

**2003 Annual Report on the Air Resources Board
Expenditure of Nonvehicular Source Fees
for Fiscal Year 2002/2003**

Background

The California Clean Air Act of 1988 (the "Act," Stats. 1988, c. 1568) requires attainment of State ambient air quality standards by the earliest practicable date. As part of that mandate, the Act requires the Air Resources Board (ARB) and the air pollution control and air quality management districts (districts) to take various actions to reduce air pollution from motor vehicles, industrial facilities, and other sources of emissions.

Section 39612 of the Health and Safety Code (H&SC), which was originally enacted as part of the Act, authorizes the ARB to require districts to collect fees from nonvehicular sources within their jurisdiction for the purpose of recovering costs of additional State programs related to those sources. H&SC section 39612 requires that those fees be collected from nonvehicular sources authorized by district permits to emit above a certain threshold of any nonattainment pollutant or its precursors. The total amount of fees collected was limited to \$3 million in any fiscal year (FY) through FY 2002/2003.

In order to implement H&SC section 39612, the ARB adopted regulations in 1989 for fiscal year 1989-1990 (Sections 90800-90803, Title 17, California Code of Regulations). In subsequent years, ARB adopted regulations to continue the implementation of H&SC section 39612 that were applicable for each year through FY 2002/2003.

As required by H&SC section 39612, this annual report discusses fees collected pursuant to this section and the expenditure of those fees for FY 2002/2003.

Fiscal Year 2002-2003 Expenditures of Nonvehicular Source Fees

During FY 2002-2003, the ARB used the fees collected from nonvehicular sources to develop and enforce emission reduction strategies for nonvehicular sources. In addition, the ARB used the fees to develop the technical information and air quality plans necessary to address these sources. Table 1 provides a summary of the fees expended in five major nonvehicular source program categories as described below:

- Enforcement – These activities include conducting inspections of stationary sources, investigating complaints, issuing notices of violations, evaluating district variances for compliance with regulatory requirements, obtaining and analyzing evidence to determine the date of onset, cause, and extent of violation of air pollution regulations, and reviewing district rules for enforceability.

- **Monitoring and Laboratory** – These activities include measuring ambient levels of gaseous and particulate criteria and toxic air pollutants. These efforts are used in determining which areas of the State are nonattainment for the State and federal ambient air quality standards, and are used for statewide ambient air toxic monitoring to facilitate the identification and control of toxic air contaminants in California.
- **Research** – These activities include investigating the reactivity of air pollutants and the atmospheric processes that contribute to ozone and particulate matter formation, conducting vulnerable populations and children’s health studies, and reviewing/updating ambient air quality standards based on research results.
- **Technical Support and Planning** – These activities include maintaining and updating emission inventories, conducting air quality modeling to determine the population exposure to ozone and particulate matter and to determine the effectiveness of ozone and particulate matter attainment strategies, and developing and implementing air quality plans for ozone and particulate matter.
- **Rule Development and District Oversight** – These activities include managing a database of Best Available Control Technologies (BACT) to facilitate the transfer of technologies among districts facing growth from similar sources, helping districts comply with federal permit requirements, developing areawide emission inventories to better target district resources, providing guidance and technical resources to evaluate feasibility and effectiveness of regulatory actions, developing suggested control measures to assist districts in developing regulations, and evaluating, developing and implementing regulatory measures to reduce emissions.

Table 1

Expenditure of Fees for Fiscal Year 2002-2003

Activity	Expenditure
Enforcement	\$318,000
Monitoring and Laboratory	\$613,000
Research	\$334,000
Technical Support and Planning	\$699,000
Rule Development and District Oversight	\$1,036,000
Total Expenditures	\$3,000,000

Status of Efforts to Address Priority Activities

In addition, H&SC section 39612(c) gives priority for expenditure of nonvehicular source fees to five specified activities. The ARB's efforts to address these activities are summarized below.

1. Identifying air quality-related indicators that may be used to measure or estimate progress in the attainment of State ambient air quality standards – ARB initially identified air quality-related indicators in July 1993 and published a description of them in a September 1993 document, *Guidance for Using Air Quality-Related Indicators in Reporting Progress in Attaining the State Ambient Air Quality Standards*. The ARB staff developed three progress reporting indicators – expected peak day concentration, population-weighted exposure, and area-weighted exposure. Since then, each year, ARB staff has analyzed ambient air quality data to calculate these indicators. Every three years, ARB sends the indicators to each of the districts for use in their triennial assessments of progress toward attainment of the State ambient air quality standards. Most recently, ARB provided the 2002 indicators to Districts in summer 2003. Since 1999, ARB has also published the indicators for the five most-populated California air basins (South Coast, San Francisco Bay Area, San Joaquin Valley, San Diego, and Sacramento Valley) as part of the annual *California Almanac of Emissions and Air Quality* (Almanac).

H&SC section 39607(f) requires that ARB continue to evaluate the prospective application of air quality indicators, and upon a finding that adequate air quality modeling capability exists, identify indicators which may be used by districts in lieu of the annual five percent emission reductions mandated by H&SC section 40914(a). Prospective indicators have not yet been developed because adequate air quality modeling capability for this application does not yet exist. However, ARB staff are continually evaluating and improving our modeling efforts.

2. Establishing a uniform methodology for assessing population exposure to air pollutants – As discussed above, ARB established a population-weighted exposure indicator in its 1993 document, *Guidance for Using Air Quality-Related Indicators in Reporting Progress in Attaining the State Ambient Air Quality Standards*. ARB reports population-weighted exposure to districts for use in their triennial progress assessments and publishes population-weighted exposure for five air basins as part of its annual Almanac.

3. Updating the emission inventory– The ARB compiles, maintains, and is constantly working to improve a very detailed and complex inventory of air pollution sources. Emission inventory improvement is an integral part of ARB's air quality planning and regulatory development processes. It is also an important ARB research category. Pursuant to H&SC section 39607.3, ARB staff periodically update the inventory and bring it to the Board for approval either as a stand alone item or as part of

the Board's approval of air quality plans. ARB also publishes the inventory for all California air basins annually as part of the Almanac. In 2003, ARB completed development of extensive new inventories for Northern and Central California to support ozone attainment modeling and planning. In addition, staff scrutinizes and improves the inventory as part of the development of each new air quality plan for both State and federal air quality standards. For example, the ARB staff worked with the districts in FY 2002/2003 to improve and prepare the inventories for the 2003 South Coast Air Quality Management Plan and the San Joaquin Valley plan to attain the federal PM10 standard.

Emission inventories are also verified as part of the planning process. Day-specific inventories are prepared and input into air quality models. Then, the predicted pollutant concentrations from the air quality models are compared to actual observed pollutant concentrations from an air pollution episode. This comparison can help point to discrepancies in the emission inventory.

Recent improvements to ARB's stationary/area source inventory include estimates of biogenic emissions, as well as to the methodologies used to estimate emissions from architectural coatings, livestock husbandry, and stationary diesel engines. Also, in FY 2002/2003, ARB surveyed thousands of households to determine the population and usage of lawn and garden equipment and tested a number of pieces for exhaust and evaporative emissions.

Finally, ARB has also funded a number of research projects related to improving our understanding of the emission inventory. FY 2002/2003 projects included studies on source apportionment of fine and ultrafine particulate matter, evaporative emissions from offroad equipment, weekend versus weekday activity, and emissions from industrial coatings and solvents.

4. Identifying, assessing, and establishing the mitigation requirements for the effects of interbasin transport of air pollutants – The Act directs ARB to assess transport, defined as the contribution of ozone and ozone precursors in upwind regions on ozone concentrations that violate the State ozone standard in downwind regions. In addition, the Act directs the ARB to establish mitigation requirements for upwind districts commensurate with their contributions to the air quality problems in downwind regions.

Over the last decade, the ARB has published several assessments of transport relationships between air basins and regions in California. The assessments identify transport couples consisting of an upwind area (source of transported emissions) and a corresponding downwind area (receptor of transported emissions). ARB also determines whether the contribution of transported pollutants is overwhelming, significant, inconsequential, or a combination thereof. The ARB approved the initial assessment in 1990, and updated the assessment in 1993, 1996, and 2001.

ARB adopted transport mitigation regulations for the districts in 1990 and amended them in 1993. The 1990 regulations established mitigation requirements for upwind areas found to have either overwhelming or significant impacts on downwind areas.

The primary mitigation requirement was application of Best Available Retrofit Control Technology. In May 2003, the ARB adopted amendments that strengthened the mitigation requirements. These amendments include a new requirement that upwind districts adopt all feasible measures for the ozone-forming pollutants, independent of the upwind district's attainment status. In addition, they include a new requirement that "no net increase" thresholds for new source review permitting programs in upwind areas be as stringent as those in downwind districts.

5. Updating the State board's guidance to districts on ranking control measures for stationary sources based upon the cost-effectiveness of those measures in reducing air pollution – In 1990, ARB issued guidance entitled *Cost-effectiveness: District Options for Satisfying the Requirements of the Clean Air Act*. The guidance discusses methods for determining cost-effectiveness of district controls and ranking controls versus one another. Since publication of the guidance, ARB staff have worked with the districts as they have developed their own cost-effectiveness procedures. In FY 2002/2003, for example, ARB staff reviewed and provided input on the South Coast Air Quality Management District's socioeconomic analysis guidelines and methodology. The ARB has also worked with the California Air Pollution Control Officers Association to develop a list of all feasible measures for use by the districts in their California Clean Air Act plans for ozone.