

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

For Agenda of April 27, 2006

To: Board of Directors
Sacramento Metropolitan Air Quality Management District

From: Larry Greene
Air Pollution Control Officer

Subject: Authorization for the Air Pollution Control Officer to Sign a Memorandum of Understanding with the Sacramento Area Council of Governments (SACOG) to Provide Modeling for Land Use Benefits

Recommendation

Staff Recommends that the Board:

- 1) Approve the attached resolution authorizing the Air Pollution Control Officer (APCO), in consultation with the District Counsel, to sign a Memorandum of Understanding and to provide \$250,000 to the Sacramento Area Council of Governments (SACOG) to help fund the development of a model to estimate emission reductions from implementing smart growth principles.
 - 2) Instruct the Clerk of the Board to transmit fully executed documents to concerned parties
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Discussion

The Sacramento region has undertaken an effort to develop a guide for local jurisdictions' use in assessing the impacts of their land use decisions by comparing a "Base Case" of build out using existing General Plans to a "Preferred Scenario" that incorporates smart growth principles. This guide, referred to as Blueprint, was developed by SACOG with participation from SMAQMD and the other air districts of the Sacramento Federal Nonattainment Region.

The Sacramento Federal Ozone Nonattainment area is required to prepare a plan (called state implementation plan or SIP) to demonstrate how the region will meet the federal ambient air quality standards for ozone by specified deadlines. Air quality benefits from Blueprint could be included in that plan provided the measure meets Federal Clean Air Act requirements. One of the requirements is to quantify the benefits of Blueprint using local travel demand models.

There are several different models involved in this, including:

- The PLACE³S model (PLAnning for Community Energy, Environmental, and Economic Sustainability) is a smart growth planning tool that uses computer-assisted GIS quantification tools to help communities balance the costs and benefits of energy use, environmental impacts (including air quality and traffic) associated with various land use designs. This model is used to develop and implement Blueprint principles.
- SACMET computer model, developed by SACOG, that analyzes local travel demands in the Sacramento region, including Sacramento, Sutter, Yuba, Yolo, Placer, and El Dorado counties.
- The California Air Resources Board's EMFAC is the model that establishes emissions factors for on-road motor vehicles.
- URBEMIS is a model developed jointly by several local air districts, including SMAQMD, and the California Air Resources Board to estimate air quality impacts associated with land use development projects. URBEMIS uses EMFAC and other information to estimate air quality emissions from traffic, construction and other area sources (such as paint and solvent use) from individual land use projects (such as specific plans, housing development projects, etc.). URBEMIS is the model used for CEQA purposes by local jurisdictions and air districts. Prior to this project the URBEMIS model was not linked to local travel demand models and therefore not able to evaluate cumulative regional effects of land use development projects.

SACOG has undertaken an extensive effort to integrate the SACMET and PLACE³S model to better analyze land use scenarios for particular locations. This effort will establish a tool to evaluate regional air quality impacts associated with general plans and individual land use decisions, by integrating the regional scale travel demand model with an air emissions tool.

As part of this process, SACOG agreed to generate a model integrating EMFAC, URBEMIS, PLACE³S, and SACMET models. This will enable the district to better analyze and evaluate emissions from land use projects because the number and length of vehicle trips associated with specific land uses will provide better information for project review, the evaluation of mitigation strategies and for local jurisdictions in assessing the air quality impacts of their decision-making process.

Elsewhere on this Board agenda there is a separate MOU for a land use database. That MOU represents an agreement between SMAQMD, SACOG, the Placer APCD and the El Dorado APCD to jointly fund development costs for the enhancement of a land use tracking database which SMAQMD has been using for a number of years. This database holds information about the land use projects we receive from 6 municipalities in Sacramento County. Sample information includes the project's name, location, size, projected air quality emissions, air quality mitigation measures, mitigation fees. SACOG will enhance the database: allow other Districts to use it, put it on an internet platform, and add a GIS component.

Information generated from this MOU will establish emissions related to development projects and can be stored in the database. Together these two tools - the integrated model and the database - will allow the region to quantify and track the impacts of land use projects and benefits from mitigation strategies so that the region can claim credit for any land use measures included in the SIP.

Fiscal Impacts

The SMAQMD allocation for this overall project is \$250,000. This is roughly half of the anticipated cost of the project, with the California Energy Commission committing a similar amount. The funds for this project will come from budgeted Measure A or EPA 105 Grant funding.

Conclusion

This MOU will support the efforts by SACOG to develop a tool to better analyze land use scenarios. The integrated modeling will enable the following: 1) assessment of the regional air quality impacts associated with implementation of Blueprint principles, 2) evaluate the air quality impacts associated with land use projects and consider the benefits of mitigation strategies (for use in CEQA documents), and 3) provide estimates of potential benefits from Blueprint to support inclusion of Blueprint into the SIP.

Respectfully submitted,

Larry Greene
Air Pollution Control Officer

Reviewed by:

Kathrine Pittard
District Counsel

Attachments

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Resolution No. _____

WHEREAS the Sacramento Federal Nonattainment area (for ozone) is required to prepare a plan (called state implementation plan or SIP) to demonstrate how the region will meet the federal ambient air quality standards for ozone by specified deadlines.

WHEREAS, the Sacramento region has undertaken an effort to develop a guide for local jurisdictions' use in assessing the impacts of their land use decisions that incorporates smart growth principles and results in fewer emissions of ozone-forming pollutants associated with vehicle trips. This guide, referred to as Blueprint, was developed by SACOG with participation from SMAQMD and the other air districts of the Sacramento Federal Nonattainment Region.

WHEREAS, air quality benefits from Blueprint could be included in the SIP provided the measure meets Federal Clean Air Act requirements, including quantifying the air quality benefits using local travel demand models.

WHEREAS, SACOG agreed to generate the needed model by integrating EMFAC, URBEMIS, PLACE³S, and SACMET models.

WHEREAS, the integrated modeling will: 1) enable assessment of the regional air quality impacts associated with implementation of Blueprint principles, 2) enable evaluation of the air quality impacts associated with land use projects and consider the benefits of mitigation strategies (for use in CEQA documents), and 3) provide estimates of potential benefits from Blueprint to support inclusion of Blueprint into the SIP.

Now, therefore, be it resolved and ordered by the SMAQMD Board of Directors that the APCO, in consultation with the District Counsel, is authorized and directed to negotiate and sign a Memorandum of Understanding with Sacramento Area Council of Governments, in a form similar to the attached, on behalf of the Sacramento Metropolitan Air Quality Management

District and to do and perform everything necessary to carry out the purpose of the resolution and contract.

ON A MOTION by Director _____, seconded by Director _____, the foregoing resolution was passed and adopted by the Board of Directors of the Sacramento Metropolitan Air Quality Management District, State of California, this 27th day of April, 2006, by the following vote, to wit:

AYES: Directors

NOES: Directors

ABSENT: Directors

Chairperson
Board of Directors

(SEAL)

ATTEST: _____
Clerk of the Board

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) made between the Sacramento Metropolitan Air Quality Management District, a public agency of the State of California (SMAQMD) and Sacramento Area Council of Governments (SACOG).

1.0 Recitals:

- 1.1 The Sacramento region has undertaken an effort to develop a guide for local jurisdictions' use in assessing the impacts of their land use decisions, comparing a "base case" of build out using existing General Plans vs. a "Preferred Scenario" that incorporates smart growth principles and results in fewer emissions of ozone-forming pollutants associated with vehicle trips. This guide, referred to as Blueprint, was developed by SACOG with participation from SMAQMD and the other air districts of the Sacramento Federal Nonattainment Region.
- 1.2 The Air District is mandated to educate land use agencies and the public on the air quality impacts of land development, and participated in the Blueprint process in furtherance of this mission
- 1.3 SACOG has developed a SACMET computer model that analyzes travel demands in the Sacramento region, including Sacramento, Sutter, Yuba, Yolo, Placer, and El Dorado counties.
- 1.4 The PLACE³S model (PLAnning for Community Energy, Environmental, and Economic Sustainability) is a smart growth planning tool that uses computer-assisted quantification tools (GIS) to help communities balance the costs and benefits of energy use, environmental media, including air quality, and traffic associated with various land use designs. The model's development was sponsored by the state energy agencies in California, Oregon, and Washington, and the final product transferred to a web-based model by a computer firm, Ecointeractive. This model is used to develop and implement Blueprint principles.
- 1.5 URBEMIS is a model developed jointly by several local air districts, including SMAQMD and the California Air Resources Board to estimate air quality impacts associated with land use development projects. URBEMIS estimates air quality emissions from traffic, construction and other area sources (such as paint and solvent use) from individual land use projects (such as specific plans, housing development projects, etc.). URBEMIS is the model used for CEQA purposes by local jurisdictions and air districts. Prior to this project the URBEMIS model was not linked to local travel demand models and therefore not able to evaluate cumulative regional effects of land use development projects.
- 1.6 The Sacramento Federal Nonattainment area (for ozone) is required to prepare a plan (called state implementation plan or SIP) to demonstrate how the region will meet the

federal ambient air quality standards for ozone by specified deadlines. Air quality benefits from Blueprint could be included in that plan provided the measure meets Federal Clean Air Act requirements. One of the requirements is to quantify the benefits of Blueprint using the models noted above.

- 1.7 SACOG has undertaken an extensive effort to integrate the SACMET and PLACE³S model to better analyze land use scenarios for particular locations. This effort will establish a tool to evaluate regional air quality impacts associated with general plans and individual land use decisions, by integrating the regional scale travel demand model with an air emissions tool.
- 1.8 As part of this process, SACOG agreed to generate a model integrating URBEMIS, PLACE³S, and SACMET models. This will enable the district to better analyze and evaluate emissions from land use projects because the number and length of vehicle trips associated with specific land uses will provide better information for project review, and for local jurisdictions in assessing the air quality impacts of their decision-making process.
- 1.9 SACOG also agreed to apply this model revision to develop estimates of the air quality emission benefits of Blueprint for use in developing the SIP.
- 1.10 Because of the benefits the district derives from the entire SACMET/ PLACE³S /URBEMIS model revision project, and in particular the integration of URBEMIS, the District has agreed to contribute \$250,000 toward the SACOG effort to integrate the three models, which to date has cost _____.

NOW, THEREFORE, in consideration of the mutual promises hereafter set forth, the SMAQMD and SACOG agree as follows:

2.0 Terms and Conditions

- 2.1 **Purpose of MOU**
Under this MOU, SACOG will accept funds from SMAQMD in support of the development of the I- PLACE³S Model.
- 2.2 **Term of MOU**
The term of this MOU will commence upon execution by all parties and terminate June 30, 2007.
- 2.3 **Scope of Work**
SACOG will invoice SMAQMD in an amount not to exceed \$250,000 for work covered under this MOU. All unused SMAQMD funds shall be returned to SMAQMD.

2.4 **Final Report**

Upon completion of the I-Places Model, SACOG will forward to SMAQMD a Final Report detailing expenditures and completed tasks.

2.5 **Indemnification**

a. SMAQMD will indemnify and defend SACOG, its officers, agents and employees from and against all claims, demands, losses, damages, liability, costs, and expenses of whatever nature including court costs and Counsel fees, accruing or resulting to any person, firm, or corporation who may be injured by the negligence of SACOG in the performance of its obligations under this Contract.

b. SACOG will indemnify and defend SMAQMD, its officers, agents and employees from and against all claims, demands, losses, damages, liability, costs, and expenses of whatever nature including court costs and Counsel fees, accruing or resulting to any person, firm, or corporation who may be injured by the negligence of SMAQMD in the performance of its obligations under this MOU.

2.6 **Alteration**

No alteration or variation of the terms of this MOU will be valid unless made in writing and signed by both parties. The APCO of SMAQMD has the authority to move funds between SIP related tasks in order to further the intent of this MOU.

2.7 **Termination**

Either party may terminate this MOU without cause upon thirty (30) days written notice served upon the other party. Any unspent funds will be returned to SMAQMD less SMAQMD's proportionate share of costs incurred as of the date of the notice.

2.8 **Notices**

Any notice, demand, request, consent, or approval that either party hereto may be or is required to give the other, must be in writing, and be either personally delivered or sent by prepaid, certified first class mail, return receipt requested, addressed as follows:

To SACOG	To SMAQMD
Mike McKeever, Executive Director SACOG 1415 L Street, Suite 300 Sacramento, CA 95814 Phone (916) 340-6205 Fax (916) 321-9551	Larry Greene, Air Pollution Control Officer SMAQMD 777 12 th Street, Suite 300 Sacramento, CA 95814 Phone (916) 874-4802 Fax (916) 874-4805

A. **Change of Address:** Either party may change the address for service by giving 15 days advance written notice to the other party.

B. **Effective Date:** All notices will be effective upon receipt and will be deemed received (i) upon delivery if personally delivered, (ii) on the 5th day following deposit in the mail, if sent by certified mail, or (iii) upon the date stated in the facsimile delivery confirmation, if sent by facsimile.

2.9 **Audit of SACOG Records**

With regard to this MOU, SACOG will maintain appropriate financial records, and SMAQMD may demand access to these financial records to perform an audit. SACOG must make these records available to SMAQMD thirty (30) days after receiving a request for the records from SMAQMD, and SACOG will retain the records until December 31, 2009.

2.10 **Time**

Time is of the essence in each and all of the provisions of this MOU.

2.11 **Successors and Waivers**

This MOU binds the successors of SACOG and SMAQMD in the same manner as if they were expressly named. Waiver by either party of any default, breach or condition precedent will not be construed as waiver of any other default, breach or condition precedent or any other right hereunder.

2.12 **Severability**

If any provision of this MOU is held invalid or unenforceable, its invalidity or unenforceability will not affect any other provisions of this MOU, and this MOU will be construed and enforced as if the invalid or unenforceable provision had not been included.

2.13 **Statutory Limitations**

This MOU and any payments for compensation and expenses are subject to the provisions and limitations imposed by federal and State law. SMAQMD has no liability for payment of any compensation and expenses that are found to be in contravention of federal or State law. SACOG will reimburse SMAQMD for any funds paid by it under this MOU that are later determined to be in contravention of any federal and State law.

2.14 **Contract Manager:** Brigette Tollstrup is the SMAQMD's named Contract Manager for this MOU. It is the responsibility of the Contract Manager to: 1) verify compliance with the terms and conditions of the MOU, 2) determine that the work has been completed, 3) ensure that funding is available to pay approved invoices, and 4) approve all invoices under the MOU.

Executed by:

Sacramento Metropolitan Air
Quality Management District

Sacramento Area Council of Governments

Larry Greene
Air Pollution Control Officer/
Executive Director

Mike McKeever
Executive Director

Reviewed by

Kathrine Pittard
District Counsel

Exhibit A
Description of Services

1. CityLabs (subcontractor to SACOG) will make software improvements to the SACMET model to:
 - a. enable web-based application
 - b. improve model processing speed
2. Equinteractive (subcontractor to SACOG) will integrate SACMET model with PLACE³S and make the resulting I-PLACE³S model more user friendly for general public.
3. SACOG will purchase necessary hardware and perform the following tasks using their subcontractors:
 - a. Integrate most recent motor vehicle emissions factors from the most recent version of the California Air Resources Board's EMFAC model.
 - b. Analyze, in cooperation with the SMAQMD, the potential air quality mitigation measures that can be evaluated with the I- PLACE³S modeling system.
 - c. Integrate URBEMIS into SACMET/ I-PLACE³S model to allow seamless evaluation of travel and non-travel related impacts of small scale projects using the fully integrated model. The fully integrated model must be designed for ease of utilization by local jurisdiction staff and environmental consultants.
 - d. Upgrade the I-PLACE³S model to incorporate the mitigation measures identified during step d. The result of this step will be a tool for evaluating air quality impacts of large scale (general plan) and small scale (specific plans or housing projects) land use development projects.
 - e. Develop estimates of the vehicle activity and air quality benefits associated with Blueprint during SIP attainment dates and milestone years (for example: 2013, 2019, and 2024).
4. SACOG will provide the following by August 1, 2006, or later at the agreement of the SMAQMD Contract Manager:
 - a. integrated I-PLACE³S model for use by SMAQMD staff and local jurisdictions
 - b. estimates described in 3.b.

Exhibit B
Compensation and Benefits

1. Contractor must perform and complete all work required under this Contract in a professional manner and in accordance with the professional standards observed by competent practitioners of the profession in which Contractor, its subcontractors or agents, are engaged.
2. The APCO has the sole discretion to determine whether Contractor has successfully completed the tasks.
3. Contractor must submit one original and one duplicate invoice in the amount of \$250,000 to SMAQMD. Contractor will be paid upon execution of this Contract, less 10%. The remaining 10% will be paid to Contractor upon receipt of the deliverables as listed in Exhibit A, paragraph 4, items a. and b.
4. Contractor will be reimbursed only for approved expenses. All expenses must be documented by receipts.
6. It is understood by Contractor that \$250,000 is the maximum total payment budgeted for this Contract. It is the responsibility of the Contractor to successfully complete the requested services as outlined in Exhibit A, including expenses and the acquisition of materials and supplies, while remaining within this budget.