

Conservation Services (NCRS) anticipates making some funding available under the Environmental Quality Incentives Program (EQIP) to the extent practicable for replacement of existing agricultural engines with engines meeting the requirements of our nonroad regulations.

#### What Is EPA Doing?

We are revising the definition of nonroad engines to include certain diesel engines that are used in agricultural operations in California that would otherwise not meet the current definition of nonroad engine. As a result, a diesel engine used in agricultural operations in California that does not meet the current definition, *e.g.* because it is used in a stationary application, would still be considered a nonroad engine if it is part of an engine family certified by the engine maker to the applicable nonroad engines standards, and at least some of the engines in that engine family meet the current definition of nonroad engine.

Internal combustion engines are often manufactured for use in many different applications. Engines that are part of an engine family that has been certified by EPA to meet applicable nonroad engine standards may get used in either portable or stationary applications. Under the current definition, only the engines used in mobile applications meet the definition of nonroad engine and those used in stationary applications do not. Under this revision, an engine in that certified engine family that is used in agricultural operations in California would continue to meet the definition of nonroad irrespective of its use as long as some engines in the engine family are used in portable applications.

This rule change does not require farmers in California to replace existing engines with new engines certified to the nonroad standards. However, for farmers who have already made this replacement or who do so in the future, their engines will be treated by EPA as nonroad engines, subject to the mobile source requirements established under Title II of the Clean Air Act, rather than as stationary engines subject to the stationary source requirements of Title I and V of the Clean Air Act. Those engines that are not replaced will continue to be regarded as stationary sources subject to those requirements.

#### Why Is EPA Making This Change?

As discussed below, EPA believes that allowing diesel agricultural engines in California to be classified as nonroad engines if they are certified to those standards will result in more emission

reductions than would otherwise occur if such engines remained subject to the stationary source requirements and that these reductions will occur more quickly than if these engines continue to be regulated as stationary sources.

Engines used in stationary applications on farms in California have previously not been regulated under the stationary source requirements of the Clean Air Act, including Title V requirements. Effective November 14, 2002, such engines became subject to the Title V permit program pursuant to EPA's regulations at 40 CFR part 71.<sup>4</sup> Title V, however, does not require subject sources to reduce emissions from the source's operation. The main goal of Title V is to improve a source's compliance with all Clean Air Act requirements to which it is subject. New Source Review requirements of the Clean Air Act requires emission controls be evaluated and possibly installed for new major sources or existing major sources which perform a significant modification. While New Source Review and other requirements under Title I or Title V (*e.g.*, Reasonably Available Control Technology requirements for major sources of NO<sub>x</sub> required under Title I) may lead to emission reduction for some engines in the future, it is unclear to what extent agricultural engines in California would be required to reduce emissions as a result of such requirements. Finally, even assuming potential future emission controls for some of these engines that could result from stationary source requirements, it is not expected that such controls would result in greater total emission reductions compared to what would result from using engines meeting the applicable nonroad emission standards.

In contrast, regulations for diesel nonroad engines establish federal emission standards for these engines and a pre-production certification procedure to ensure compliance with the standards, and include various other compliance and enforcement measures. These standards require substantial control of emissions and are generally designed to "achieve the greatest degree of emission reduction achievable through the application of [available] technology \* \* \*, giving appropriate consideration to \* \* \* cost \* \* \* noise, energy and safety factors." See Clean Air Act section 213(a)(3). These regulations have been in effect beginning with the 1996 model year. The so called "Tier 2" version of these regulations is currently being phased in and will result in a further improvement

in emission performance. More stringent "Tier 3" standards will be phased in beginning with the 2006 model year. Additionally, EPA is developing another set of more stringent nonroad emission standards which we anticipate will very substantially improve the emission performance of new nonroad engines in the future. This sequence of increasingly more stringent emission regulations for these new nonroad diesel engines will assure that the nonroad requirements result in the maximum feasible emission controls we can anticipate for at least the next decade or so. If engines meeting these nonroad standards are extensively used in agricultural applications, maximum feasible emission reductions should result. This regulatory amendment is intended to encourage the widespread use of such nonroad engines for all agricultural pump applications in the State of California.

#### What Is Current Emission Performance of These Stationary Engines?

We estimate that approximately 3,700 stationary diesel engines are used in agricultural applications in California, primarily for powering irrigation pumps such as those used for crop irrigation and for tending livestock. Some of these are quite old, dating as far back as 1960. However, between 1999 and 2001 approximately 1,500 engines were replaced through a state financed program known as the Carl Moyer program. Under the Carl Moyer program, existing stationary diesel engines were replaced with new engines of similar power and performance that were also certified to meet the nonroad emission standards. It is estimated that this program reduced oxides of nitrogen (NO<sub>x</sub>) emissions statewide in California by over 1,750 tons per year. The remaining approximately 2,200 stationary engines are estimated to have average emission levels approximately 8.76 g/bhp-hr, which is about twice as much as the emissions of a nonroad engine manufactured to current (*i.e.*, Tier 2) nonroad standards (4.8 to 4.9 g/hp-hr NO<sub>x</sub> + HMHC for engines between 100–750 hr). Current nonroad standards also require emissions of particulate matter (PM) to be approximately 40 percent lower than Tier 1 levels.

#### What Is the Impact of These Stationary Source Emissions on Air Quality?

Currently, agricultural stationary source diesel engines represent one of the most significant sources of NO<sub>x</sub> emissions from agricultural activities in California. Particularly in major farming areas such as the San Joaquin Valley, NO<sub>x</sub> emissions from stationary diesel engines represent approximately 5% of

<sup>4</sup> Federal Register 63551 (October 15, 2002)