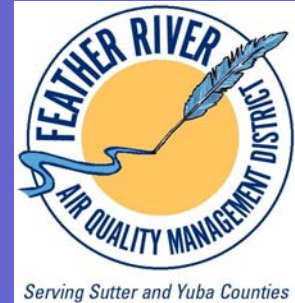


Feather River Air Quality Management District



Public Workshop

Diesel Engines used in Agricultural Operations

January 30, 2008 – Yuba County

February 7, 2008 – Sutter County

Overview

- **Presentation Overview**
 - Stationary ATCM-Agricultural Engines Requirements
 - Registration Program
 - Registration Fees
 - Grants Available
 - Questions/Discussions

Stationary ATCM - Ag Engine Requirements

- Overview
 - Background
 - ATCM Requirements for Ag Engines
 - Questions

Background

- The Airborne Toxic Control Measure for Stationary CI Engines (Stationary ATCM) was adopted to :
 - Reduce Diesel Particulate Matter (DPM) from stationary engines
 - DPM or “Soot” is a Toxic Air Contaminant (TAC)
 - Reduce public exposure and health impacts
- Stationary ATCM became effective on December 8, 2004
 - Includes provision for “New” Ag Engines
- Stationary ATCM was amended in November 16, 2006.
 - Includes emission standards for In-Use Ag Engines
 - Includes guidelines for a registration program
 - Effective on October 18, 2007
- California Health & Safety code requires the District to adopt, implement and enforce ATCM
 - Adopted Rule 11.1, Rule 4.16 and Rule 7.14 on October 1, 2007.

ATCM Requirements for Ag Engines

- **Applicability**
 - Stationary Engines used in Agricultural Operations (> 50 bhp)
 - Portable Engines used in Agricultural Operations (> 50 bhp)
 - Source-owned Portable engine are subject to the Stationary ATCM
 - Portable engine from a rental company are subject to the Portable Engine ATCM
 - Registered in PERP
 - Permitted by the District

ATCM Requirements for Ag Engines

- Exemptions from Registrations
 - Self propelled or mobile equipment (i.e. Tractors, Trucks)
 - Ag Wind Machines is exempt from ATCM requirements.
 - Engine registered Statewide Portable Equipment Registration Program (PERP)
 - Engine that are subject to District permitting requirement

ATCM Requirements for Ag Engines

- Exemptions from Emissions Standard
 - An emergency Standby Engine or a remotely located engine is exempted from emissions standard requirements, but requires to be registered
 - Emergency Standby Engine is installed for the primary purpose of providing electrical power or mechanical work during an emergency use and is not the source of primary power
 - Remotely located engine means an Ag engine that is
 - Located in a federal attainment/unclassified area for PM and ozone (Yuba County and North of Sutter County)
 - Located more than one-half mile from any residential area, school or hospitals
 - Remotely located engine does not apply to Portable Engines.

FRAQMD Attainment Areas



ATCM Requirements for Ag Engines

- Fuel Requirements
 - CARB Diesel Fuel
 - Alternative diesel fuel that is:
 - Biodiesel
 - Biodiesel blend that does not meet the definition of a CARB diesel fuel
 - Fischer-Tropsch Fuel
 - An emulsion of water in diesel fuel
 - Alternative diesel fuel that meets the requirement of the Verification Procedure
 - Alternative fuel (such as natural gas or propane)
 - CARB Diesel Fuel and additives that meets the requirement of Verification Procedures

ATCM Requirements for Ag Engines

- **New Ag Engines Requirements**
 - “New” is defined as any CI Engine installed at a facility after January 1, 2005, including engines that are relocated from an off-site location after January 1, 2005
 - Except for an engine or replacement for an engine used in agricultural operations that is relocated within the same facility or to another facility under the same owner or operator for use in agricultural operations

New Stationary Agricultural Engines > 50 bhp

Horsepower	PM Standard (g/bhp-hr)	HC, NO _x , NMHC+NO _x , & CO Standards (g/bhp-hr)
All gen-sets > 50 hp	The more stringent of PM ≤ 0.15 or off-road tier standard of engine with same power rating	Off-road CI Engine Certification Standard for an off-road engine of the model year and maximum rated power of engine or Tier 1 standard if no limits have been established.
Other > 50 hp and <100 hp	The more stringent of PM ≤ 0.30 or off-road tier standard of engine with same power rating	
Other ≥100 hp and <175 hp	The more stringent of PM ≤ 0.22 or off-road tier standard of engine with same power rating	
Other ≥175 hp	The more stringent of PM ≤ 0.15 or off-road tier standard of engine with same power rating	

ATCM Requirements for Ag Engines

- In-Use Ag Engines Requirements
 - Noncertified Engines
 - Noncertified Engine means a CI engine that is not certified to off-road CI Certification Standard, (Tier 1, 2, 3 or 4 Emission Standards)
 - Noncertified Engine are also referred to as “Tier 0” Engines
 - Certified Engines
 - Certified Engine means a CI engine that is certified to meet the Tier 1, Tier 2, Tier 3, or Tier 4 Off-road CI Certification Standards.
 - Current standards are:
 - 50-750 bhp: Tier 3 Emission Standards
 - 750+ bhp: Tier 2 Emission Standards

In-Use Non-Certified Agricultural Engines > 50 bhp

Horsepower (hp)	Application	Compliance Date on or after Dec. 31	PM Standard (g/hp-hr)	HC, NO _x , NMHC+NO _x , & CO Standards (g/bhp-hr)
50 < hp < 75	Gen-Sets	2015	0.02	Off-road CI Engine Certification Standard for an off-road engine of the model year and maximum rated power. If no standards exist, then Tier I apply.
	Other	2011	0.30	
75 ≤ hp < 100	Gen-Sets	2015	0.01	
	Other	2011	0.30	
100 ≤ hp < 175	Gen-Sets	2015	0.01	
	Other	2010	0.22	
175 ≤ hp ≤ 750	All	2010	0.15	
hp > 750	All	2014	0.075	

In-Use Tier Certified Agricultural Engines > 50 hp

Horsepower (hp)	Compliance Date on or after Dec. 31	PM Standard (g/hp-hr)	HC, NO _x , NMHC+NO _x , & CO Standards (g/bhp-hr)
$50 < \text{hp} < 75$	The later of 2015 or 12 years after initial installation.	0.02	Off-road CI Engine Certification Standard for an off-road engine of the model year and maximum rated power of engine or Tier 1 standard if no limits have been established.
$75 \leq \text{hp} < 175$	The later of 2015 or 12 years after initial installation.	0.01	
$175 \leq \text{hp} \leq 750$	The later of 2014 or 12 years after initial installation.	0.01	
$\text{hp} > 750$	The later of 2014 or 12 years after initial installation.	0.075	

Questions?

- Applications are due March 1, 2008.
- For more information:
 - ARB Stationary Engine Information Website
 - Stationary Engine Program
<http://www.arb.ca.gov/diesel/statport.htm>
 - Stationary In-use Agricultural Engines
<http://www.arb.ca.gov/diesel/ag/inuseag.htm>
- Questions?

Registration Program – Rule 4.16

- What engines need to be registered?
- Overview of District Forms
- Associated Fees
- Inspection

What engines need to be registered?

- Stationary or Portable engines which are:
 - Diesel/Biodiesel fueled
 - Greater than 50 hp
 - Used exclusively in agricultural operations
- Examples
 - Well Pump engines, Generator Set engines, Compressor engines,

Which engines do not need to be registered?

- Engines exempt from registration:
 - Engines which provide motive power to equipment. (i.e. tractors, backhoes, loaders, skidsteers, excavators, etc)
 - Gasoline, propane & natural gas fueled engines.
 - Engines less than or equal to 50 bhp
 - Rental engines used in agricultural operations (Engine is likely subject to Statewide Portable Equipment Regulation)
 - Agricultural Wind Machines
 - Equipment which holds registration with Air Resources Board

Application Forms

- FORM 1
 - Application for Registration Cover Sheet
- FORM 2
 - Stationary Engine Information
- FORM 3
 - Portable Engine Information
- Available Online at:
 - <http://www.fraqmd.org/permits-ag/ag-home.htm>

Application for Registration Cover Sheet

- Required for each owner/operator
 - One cover sheet can be used for single owner/operator with multiple engines.
- Application Deadline
 - March 1, 2008 for engines purchased or installed before January 1, 2008.
 - Within 90 days for engines purchased or installed after January 1, 2008.

FORM 1 – Sample

Feather River Air Quality Management District
 Application for Certificate of Registration
 Compression Ignition Engines Used in
 Agricultural Operations



938 14th Street, Suite 275
 Marysville, CA 95901
 (530) 634-7659
 FAX (530) 634-7660
 www.fraqmd.org

David A. Valler, Jr.
 Air Pollution Control Officer

Form 1 – General Information				
1. Registration to be Issued To (Owner/Operator or Company Name):				
2. Street Address:	Street Address			Suite/Unit #
	City	State	ZIP Code	
3. Mailing Address: (if different from above)	Street Address/PO Box			Suite/Unit #
	City	State	ZIP Code	
4. Contact Name:	Title:			
Phone: ()	Fax: ()			
E-mail Address:				
5. General Nature of Business: <input type="checkbox"/> Field Crop <input type="checkbox"/> Row Crop <input type="checkbox"/> Orchard <input type="checkbox"/> Dairy <input type="checkbox"/> Timber Harvesting <input type="checkbox"/> Other:				
6. Change of Ownership: Previous Owner: _____ Emission Unit Registration No.: _____				
7. For initial registration, attach appropriate supplemental form for each engine: <input type="checkbox"/> FORM 2 – Stationary Engine Information Number of Engines # _____ <input type="checkbox"/> FORM 3 – Portable Engine Information Number of Engines # _____				
	No. of Units	Fee	Total	Fees Payable To: FRAQMD 938 14 th Street, Suite 275 Marysville, CA 95901
Each Emissions Unit Application Fee	X	\$113.00	\$	
Change of Ownership	X	\$31.00	\$	
	Total		\$	
Additional Fees will be assessed and invoiced upon issuance of registration, cancellation/withdrawal of registration application, and/or upon denial of application. The additional fees will be assessed pursuant to District Rule 7.14 at the currently hourly rate to cover costs of assessment, processing, and evaluation of the application. Hearing Board costs are additional. These fees do not include State costs incurred pursuant to Section 44380 of the California Health and Safety Code.				
District Hourly Fee (as of 7/11/2006)				\$70.00/hour
I certify under penalty of perjury under the laws of the State of California, based on information and belief formed after reasonable inquiry, that the information contained in this application, composed of the forms and attachments, is true, accurate, and complete, and that I am the responsible official: RESPONSIBLE OFFICIAL SIGNATURE: _____ NAME (PRINTED): _____ TITLE: _____ DATE: _____ FOR FRAQMD USE ONLY RECEIPT # _____ DATE _____ RECEIVED BY _____ CERTIFICATE APPLICATION # _____				
Application for Certificate of Registration/Ag CI Engines – FORM 1			Approved/Revised 10/18/2007	

Stationary vs. Portable

- Stationary engines include:
 - Engines fixed to one location
 - Portable engines used at one location & subsequently moved to a storage site while not in use
 - Portable engines which reside at one location for 12 consecutive months or more
- Portable engines
 - Engines which operate at various locations throughout the year and that are capable of being transported from one location to another via wheels or skid.

FORM 2 – Sample

Feather River Air Quality Management District

Form 2 – Stationary Engine Information	
Stationary engines include: 1) Engines fixed to a single location; 2) Engines that operate at a single location for more than twelve (12) consecutive months; and 3) Engines that operate at a single location on a seasonal basis.	
For non-stationary or portable engines, please fill out FORM 3 – Portable Engine Information	
1) Owner/Operator/Company Name _____	
2) Manufacturer's Maximum Brake Horsepower Rating:	HP@ _____ RPM _____
3) Date of Installation or of Proposed Installation: _____	
4) Year of Manufacture: _____	(or approximate age of engine _____ yrs old)
5) Engine Manufacturer: _____	
6) Engine Model: _____	7) Serial Number: _____
8) Engine Designation: _____ EPA/CARB Engine Family Number: _____	
9) Estimated Annual Hours of Operation: _____	Hours/year _____
10) Type and Estimated Amount of Fuel Used: _____ Gallons/Year	
<input type="checkbox"/> Biodiesel (specify blend): _____	Gallons/Year _____
<input type="checkbox"/> CARB Diesel	Gallons/Year _____
<input type="checkbox"/> Other, Please specify: _____	Gallons/Year _____
11) Is engine equipped with hour meter or fuel flow meter? <input type="checkbox"/> Hour Meter <input type="checkbox"/> Fuel Flow Meter	
12) Work Performed by Engine: <input type="checkbox"/> Generator Set <input type="checkbox"/> Water Pump Drive <input type="checkbox"/> Compressor Drive <input type="checkbox"/> Other: _____	
13) Location (Supply at least ONE of the following Description):	
<input type="checkbox"/> Latitude/Longitude: _____ deg. _____ min _____ sec Northing, OR Decimal _____ _____ deg. _____ min _____ sec Easting, OR Decimal _____	
<input type="checkbox"/> Universal Trans Meridian (UTM): Zone 10 _____ E _____ N	
<input type="checkbox"/> PLSS data: Town: _____ Range: _____ Section: _____	
<input type="checkbox"/> Parcel/Plot Number: _____	
<input type="checkbox"/> Address, town, names and distance/direction to nearest crossroads: _____	
<input type="checkbox"/> Other: _____	
14) Is engine located within ¼ mile of a residential area, school, and/or hospital? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please specify: <input type="checkbox"/> Residence <input type="checkbox"/> School <input type="checkbox"/> Hospital Estimated Distance: _____ Feet	
Address/Location of Receptor(s): _____	
15) Printed Name of Owner/Operator: _____	Title: _____
16) Signature of Owner/Operator: _____	Date: _____

FORM 3 – Sample

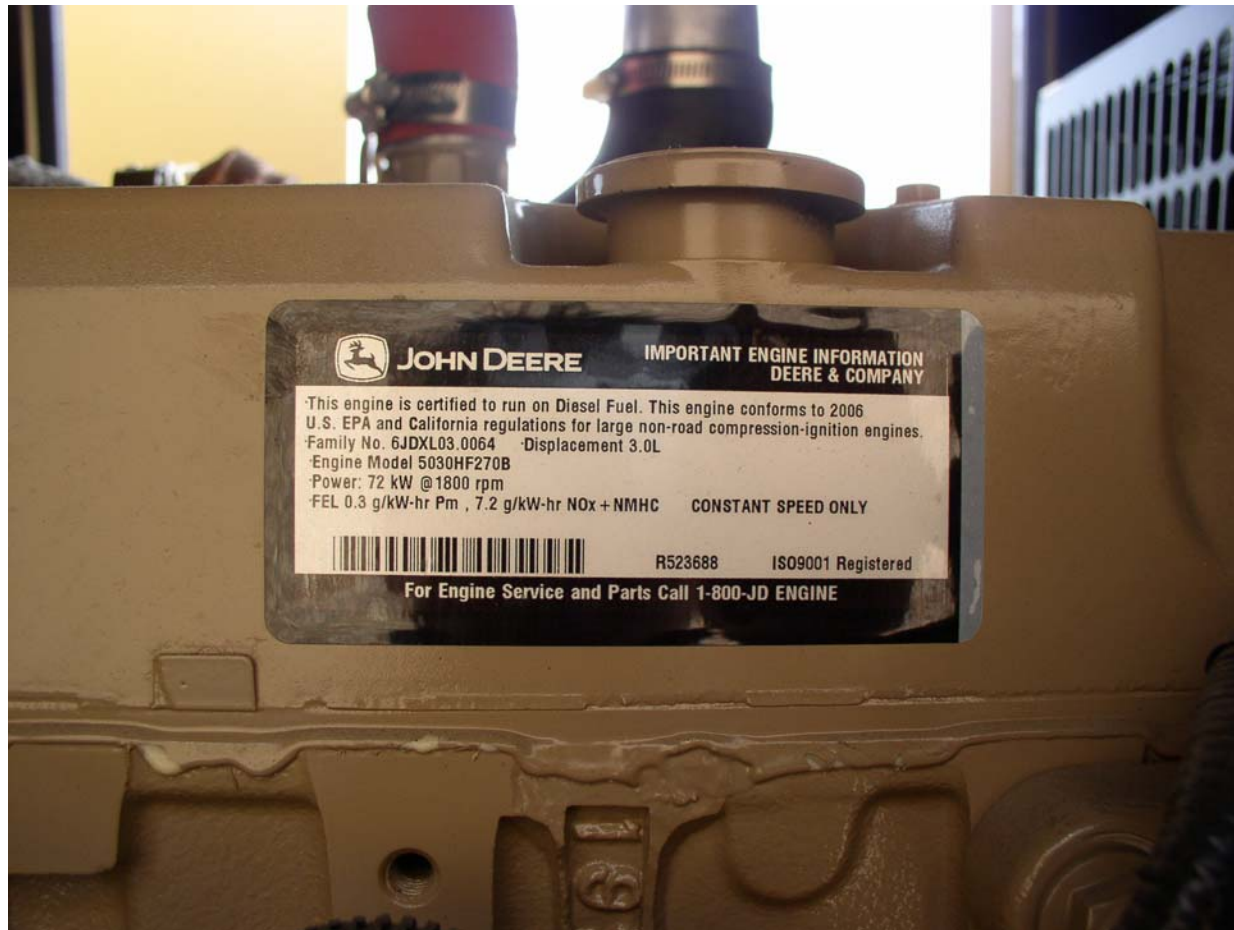
Feather River Air Quality Management District

Form 3 – Portable Engine Information			
<p>"Portable" means designed and capable of being carried or moved from one location to another. Indicia of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.</p> <p>Engines not considered portable include engines that operate at one location on a seasonal basis and engines that will remain at one location for more than twelve (12) consecutive months.</p> <p>For Engines that are not considered portable, please complete FORM 2 – Stationary Engine Information</p> <p>Note: Tractor and truck engines used primarily to drive/propel mobile equipment and vehicles are not subject to District registration requirements or the Portable Airborne Toxic Control Measure.</p>			
1) Owner/Operator/Company Name			
2) Manufacturer's Maximum Brake Horsepower Rating:		HP@	RPM
3) Date of Installation or of Proposed Installation:			
4) Year of Manufacture:		(or approximate age of engine yrs old)	
5) Engine Manufacturer:			
6) Engine Model:		7) Serial Number:	
<input type="checkbox"/> Tier "0" (non-certified / pre-1996) <input type="checkbox"/> Tier 1 <input type="checkbox"/> Tier 2 <input type="checkbox"/> Tier 3 <input type="checkbox"/> Tier 4			
8) Engine Designation: EPA/CARB Engine Family Number:			
9) Estimated Annual Hours of Operation:		_____ Hours/year	
10) Type and Estimated Amount of Fuel Used:		<input type="checkbox"/> Biodiesel (specify blend): _____ Gallons/Year	
<input type="checkbox"/> CARB Diesel Gallons/Year		<input type="checkbox"/> Other, Please specify: _____ Gallons/Year	
11) Is engine equipped with hour meter or fuel flow meter? <input type="checkbox"/> Hour Meter <input type="checkbox"/> Fuel Flow Meter			
12) Work Performed by Engine:			
<input type="checkbox"/> Generator Set <input type="checkbox"/> Water Pump Drive <input type="checkbox"/> Compressor Drive <input type="checkbox"/> Other: _____			
13) County and address/location in which engine is stored when not in use:			
<input type="checkbox"/> Yuba Location: _____		<input type="checkbox"/> Sutter Location: _____	
14) Does engine operate entirely within Yuba and/or Sutter counties?			
<input type="checkbox"/> Yes <input type="checkbox"/> No, Please list other counties: _____			
15) Printed Name of Owner/Operator:		Title:	
18) Signature of Owner/Operator:		Date:	

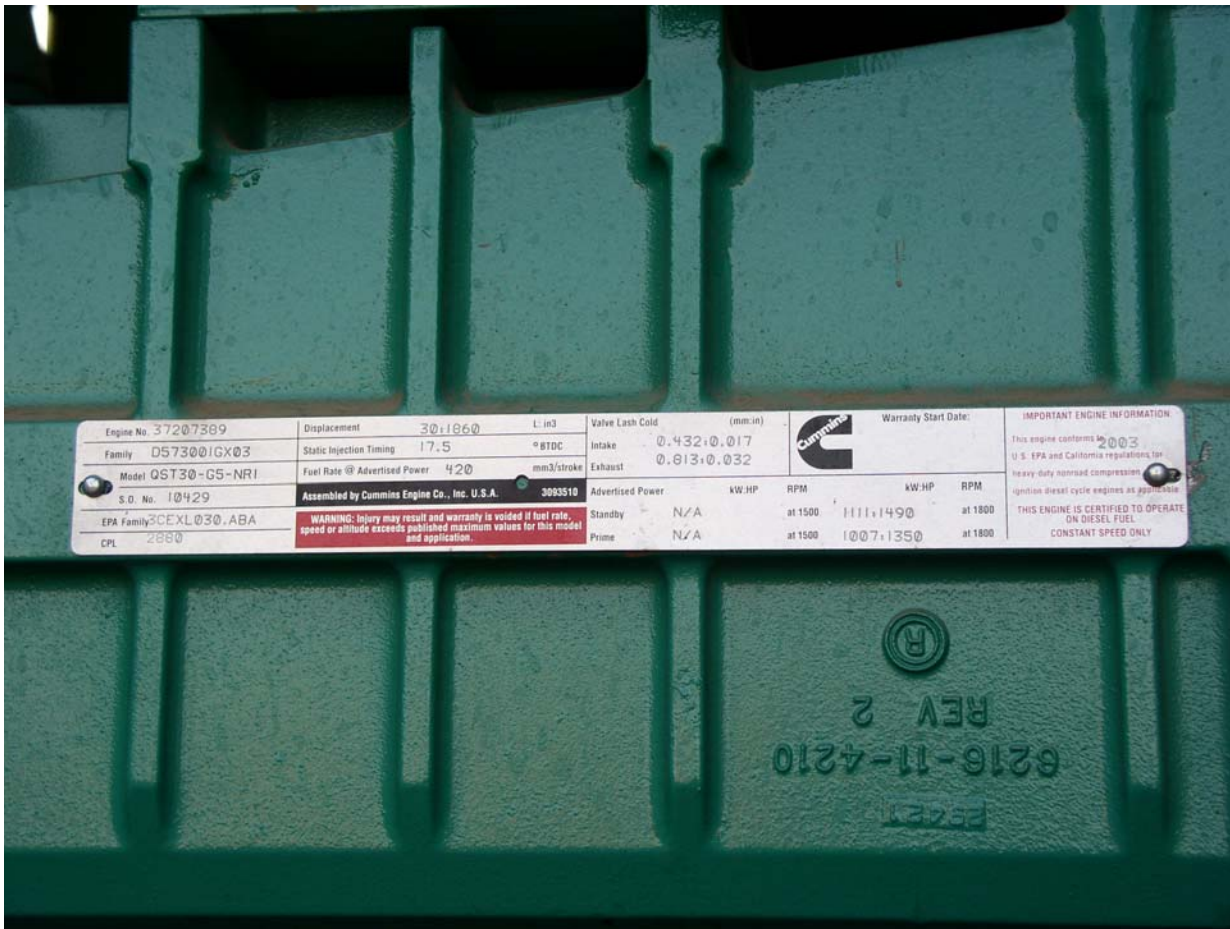
Engine Information

- EPA Engine Family Number
 - Example: 2JDXL08.1036
 - 2: Model Year 2002
 - JDX: John Deere
 - L: Non-road CI Family
 - 08.1: 8.1 liter displacement
 - 036: Engine family sequential characters
- <http://www.arb.ca.gov/msprog/offroad/cert/cert.php>
- Usually Found On engine block with Make and Model Information

Engine Information



Engine Information



Registration Fees

Initial Application Fees

Application Filing	\$113.00 per engine
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Evaluation/Inspection	\$70.00 per hour
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Annual Registration Fees

Annual Renewal	\$81.00 per engine
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Evaluation/Inspection	\$70.00 per hour
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Inspection Fee/Schedule

- Hourly fee covers district time for evaluation of application and inspection and will be invoiced upon issuance of registration.
- District will inspect engine after evaluation is complete and prior to issuing registration
 - Verify application information & that hour meter or fuel meter is installed.
- District will not inspect engines annually.
- District may inspect engines as part of complaint response or because of an action required by the registration.

Questions?

- For application questions and help, call or email:
 - Matt Baldwin (mbaldwin@faqmd.org)
 - (530) 634-7659 ex. 308, or
 - David Yang (dyang@faqmd.org)
 - (530) 634-7659 ex. 208

Funding is Available Through the Carl Moyer Grant Program

- Accepting Applications Now
- Replace your uncontrolled (pre-1996) engine with:
 - a new, emission certified diesel engine
 - Or a new electric motor
- Last year for 100+ hp pre-1996 diesel engines to receive funding.
- 50-100 hp diesel engines have until 2009.
- Tier I and Tier II engines are eligible until 2011.

To Apply/More Information:

- Applications online: www.fraqmd.org/moyer
- Pick up at office: 938 14th Street, Marysville
- Call Sondra Andersson: (530) 634-7659 ext 210
 - Email: sandersson@fracmd.org