



The Florida Senate

Interim Project Report 98-48

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Committee on Transportation

Senator Roberto Casas, Chairman

CLEAN AIR ACT: MOBILE SOURCES

SUMMARY

In 1998, the Florida Legislature enacted section 325.2135, Florida Statutes, prohibiting the Department of Highway Safety and Motor Vehicles (DHSMV) from entering into or extending any contracts relating to Florida's motor vehicle inspection program (MVIP) without specific legislation in 1999. Section 325.2135, F.S., does, however, allow DHSMV to enter into contracts for biennial inspection of vehicles 5 model years or older if no specific legislation is passed during the 1999 legislative session. DHSMV was also directed to employ an independent consultant to develop Request for Proposal specifications and to report its recommendations to the Legislature by January 1999. The Department selected Sierra Research, Inc., as the consultant to conduct the study.

The Sierra Research report, combined with additional information from the Department of Environmental Protection's (DEP) existing air quality monitors, gives the Legislature the benefit of additional information in 1999. The Sierra Research report recommends the implementation of enhanced testing procedures, biennial inspections, and a four model year exemption. This recommendation would result in an inspection fee of \$22.55. The consultant stated this scenario represents the best combination of increased program benefits and reduced cost burden on affected motorists.

Air quality monitor readings from 1997, 1998, and 1999 will be averaged for a determination of compliance with the 1997 air quality standard in 2000. Based on 1997 and 1998 monitor readings it appears likely that Escambia and Hillsborough counties will be in non-attainment. Dade, Broward, and Palm Beach counties which were previously in non-attainment may, under the new measurements, be in attainment. Duval county's status will depend largely on whether the effects of this summer's fires are discounted. Pinellas and Orange counties may or may not be in attainment depending upon the 1999 monitor readings.

Unfortunately, the Legislature continues to lack certain information which would enable it to make a fully informed decision during the 1999 legislative session. Specifically, there is continuing uncertainty relating to the following: actual air monitor readings for 1999; the Environmental Protection Agency's (EPA) determination on Florida's request to waive monitor readings impacted by this summer's unprecedented forest fires; EPA's pending rule on low sulphur fuel; and EPA's position regarding possible sanctions for non-compliance.

This report examines developments and information since the 1998 legislative session for use in determining what MVIP specific legislation, if any, is needed during the 1999 legislative session.

BACKGROUND

Ozone is the major mobile source pollutant in the air quality standards established by the EPA. It is formed by a combination of Nitrous Oxides and volatile organic compounds. Nitrous Oxides, the more problematic component of ozone in Florida, are emitted from motor vehicles, power plants, and other sources of combustion. The Florida Department of Transportation estimates motor vehicles account for 34 percent of Florida Nitrous Oxides emissions. Volatile organic compounds are emitted from a variety of sources, including motor vehicles, chemical plants, refineries, factories, consumer and commercial products, and other industrial sources. The Department of Transportation estimates motor vehicles account for 27 percent of the volatile organic compounds in Florida.

The Federal Clean Air Act requires each state to have a plan for meeting federal air quality requirements. Florida's state implementation plan allocates a portion of the allowable levels among contributing polluters, the two main contributors being motor vehicles and stationary sources such as power plants and factories. The plan also sets out what Florida is doing to ensure each polluter only uses its "share" of the total pollutants allowed.

Six Florida counties were not in full attainment of EPA air quality standards in 1987. Since 1987, Dade, Broward, Palm Beach, Hillsborough, Pinellas, and Duval counties have implemented a MVIP. The inspections are conducted by three private contractors in centralized stations in accordance with the Florida Clean Outdoor Air Act, Chapter 325, Florida Statutes. The current program utilizes “basic” testing, or testing vehicles at idle. Each year more than 5 million inspections are conducted. According to DHSMV, the overall inspection failure rate has declined steadily since program inception. The failure rate is highest for older model year vehicles. By 1996, each of the above mentioned counties was redesignated by the EPA as an area in attainment under EPA’s 1987 air quality standard.

Transportation Conformity

In addition to showing how Florida will currently maintain the budgeted emissions levels, the Department of Transportation and Metropolitan Planning Organizations must demonstrate how the emissions budget will be met in future years. When planning future transportation projects these entities must ensure projects do not cause the relevant program area to exceed the established emissions budget. This means that even if Florida is designated in current attainment, it may still be out of conformity with its plan over time due to projected increases in emissions. Nonconformity can result in delays or stoppage of transportation projects which are crucial to Florida’s economic development efforts.

The impact of future transportation projects on conformity is projected through modeling. Variables used in these models include vehicle miles traveled, improvements in technology, how clean the fleet is or will be, efforts to maintain reduced emissions, etc. Models provide the best estimates of what tonnage of emissions will be produced by planned transportation projects. Critical elements of the conformity determination include the following:

- ▶ Conformity with the emissions budget must be predicted out to 20 years.
- ▶ Conformity with the 20-year plan is checked every three years. This was last done in late 1995. It must be done again in 1999.
- ▶ Conformity of Metropolitan Planning Organization’s Transportation Improvement Plans is checked once a year. If these phases are not

consistent with the long range plan, the plan must be revised.

According to the Department of Transportation, 100 percent of the state met the transportation conformity requirements in 1996. However, in some instances the margin of conformity was very narrow. For example, several of the counties stayed within their budgets by tenths of a ton. According to DEP, without the MVIP several counties would have likely failed to meet their budgeted emission requirements.

Changes in Federal Air Quality Standards

The Department of Environmental Protection has been reviewing the readings from the state-wide air quality monitors, especially the readings from the monitors in the three MVIP areas which incorporate the six counties. The EPA’s 1997 ambient air quality standard is a level equivalent to 85 parts per billion averaged over any 8 hour period. The fourth highest ozone readings from 1997, 1998, and 1999 will be averaged for a determination in 2000 as to whether attainment of this new standard has been met. In July of 1999 the Governor is required to submit to EPA a list of areas projected to be in non-compliance. The EPA Administrator must designate the resulting non-attainment by the year 2000. In 2003 the state is required to submit a revised state implementation plan to EPA that demonstrates how the state will address the areas determined to be in non-attainment. The state implementation plan must be implemented by 2005.

In 1997, EPA reduced its air quality standard for the allowed ozone pollution from 120 parts per billion to 85 parts per billion. The EPA’s revised 1997 standard not only lowered the level of tolerated pollution, but it is also measured the levels differently, making predictions difficult, but not impossible. These forecasts are based on the data available for 1997 and 1998. With two of the variables to be averaged available, the necessary readings for 1999 can be determined. In some counties, the 1999 readings will have to be substantially lower than in years past in order for a program area’s average readings to meet attainment of EPA’s 1997 standard. Preliminary indications are that the three south Florida counties, Palm Beach, Dade and Broward, may be in attainment under EPA’s new air quality standard. Pinellas, Orange and Duval counties may fall into non-attainment depending on 1999 readings. Hillsborough and Escambia counties are the most likely counties to revert to non-attainment.

The Department of Environmental Protection has developed a website which posts readings from the air quality monitors. The website can be accessed through the Legislature's home page; *Online Sunshine* at <http://www.leg.state.fl.us/>.

Recent Legislative Action

During the 1998 legislative session, many of the regulations intended to give guidance to states for implementation of EPA's 1997 changes to the air quality standards were not available. In addition, there was uncertainty regarding likely air monitoring readings for 1998 and 1999. The current MVIP contracts under Florida's Clean Outdoor Air Act will expire in April and May of 2000. The Legislature recognized that while a determination regarding the future operation of the MVIP would have to be made in an environment of some uncertainty, additional information regarding the availability of options was needed.

In order to avoid committing to a program without knowledge of which program was necessary, the Legislature enacted s. 325.2135, F.S., which required DHSMV to hire a consultant to develop Request for Proposals specifications, along with an estimated range of fees and report its recommendations to the Legislature by January 1999.

Section 325.2135, F.S., further prohibited DHSMV from entering or extending any contracts until after the 1999 session. If no program specific legislation is passed in 1999, DHSMV is authorized to enter into one or more contracts for a biennial motor vehicle emissions inspection program. This program must exempt the latest four model years and use the current test known as "basic" which tests emissions while the vehicle is in idle. The fee is to remain at \$10 per inspection unless an increase is approved through the budget amendment process in Chapter 216, Florida Statutes, with notice being provided to the chairmen of the Transportation and Natural Resource committees in both the House and Senate, along with the Senate Ways and Means and the House Appropriations committees.

METHODOLOGY

In order to assess options relating to the MVIP, Senate staff reviewed the Sierra Research report and DHSMV's accompanying draft Request for Proposals. In addition, Senate staff, with the assistance of DEP, surveyed other states currently operating a MVIP. Staff also continued to dialogue with officials from various state and federal

agencies concerning new developments that impact the MVIP.

FINDINGS

Several significant developments have occurred since the conclusion of the 1998 legislative session. Sierra Research completed its evaluation of the various MVIP options. The resulting report recommends implementation of enhanced testing equipment and procedures (ASM 5015), biennial inspections, and model year exemptions. In addition, the 1998 air monitor readings have been analyzed. In general, the readings were higher than projected, due largely to adverse climatic conditions affecting the state this summer. However, there is continuing uncertainty surrounding several EPA requirements and Florida's likely status relative to those requirements. The survey of other states indicates most states with a MVIP are presently grappling with many of the same issues as Florida.

The Sierra Research Report

Sierra Research issued its report on Florida's MVIP in December 1998. Thirteen separate analysis scenarios were modeled for the years 1997 and 2005 for each MVIP county. These scenarios included a "no-MVIP" alternative as well as combinations of annual and biennial inspection frequencies, exemption of the four most recent model years from testing, the existing MVIP test procedures, and a series of testing options. While the Sierra Research report offers a multitude of recommendations, the report is limited to what type of program, if any, should operate within the existing program areas. Key findings and recommendations are summarized as follows:

- Current emissions projections rely on overly optimistic assumptions. Decisions on the future of the MVIP need to be made in spite of future uncertainty in emissions projections and attainment forecasts.
- Due to a need for additional emission reductions beyond those provided by the current MVIP, ASM 5015 testing should be implemented as part of the next contract cycle. The ASM test requires testing the vehicle at a constant speed on a chassis dynamometer. This test is much more effective in identifying vehicles with high Nitrous Oxide emissions. Additional enhancements should be implemented as part of the ASM 5015 to improve the test and minimize impacts on motorists.

- Proposed changes in test volumes will have minimal air quality impact but could have a significant adverse impact on public convenience. Lower test volumes will have a dramatic impact on inspection fees. The existing inspection fee cap of \$10/test is inadequate to fund required or desired MVIP modifications.
- The existing MVIP contracts should be renegotiated since there is inadequate time to procure new contracts. The state should be prepared if necessary to suspend the MVIP for as long as 12 months.
- The design of the Request for Proposals needs to be simplified into one MVIP scenario with a sufficiently long contract period (5 years).
- The current level of state oversight of the MVIP is inadequate to assure proper contractor performance, motorist compliance and overall program effectiveness. Due to the technical expertise necessary to effectively bargain with the MVIP contractors, an expert should be retained.

The report notes that while inspection fee costs would be increased significantly on a per-test basis (from \$10 to \$22.55) under the recommended option, annual test fees would increase by less than 15 percent due to the implementation of biennial inspections. The report further states that by exempting vehicles that rarely fail their inspections, this option focuses the cost of the program on those vehicles that are more likely to fail.

Additional MVIP Considerations

Sierra Research's report is based on the current scenario which could be skewed by three new developments: (1) the new measurements may allow the emissions plans for south Florida to eliminate the MVIP, depending on 1999's air quality readings; (2) DEP's report to the EPA may be answered with relief from monitor readings believed affected by the summer fires; and (3) EPA's rule on low sulfur fuels, originally expected by December 1998, but now projected to be released in February 1999, may mandate fuel low enough in sulfur content to reduce Nitrous Oxides, the key component of ozone, and therefore, reduce or eliminate the need for a MVIP.

The DHSMV letter to the Senate President accompanying the report stated that 18 to 20 months are necessary to obtain permits, build inspection stations, and test the equipment. Therefore, a potential gap exists

between the time existing contracts expire in April and May of 2000 and when new services can be provided. DHSMV suggests extending its contracts not to exceed one year in order to issue a Request for Proposal, receive competitive proposals and to enter into contracts for MVIP's. The DEP indicated this option may be favorable to the risk of a 12 month suspension in program operations.

Survey Findings

The surveys sent to states with an operational MVIP indicate Florida is not the only state unsure of what action to take relative to its MVIP. Specifically, uncertainty surrounding EPA rules, lack of adequate time for program implementation, and software compatibility were three of the most commonly cited problems.

In evaluating comparable emission testing programs in other states, staff determined the majority of state programs are operated on a program-area basis rather than state-wide. County employees conduct the testing in 17 states that responded, while private contractors conduct the testing in 10 states. Seven states reported use of the "basic" idle test, while 14 states reported use of enhanced testing. Twelve states reported usage of annual testing, while 6 reported that testing is conducted biennially. The average inspection fees charged vary from \$12 to \$25. The average costs of repairing failed vehicles ranged from \$15 to \$265.

Discussion of Options

As previously noted, there are a number of unresolved questions that could impact policy decisions relating to the MVIP. Fortunately, some additional information has come to light since last legislative session which is helpful in evaluating policy options to address this issue. The following section describes various alternatives and the possible impact on Florida's conformance with EPA requirements. The estimates of costs are based on information provided by the Center for Urban Transportation Research and the Sierra Research report.

Traffic control methods can provide improvements in air quality but often require life style changes which alter individual behavior patterns. These methods include: High-Occupancy-Vehicle lanes, Telecommuting, Compressed Work Week, Flexible Work hours, Staggered Work Hours, Traffic Signals, Ridesharing, and Park-and-Ride Lots. While these methods may assist in preventing economic development restrictions

resulting from air pollution, they may have independent economic impacts by placing restrictions on personal or business behaviors.

New fuel technologies could provide a reduction in Nitrous Oxide emissions by up to 15 percent if used throughout a region. This would provide significant benefits in emission reduction. While usage of this fuel could result in some increased cost to motorists, the cost increase is projected to be minor. DEP reports that the pending EPA rule on low sulphur fuel could have a major impact on emission models for the year 2004 and beyond.

Elimination of the current motor vehicle inspection program would provide cost and time savings totaling \$21 per vehicle to motor vehicle operators in the six counties currently being tested. DEP reports that the benefits obtained through low sulphur fuels, combined with continuing technological improvements in passenger vehicles, diesel vehicles, and stationary sources, could by the year 2004, reduce or eliminate the need for a MVIP. However, in the absence of a MVIP, those counties determined to be in non-attainment with the applicable air quality standards would be required to find other methods of achieving the required emission reductions. Failure to realize the required emission reductions could expose program areas to possible federal sanctions. Termination of the program would also mean the \$18 million which DHSMV's general fund receives from a portion of the tests would be lost. Those revenues support a host of DHSMV programs in addition to the MVIP.

Biennial testing under current methods would reduce the impact to the public by reducing the time spent at testing stations and, to the extent the cost was reduced, provide a cost savings. Attainment could possibly be achieved under current standards, but the impact on conformity for long term transportation planning is not clear based on the marginal status of several counties.

Enhanced testing would provide improved air quality and a greater margin for compliance with EPA standards whether the tests were performed annually or biennially. This margin would come from an estimated 15% reduction in Nitrous Oxide pollution. However, the enhanced tests are more time consuming and based on data from other states costs vary from \$17 to \$25 per vehicle tested for the test alone.

Exempting newer motor vehicles from emissions testing would significantly reduce the number of vehicles being

inspected with marginal impacts on air quality. Exemption would provide time and money savings to the public equivalent to the average cost of \$21 per vehicle. Because of the marginal nature of several of the program areas, the years of exemption must be examined closely for each area to avoid a non-attainment classification.

The emissions testing programs achieve air quality improvements by requiring motor vehicles which do not pass the test to be repaired or eliminated from use. It is older vehicles which predominantly fail these emissions tests and which often require costly repairs. To the extent these older vehicles are more often owned by persons with low incomes, the impacts of this program may disproportionately impact those individuals.

RECOMMENDATIONS

During the 1999 session the Legislature will be in the position of evaluating the future of Florida's MVIP in an environment of uncertainty. This is due to evolving federal air quality requirements and unanswered questions relative to Florida's likely status under those requirements. The challenge confronting the Legislature is to identify and implement the least intrusive and lowest cost option to achieve attainment and conformity with federal requirements. In evaluating potential options there are several important dates to consider: (1) in 1999 the Governor must submit to EPA a list of areas predicted to be in non-attainment in 2000; (2) in 2003 the state is required to submit a new state implementation plan to EPA that demonstrates how Florida will address those areas in non-attainment, and (3) in 2005 the revised state implementation plan must be implemented. Given this regulatory backdrop, the Legislature has several policy options:

OPTION #1: Enact legislation discontinuing the MVIP at the conclusion of the existing contract periods (March/April of 2000). Implicit under this option is the assumption that anticipated technological improvements in fuels, motor vehicle engines, and stationary sources will provide significant future reductions in emissions. Under this option the state would still have the ability to include a reconfigured MVIP in its 2003 state implementation plan. Any future MVIP should consider including those testing elements (upgraded testing equipment, biennial inspections, model year exemptions) identified in the Sierra Research report. However, it is unclear how EPA would react to the elimination of the MVIP prior to the determination of which areas are in non-attainment. If the MVIP is

discontinued prior to determination of which areas are in non-attainment, the state implementation plan may have to be revised to reflect reductions from other sources.

OPTION #2: Allow DHSMV to implement the MVIP as specified in s. 325.2135, F.S., with contract termination in 2003. This option adds an expiration to the default provision if the Legislature takes no action this session. This option provides for the continued operation of the MVIP, with changes in testing frequency and model year exemptions. Under this option the state would continue to remain in conformance with the current state implementation plan. However, Sierra Research and DEP indicated that due to the fact that this test has little impact on Nitrous Oxides, it would provide limited long-term benefits. Further, Sierra Research reports that the current basic testing, if retained, needs additional technical enhancements in order to comply with current federal rules concerning inspection equipment and procedures. The contracts should expire in 2003 unless the new state implementation plan specifies the continuation of a MVIP.

OPTION #3: Modify the MVIP design specified in s. 325.2135, F.S., to incorporate ASM 5015 testing equipment and procedures. This option would provide substantial assurance that Florida's emissions program is effectively addressing federal clean air mandates. Implementation of the testing equipment and procedures specified under this option could result in a significant reduction in Nitrous Oxides. Similar to OPTION #2, this option would require biennial testing and model year exemptions, reducing the impact of the program on the public. However, this option would increase the expense and time associated with emissions testing.

COMMITTEE(S) INVOLVED IN REPORT (*Contact first committee for more information.*)

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MEMBER OVERSIGHT

Senators Hargrett and Latvala