	Tier 0	2016	60	Tier 4 Final	195			10	Tulare
2165	6011	Tractor	Diesel	1977	81	Tier 0	2016	108	Tier 4 Final	1000			10	Tulare
2166	6015	Tractor	Diesel	1991	109	Tier 0	2016	135	Tier 4 Final	700			10	Tulare
2167	6017	Tractor	Diesel	1985	97	Tier 0	2016	100	Tier 4 Final	1080			10	Madera
2168	6019	Tractor	Diesel	1999	95	Tier 1	2016	100	Tier 4 Final	1080			10	Madera
2169	2281	Tractor	Diesel	1965	110	Tier 0	2012	115	Tier 4 Alt Nox	500			10	Stanislaus
2170	6022	Tractor	Diesel	2001	92	Tier 1	2015	115	Tier 4 Final	450			10	Madera
2171	6090	Tractor	Diesel	1983	56	Tier 0	2015	63	Tier 4 Final	1000			10	San Joaquin
2172	6088	Tractor	Diesel	1975	63	Tier 0	2015	63	Tier 4 Final	1000			10	San Joaquin
2173	6086	Tractor	Diesel	1997	81	Tier 0	2015	92	Tier 4 Final	1000			10	San Joaquin
2174	6084	Tractor	Diesel	1974	67	Tier 0	2015	71	Tier 4 Final	1000			10	San Joaquin
2175	6082	Tractor	Diesel	1984	86	Tier 0	2016	71	Tier 4 Final	300			10	San Joaquin
2176	6080	Tractor	Diesel	1990	79	Tier 0	2016	71	Tier 4 Final	400			10	San Joaquin
2177	6078	Tractor	Diesel	1979	72	Tier 0	2016	85	Tier 4 Final	400			10	San Joaquin
2178	6076	Tractor	Diesel	1997	86	Tier 0	2016	125	Tier 4 Final	300			10	San Joaquin
2179	6070	Tractor	Diesel	1998	100	Tier 1	2015	117	Tier 4 Final	1000			10	San Joaquin
2180	6068	Tractor	Diesel	1996	88	Tier 0	2015	85	Tier 3	200			10	San Joaquin
2181	6066	Tractor	Diesel	1982	156	Tier 0	2016	101	Tier 3	700			10	San Joaquin
2182	6064	Tractor	Diesel	1997	81	Tier 0	2016	92	Tier 4 Final	1000			10	San Joaquin
2183	6024	Tractor	Diesel	1965	55	Tier 0	2015	57	Tier 4 Final	400			10	Madera
2184	6062	Tractor	Diesel	1965	81	Tier 0	2015	93	Tier 3	450			10	Stanislaus
2185	6060	Tractor	Diesel	1996	80	Tier 0	2015	101	Tier 3	1000			10	Madera
2186	6058	Tractor	Diesel	1994	104	Tier 0	2014	115	Tier 4 Alt Nox	1000			10	Madera
2187	6056	Tractor	Diesel	1986	102	Tier 0	2014	115	Tier 4 Alt Nox	1000			10	Madera
2188	6054	Tractor	Diesel	1999	95	Tier 1	2013	115	Tier 4 Alt Nox	700			10	Madera
2189	6046	Tractor	Diesel	1995	360	Tier 0	2016	370	Tier 4 Final	1680			10	Kings

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Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
2190	6051	Tractor	Diesel	1962	96	Tier 0	2015	100	Tier 4 Alt Nox	750			10	Madera
2191	6049	Tractor	Diesel	1974	72	Tier 0	2016	85	Tier 4 Final	400			10	San Joaquin
2192	6044	Tractor	Diesel	1961	68	Tier 0	2016	85	Tier 4 Final	1000			10	Tulare
2193	6042	Tractor	Diesel	1964	89	Tier 0	2016	105	Tier 4 Alt Nox	1000			10	Tulare
2194	6040	Tractor	Diesel	1966	110	Tier 0	2015	112	Tier 4 Alt Nox	1000			10	Tulare
2195	6032	Tractor	Diesel	1997	115	Tier 1	2015	88	Tier 4 Final	550			10	Tulare
2196	6036	Tractor	Diesel	1990	280	Tier 0	2015	370	Tier 4 Alt Nox	1000			10	San Joaquin
2197	6034	Tractor	Diesel	1975	162	Tier 0	2016	115	Tier 4 Final	500			10	San Joaquin
2198	6030	Tractor	Diesel	1988	95	Tier 0	2011	105	Tier 3	600			10	Tulare
2199	6028	Tractor	Diesel	1976	55	Tier 0	2016	58	Tier 4 Final	450			10	Tulare
2200	6026	Tractor	Diesel	1998	120	Tier 1	2015	141	Tier 4 Final	1200			10	Kings
2201	6094	Tractor	Diesel	1974	67	Tier 0	2014	83	Tier 3	500			10	Stanislaus
2202	6096	Tractor	Diesel	1977	72	Tier 0	2016	77	Tier 4 Final	275			10	Stanislaus
2203	6092	Tractor	Diesel	1991	70	Tier 0	2016	63	Tier 4 Final	1000			10	San Joaquin
2204	6074	Tractor	Diesel	1997	86	Tier 0	2016	125	Tier 4 Alt Nox	300			10	San Joaquin
2205	2271	Tractor	Diesel	1979	77	Tier 0	2012	87	Tier 4 Interim	300			10	Stanislaus
2206	6136	Tractor	Diesel	2000	88	Tier 1	2014	100	Tier 4 Alt Nox	300			10	Stanislaus
2207	6134	Tractor	Diesel	1990	90	Tier 0	2014	100	Tier 4 Final	300			10	Stanislaus
2208	6130	Tractor	Diesel	1986	88	Tier 0	2011	97	Tier 4 Interim	800			10	Tulare
2209	6128	Tractor	Diesel	1985	145	Tier 0	2016	155	Tier 4 Final	600			10	San Joaquin
2210	6126	Tractor	Diesel	1997	81	Tier 0	2015	92	Tier 4 Final	1400			10	San Joaquin
2211	6124	Tractor	Diesel	1985	204	Tier 0	2016	92	Tier 4 Final	1400			10	San Joaquin
2212	6122	Tractor	Diesel	1972	92	Tier 0	2016	92	Tier 4 Final	1100			10	San Joaquin
2213	6120	Tractor	Diesel	1997	81	Tier 0	2015	92	Tier 4 Final	1400			10	San Joaquin
2214	6118	Tractor	Diesel	1993	84	Tier 0	2016	90	Tier 4 Final	1200			10	San Joaquin
2215	6114	Tractor	Diesel	2004	91	Tier 2	2016	100	Tier 4 Final	750			10	San Joaquin
2216	6112	Tractor	Diesel	1997	92	Tier 1	2015	108	Tier 3	400			10	San Joaquin
2217	6107	Tractor	Diesel	1985	73	Tier 0	2015	71	Tier 4 Final	416			10	San Joaquin
2218	6099	Combine	Diesel	1982	220	Tier 0	2016	295	Tier 4 Final	1100			10	Tulare

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Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
2219	6138	Tractor	Diesel	1991	81	Tier 0	2014	100	Tier 4 Alt Nox	300			10	Stanislaus
2220	6140	Orchard Sweeper	Diesel	1998	125	Tier 0	2015	129	Tier 3	550			10	Stanislaus
2221	6142	Tractor	Diesel	1963	65	Tier 0	2016	71	Tier 4 Final	200			10	San Joaquin
2222	6144	Tractor	Diesel	1982	216	Tier 0	2016	270	Tier 4 Final	900			10	San Joaquin
2223	6146	Tractor	Diesel	1995	102	Tier 0	2016	115	Tier 4 Final	1200			10	San Joaquin
2224	6148	Tractor	Diesel	1987	63	Tier 0	2016	74	Tier 4 Final	800			10	San Joaquin
2225	6150	Tractor	Diesel	1982	108	Tier 0	2016	130	Tier 4 Final	700			10	San Joaquin
2226	6152	Tractor	Diesel	1986	115	Tier 0	2016	130	Tier 4 Final	700			10	San Joaquin
2227	6154	Tractor	Diesel	1989	88	Tier 0	2015	100	Tier 4 Alt Nox	420			10	San Joaquin
2228	6156	Tractor	Diesel	1983	95	Tier 0	2015	115	Tier 4 Alt Nox	300			10	San Joaquin
2229	6158	Tractor	Diesel	1974	68	Tier 0	2015	71	Tier 4 Final	375			10	San Joaquin
2230	6160	Tractor	Diesel	1974	84	Tier 0	2016	100	Tier 4 Final	400			10	San Joaquin
2231	6162	Tractor	Diesel	1978	300	Tier 0	2016	310	Tier 4 Final	2000			10	San Joaquin
2232	6187	Tractor	Diesel	1998	91	Tier 1	2014	107	Tier 4 Alt Nox	600			10	Stanislaus
2233	6185	Tractor	Diesel	1979	69	Tier 0	2016	85	Tier 4 Final	200			10	Stanislaus
2234	6183	Tractor	Diesel	1983	85	Tier 0	2015	107	Tier 4 Final	300			10	Stanislaus
2235	6181	Tractor	Diesel	1995	120	Tier 0	2014	125	Tier 4 Alt Nox	1000			10	Stanislaus
2236	6179	Tractor	Diesel	1988	168	Tier 0	2016	175	Tier 4 Final	1200			10	Stanislaus
2237	6177	Tractor	Diesel	1994	71	Tier 0	2015	71	Tier 4 Final	1020			10	Stanislaus
2238	6175	Tractor	Diesel	1996	100	Tier 1	2016	120	Tier 4 Final	800			10	Stanislaus
2239	6172	Tractor	Diesel	1982	63	Tier 0	2015	71	Tier 4 Final	300			10	Stanislaus
2240	6170	Tractor	Diesel	1987	97	Tier 0	2016	110	Tier 4 Final	700			10	Stanislaus
2241	6168	Tractor	Diesel	1987	97	Tier 0	2016	110	Tier 4 Final	700			10	Stanislaus
2242	6164	Tractor	Diesel	1993	81	Tier 0	2014	100	Tier 4 Final	300			10	Stanislaus
2243	6191	Tractor	Diesel	1995	97	Tier 0	2016	100	Tier 4 Final	450			10	Stanislaus
2244	6189	Tractor	Diesel	1964	76	Tier 0	2015	71	Tier 4 Final	250			10	Stanislaus
2245	2073	Tractor	Diesel	1973	173	Tier 0	2009	210	Tier 3	1600			10	San Joaquin
2246	2102	Crawler Tractor or Dozer	Diesel	1967	93	Tier 0	2011	310	Tier 3	800			10	San Joaquin
2247	4440	Loader	Diesel	1979	115	Tier 0	2013	74	Tier 4 Interim	800			10	Stanislaus

Project Type NRCS EQIP

NRCS Project Data 2017

Description Vehicle Replacement

Project #	Unit ID	Primary Function	Fuel Type	Baseline Yr	Old HP	Old Tier	New Eng Yr	New HP	New Tier	Annual Usage (Hours)	Annual Usage (Miles)	Annual Usage (Fuel)	Project Life (Yrs)	Location (County)
1898	2473	Tractor	Diesel	1986	180	Tier 0	2010	150	Tier 3	1200			10	Tulare
1898	2474	Tractor	Diesel	1984	155	Tier 0				1200			10	Tulare
2028	5974	Tractor	Diesel	1958	91	Tier 0	2013	350	Tier 4 Alt Nox	500			10	San Joaquin
2028	5976	Tractor	Diesel	1972	130	Tier 0				500			10	San Joaquin
2069	5867	Tractor	Diesel	1996	108	Tier 0	2015	100	Tier 4 Alt Nox	500			10	San Joaquin
2069	5868	Tractor	Diesel	1991	103	Tier 0				500			10	San Joaquin
2123	5130	Tractor	Diesel	1978	77	Tier 0	2014	84	Tier 4 Alt Nox	600			10	San Joaquin
2123	5990	Tractor	Diesel	1970	69	Tier 0				600			10	San Joaquin

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