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**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



FROM: COUNTY EXECUTIVE OFFICE

SUBMITTAL DATE:
March 3, 2004

SUBJECT: Air Quality Improvement Workshop

RECOMMENDED MOTION: That the Board of Supervisors receive and file the attached air quality improvement status report.

BACKGROUND: On February 10, 2004, the Board of Supervisors directed the Executive Office to update the Board regarding the County's air quality improvement efforts. These efforts include, but are not limited to, the County's Rideshare Program, fugitive dust reduction efforts, alternative fuel vehicles, alternative fuel infrastructure, the use of ultra low sulfur diesel fuel, the particulate trap retrofit project for the County's diesel fleet, the formation of the Regional Air Quality Task Force, and administration of the Coachella Valley Air Quality Enhancement Program. The attached status report provides the update and is the source material for the workshop.

Departmental Concurrence


Jerry Norris, Senior Management Analyst

FINANCIAL DATA	Current F.Y. Total Cost:	\$ 0	In Current Year Budget:	N/A
	Current F.Y. Net County Cost:	\$ 0	Budget Adjustment:	NO
	Annual Net County Cost:	\$ 0	For Fiscal Year:	2004

SOURCE OF FUNDS: N / A	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

C.E.O. RECOMMENDATION: APPROVE

- Dept't Recomm.: Consent
- Per Exec. Ofc.: Consent
- Policy Policy
- Policy Policy

County Executive Office Signature 

Prev. Agn. Ref.: | **District:** | **Agenda Number:**

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COUNTY OF RIVERSIDE, CALIFORNIA

County of Riverside Air Quality Improvement Efforts

March 15, 2004

Introduction: This report provides an update to the Board on the County's air quality improvement efforts. These efforts include, but are not limited to, the County's Rideshare Program, fugitive dust reduction efforts, alternative fuel vehicles, alternative fuel infrastructure, the use of ultra low sulfur diesel fuel, the particulate trap retrofit project for the County's diesel fleet, the formation of the Regional Air Quality Task Force, and the Coachella Valley Air Quality Enhancement Program. The following highlights the various activities and tasks that have been implemented as well as touching on some future efforts.

The County Executive Office (CEO) would like to thank the following departments and agencies for providing information regarding their specific efforts: Human Resources (HR), Waste Management Department (WMD), Flood Control and Water Conservation District (Flood), Economic Development Agency (EDA), Purchasing & Fleet Services Department (Purchasing / Fleet), Regional Park & Open Space District (Parks), Transportation and Land Management Agency (TLMA), and the Western Riverside Council of Governments (WRCOG).

County Rideshare Program – The Rideshare Program is administered by HR and currently has a full time staff of three. This program serves all County employees. Funding for the program comes from the County's portion of the State AB2766 Subvention Fund, and is considered an allowable use because of the reduction in motor vehicle air pollution. This program does more than just reducing pollutants through the reduction in vehicle trips by its employees; it also helps in reducing street congestion during commute periods.

The program currently has 1,042 registered participants, and participation has increased over the last five years by nine percent. The majority of the participants use either a carpool or vanpool as their mode of transportation however; ten percent of the program participants ride a bike, walk or use public transit to get to work. On November 21, 2003, the Rideshare Program was able to get eight new bike lockers installed in the new parking structure at the CAC. There are currently 37 vehicles assigned to the program and, at this time, eight of those vehicles use alternate fuels.

Fugitive Dust Reduction Efforts – The County continues its efforts in reducing the air borne particulate matter and has received the cooperation of all of its departments. For example, Parks no longer discs the open space borders of its parks and facilities, but has switched to mowing instead. All agencies use sweepers on a regular basis as a means of reducing the amount of dust kicked up by vehicular traffic, and some departments spray water as an accompaniment.

Both TLMA and Flood include a "dust abatement" pay item in all of their public works contracts in accordance with SCAQMD Rule 403. Flood recently added a cover of mulch, as an erosion and dust control measure, to a more than two-mile stretch of the earthen backside of the Santa Ana River levee through Riverside. Currently, Flood maintenance crews are systematically replacing all earthen access roads and turnaround areas for its existing facilities with Class II base material, and require that new construction use a 4-inch overlay of Class II base material in an effort to minimize dust and erosion.

WMD has instituted a number of dust suppression activities, such as speed control of on-site traffic and the watering of on-site dirt roads and earthwork areas. These efforts are carried out regularly during the course of landfill operations and can reduce the emission of PM10. Other PM10 programs include mitigation and monitoring requirements, which have been prepared and implemented at the larger landfills, such as the Badlands, Lamb Canyon and Edom Hill, in accordance with AQMD Rule 403. Also, all trucks delivering waste to and from transfer stations and to landfills are required to be covered or to have the waste loads otherwise secured. This serves to minimize dust emissions associated with the transport of materials such as construction and demolition wastes.

WMD also deals with other airborne pollutants such as Landfill Gas Emissions (LFG) and Odor Emissions. The department regularly monitors LFG emissions into the atmosphere and has installed LFG extraction and disposal facilities at several landfills, in compliance with AQMD Rule 1150.1. Any construction work at a landfill that may result in the surface emission of LFG is required to obtain a "Permit To Excavate" from the AQMD and meet the permit requirements.

Odor Emissions may not be hazardous, but are a source of constituent complaints and therefore require some type of control. WMD practices the continuous compaction of trash throughout its daily operation, and uses the application of daily cover by the end of the day to help prevent odor emissions. The department prevents emission of odorous gases from inadvertent composting of green waste used for the alternative daily cover (ADC) by limiting the stockpile of surplus ADC material to an amount not greater than 3 days of the ADC application needs of the host landfill. Special wastes, such as dead animals, are buried immediately. Odorous wastes, such as sewage sludge, grease, and chemical toilet waste, are prohibited at all County landfills.

Alternative Fuel Vehicles – The County has made a significant effort in acquiring and using alternate fuel vehicles. Purchasing / Fleet currently has 194 total alternate fuel vehicles. The majority of the alternate fuel vehicles use a Bi-fuel blend of gas and ethanol. There are 100 of these units and six Bi-fuel units that use a blend of gas and propane. There are 44 CNG vehicles in the fleet, ranging in age from three to nine years old, and the most recent acquisitions are 29 Hybrid gas and electric vehicles. Purchasing / Fleet also has nine all electric vehicles, and six Methanol vehicles.

WMD has one Bi-fuel sedan, and recently purchased its first alternate fuel heavy-duty truck. The truck uses liquefied natural gas and was purchased for the Rural Household Hazardous Waste Collection Program.

Flood currently uses propane powered forklifts and a propane street sweeper in its daily operations, and hopes to acquire four new propane pickup trucks in Fiscal Year 2004/05. Flood has also initiated a systematic replacement of the larger diesel powered dump trucks with gasoline models, and even though these trucks do not use alternative fuels, they will produce far less pollutants than the current diesel trucks.

TLMA currently operates one propane forklift at its yard on Washington Street in Riverside. According to staff there are no current plans for future acquisitions of alternative fuel vehicles, but that could change if grant funding became available.

In 2002, EDA applied for grant funding from the South Coast AQMD for the purchase of two PM-10 Certified Alternate Fuel Street Sweepers to be used in the second district, unfortunately the application was not approved. EDA will continue to seek other grant opportunities.

Alternative Fuel Infrastructure – The County has entered into a number of agreements that allow the joint use of alternate fuel facilities with other public agencies. The Board recently approved the contribution of \$100,000 towards the construction of a CNG station on property owned by the City of Banning. This site will provide the County with a much needed fueling site in the pass area, and the joint effort saved the County from having to cover a much larger development cost had we built our own facility. EDA was able to provide \$140,000 in redevelopment financing for a joint use CNG fueling station at the Jurupa Unified School District Headquarters that will be open to the public. The County has also entered into joint use agreements with public agencies concerning CNG facilities in Blythe and in Hemet.

Flood added a propane-fueling site to its main yard on Market Street for use with its forklifts, sweepers, and future propane units. It has also made the facilities available to other departments for use. There are also CNG fueling pumps at the Purchasing / Fleet facility on Washington Street in Riverside.

On October 21, 2002, WMD began operation of a liquefied natural gas (LNG) fueling station, the Agua Mansa Clean Fuel Station, located adjacent to the Robert A. Nelson Transfer Station/Materials Recovery Facility (RAN TS/MRF). The station was built with federal and state air quality grant monies. Its first and current customer is the operator of the RAN TS/MRF, Burrtec Waste Industries (Burrtec). Burrtec has a fleet of LNG transfer trucks that was also partially funded by state grant monies. As of January 31, 2004, Burrtec has consumed 113,085 gallons of LNG fuel.

WMD recently signed contracts with three (3) additional companies for the use of the LNG station. One of them is CR&R, an operator of a transfer station in Perris, who will use the station regularly. The other two (2) users, A-Z Bus and Standard Truck Systems, will use the station on an as-needed basis. WMD will continue to solicit new LNG customers through all available channels, including the Western Riverside Clean Cities Coalition. Local fleet operators, such as Ralph's and Stater Brothers, will be the focus of its solicitation. Any new agreements will be presented to the Board for approval.

Ultra Low Sulfur Diesel – In May 2001, the Board directed the County to convert its diesel fuel to the Ultra Low Sulfur Diesel (ULSD) variety in an effort to reduce the pollutants put out by diesel vehicles. This conversion was completed in late 2001. All diesel vehicles, including the heavy-duty equipment, have been using ULSD since then with little budgetary impacts associated with the additional costs. It has been difficult to quantify the increased cost of the switch, since rates have dropped significantly from the same period in the year prior to our conversion. The fleet managers also report no vehicle performance problems as a result of using the ULSD.

When the county switched to the ULSD fuel, Arco was the only manufacturer. Purchasing / Fleet intends to rebid the ULSD contract once new fuel providers come on line. Staff will continue to monitor the providers and when there are additional sources, they will automatically proceed with the rebid.

In another fuel related project, the WMD is providing heavy-duty off-road vehicles (HDV's) for a demonstration program with the Bourns College of Engineering Center for Environmental Research and Technology (CE-CERT) from the University of California at Riverside. The project will utilize a 20/80 blend of 20 percent yellow grease and 80 percent ULSD. The purpose of the project is to measure the PM reduction with the use of the Biodiesel blend. As part of the project, CE-CERT will begin testing up to 4 WMD HDV's over a 6 –8 month period of usage. If

the test produces favorable results in terms of emission reduction and minimum power loss and maintenance problems, WMD plans to extend the use of bio-diesel fuel to 30-35 of its HDV's.

Diesel Vehicle Particulate Trap Retrofit Program – In 2001, a team consisting of personnel from the CEO, Purchasing / Fleet, TLMA, WMD, Flood, CE-CERT, the Air Resource Board (ARB), and various particulate trap manufacturers began coordinating efforts on this project. ARB has been the lead agency responsible for certifying the trap technology for this statewide program.

The County originally started with ten heavy-duty diesel vehicles stationed in the Mira Loma area. ARB selected four trap manufacturers for the initial demonstration program on the ten vehicles, and then chose two manufacturers that use passive trap technology and two using active trap technologies. Johnson-Matthey and Engelhard manufactured the passive traps, while Cleaire and Bekaert manufactured the active traps that were used on the ten vehicles. The traps from Johnson-Matthey, Engelhard and Cleaire all performed quite well and were trouble free. Unfortunately, the Bekaert Trap was problematic and the manufacturer had to pull it to try and develop a new design.

After the initial study, County staff was successful in applying for two grants that would offset costs on retrofitting an additional 55 vehicles. The Primary grant came from the Mobile Source Air Pollution Reduction Review Committee (MSRC) and covers 40 vehicles. This grant provides up to \$8,000 per vehicle as a reimbursement for the retrofit, and an additional \$500 per vehicle as an offset on the additional cost of ULSD fuel. There are 33 vehicles from TLMA and another seven from the WMD. The County received a second grant from the SCAQMD and it provides up to \$6,000 per vehicle as a reimbursement for the retrofit. This grant covers another 15 vehicles. Eight of the approved vehicles are from the WMD, and seven are from Flood.

Purchasing / Fleet coordinated the retrofit by putting out an RFP for the services, and later entering into an agreement with the successful bidder Dietrich International. After tremendous delays, the vender was able to complete the retrofit of 7 of those vehicles by the end of 2003. Manufacturer delays combined with the number of agencies that Dietrich had committed its services to, caused us to rethink our choice of vendor, so in late 2003 we changed vendors to Valley Detroit Diesel.

Effective January 1, 2004, ARB decertified all of the PM Traps that were previously approved for use during the County's retrofit program. Now, the only manufacturer that can provide a certified trap is Engine Control Systems of Ontario, Canada. A meet and greet conference for the south coast basin jurisdictions has been set up for March 17, 2004. Staff will attend to determine the effects of this change and to decide on the best alternative for proceeding with the retrofit program.

Regional Air Quality Task Force – On January 28, 2003 the Board directed the CEO to establish a regional task force to address air quality issues in the area. Staff initiated the formation of the Regional Air Quality Task Force (RAQTF), and was successful in gaining the cooperation of WRCOG, San Bernardino Association of Governments (SANDBAG), SCAQMD, the City of Riverside, and the County of San Bernardino to attend our fist meeting on February 18, 2003.

Regional issues, existing studies, ongoing clean air efforts, and funding issues were discussed during that first meeting. The participants agreed that it was crucial to take advantage of any existing efforts, rather than trying to start from scratch. WRCOG and SANDBAG, as regional agencies, agreed to lead all future efforts of the RAQTF.

The RAQTF continued discussions, at a second meeting in March of 2003, regarding the critical issues facing the region. It was decided that it would be beneficial to catalogue all of the existing studies and projects within the region that relate to air quality issues, and then to analyze them to determine which may offer benefits that the RAQTF could take advantage of.

RAQTF participants met with the Coachella Valley Association of Governments (CVAG) in late 2003 to learn about its PM10 plan and ordinance as well as its successes with the program. CVAG staff was very helpful and provided information on its efforts to improve air quality in the valley. RAQTF stakeholders are also working with SCAQMD to develop a Model Air Quality Element that could serve as a template for cities that will be updating their air quality plan in the future.

In early November 2003, WRCOG staff attempted to schedule a Task Force meeting, but due to the pending holiday season, and staff commitments to year-end tasks it became apparent that the meeting would have to wait until January 2004. A meeting did take place on January 29, 2004, with staff level individuals in attendance. Although the attendance was light, WRCOG staff received a number of phone calls from cities and organizations supporting the RAQTF idea, and requesting that the efforts be continued.

At the February 25 meeting the improved commitment from stakeholders was clearly seen as evidenced by a higher attendance. These stakeholders were a very diverse group that appeared ready to support the efforts of the Task Force. This group is committed to work through the issues and excited about the challenges ahead.

WRCOG met with John Fields, at Supervisor Tavaglione's office, on Thursday, March 4, 2004, to further discuss the direction of the RAQTF, and will be present at the Board's workshop on March 15, 2004, to answer any questions the Board may have.

Coachella Valley Air Quality Enhancement Program – The County was successful in negotiating an air quality mitigation agreement with the Colmac Biomass Waste-to-Energy project in Mecca, which resulted in the establishment of an air quality mitigation fund that helps sponsor alternative fuel uses in Coachella Valley.

This program utilizes an annual contribution of \$250,000 from the Colmac Biomass Waste-to-Energy project in Mecca to solicit RFP's from agencies in the Coachella Valley for various projects that will improve the air quality in the valley, and is administered by the CEO.

Through this fund and the recommendations of the Coachella Valley Air Quality Advisory Committee, the County has been successful in awarding annual grants for projects that, for example, educate the public, build alternative fuel infrastructure, purchase and put into use alternative fuel vehicles, or mitigate fugitive dust.

Summary – The Rideshare program continues to be a bright spot in the County's efforts against air pollution, and in helping the County with its compliance requirements to the SCAQMD and ARB. Increasing the use of alternative fuel vehicles in the program could provide an additional benefit to the program and the County.

A necessary component of an alternative fuel vehicle program is the infrastructure to go along with it. The County needs to continue to partner with other regional agencies to increase the network of fueling facilities countywide. An increase in alternative fuel availability should

ultimately lead to an increased usage of alternative fuel vehicles, and as a consequence the reduction of air pollutants.

Since the County converted its diesel fuel to the ULSD variety, additional manufacturers and distributors have come on line, which has helped to lower the fuel costs slightly. There should also be additional savings when ULSD replaces regular diesel under the EPA mandate in 2006.

The RAQTF will continue to pursue measures and policies that they can take to the governing bodies of the local jurisdictions to assist in the reduction of particulate matter in the Inland Empire and Western Riverside County.

It is to the County's benefit for departments to continue to focus on programs where grant funds exist, such as retrofitting on-road heavy-duty diesel vehicles with particulate traps. In this difficult economic period it is imperative that the County take advantage of any and all funding opportunities related to air quality improvements. To that end, CEO staff will be diligent in seeking air quality related grant opportunities, and will continue to participate in efforts to improve the quality of life for the citizens of the County of Riverside.