

REQUEST FOR QUALIFICATIONS AND PROPOSALS

for

Research Program Evaluator for the Central California Ozone Study

*Prepared by
The Central California Ozone Study Technical Committee
Authorized by
The Policy Committee for the Central California Ozone Study and
the California Regional PM10/PM2.5 Air Quality Study
Funded by
The San Joaquin Valleywide Air Pollution Study Agency*

RFQ release date: Friday, October 29, 2004

RFQ responses due no later than: 4:30 p.m. PST, Friday, November 12, 2004

Address all submissions to the Central California Ozone Study (CCOS) Program Manager:

Mr. John DaMassa
Chief, Modeling & Meteorology Branch
California Air resources Board
P.O. Box 2815
Sacramento, CA 95812

Attn: CCOS Research Program Evaluator RFQ

For routing that requires a street address, substitute "1001 I Street" for the P.O. Box

Submissions must include:

- two (2) signed copies of response documents delivered by mail or messenger to establish official receipt (for retention by the Program Manager and with Study Agency official contract files)
- one (1) unbound master suitable for black and white reproduction (color reproduction will not be provided); and
- one (1) electronic copy of all submittal documents in Word or PDF format for electronic distribution to the review committee

Contacts for inquiries

Technical issues: Mr. John DaMassa 916 324-7167 jdamassa@arb.ca.gov
Procedural issues: Mr. James W. Sweet 559 230-5810 james.sweet@valleyair.org

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1. Introduction

This Request for Qualifications and Proposals is being issued to select a contractor who will become the Research Program Evaluator (RPE) for the Technical Committee (TC) of the Central California Ozone Study (CCOS). Information on CCOS is available at <http://www.arb.ca.gov/airways/ccaqs.htm>.

The field study portion of CCOS is now over and almost all field data are in the database created to house data from the Central California Air Quality Studies (CCAQS). Initial data analysis tasks are also near completion, and CCOS is now in the advanced data analysis and photochemical modeling stage. Once the advanced data analysis and modeling are completed, the results from all analyses need to be synthesized to reformulate/improve the conceptual model for ozone formation in central California. This conceptual model will then have to be integrated with that for particulate matter formation in the same region. There may also be a need to explore post CCOS activities (such as an enhanced monitoring network and a deposition study).

The Technical and Policy Committees to CCOS have determined that the CCOS process can benefit at this time from the advice of an experienced scientist or team of scientists with a strong background in advanced data analysis, emission inventory development, meteorology, and photochemical modeling. The committees are not, however, looking for a person to optimize the CCOS business plan or other operational issues.

The required scope of work for the RPE is limited to providing technical advice and recommendations to the Technical Committee and interacting with the Policy Committee on technical program design. The RPE will not participate in the decision making processes of the Technical and Policy Committees. Also, the RPE does not have a role in the preparation of State Implementation Plans.

Due to the advisory nature of the RPE, there can be significant conflict of interest issues if the RPE or the RPE's firm wishes to bid for future CCOS contracts. To avoid any actual or apparent conflicts of interest, such a bid will be rejected if the RPE participated in the design of any aspect of the contract that the bid is for. Please note that most conflict of interest conditions do not apply to academia. Even so, to avoid the appearance of a conflict of interest, anyone from the RPE's immediate research group should not compete for contracts designed by the RPE. For more information on conflict of interest, please refer to Section 8.4.

2. Invitation to Respond

This Request for Qualifications and Proposals is being issued to select contractors believed to possess substantial expertise and hands-on experience in advanced data

analysis, emission inventory development, meteorology, and photochemical modeling. This is an open RFQ and all qualified individuals and teams are encouraged to apply.

Candidates are invited to respond with a statement of qualifications highlighting their extensive hands-on experience in advanced data analysis, emission inventory development, meteorology, and photochemical modeling. Respondents should identify the specific person(s) expected to provide services directly through the agreement or by subcontract entered into by the respondent. Qualifying responses must address all four requested areas of expertise. Statements of qualifications should be provided for all persons expected to provide services.

3. Project Description

3.1 Tasks

- Assist the TC in designing focussed scientific investigations in areas broadly identified by the TC. These areas include, but are not limited to: advanced data analysis and interpretation; diagnostic analysis of model performance; uncertainty analyses; and emissions inventory preparation. This task includes conducting appropriate literature surveys, preparing requests for proposals, and reviewing proposals and other technical documents.
- Bring to the attention of the TC, appropriate areas of scientific investigations that the TC has not identified.
- Assist the chair of the TC in conducting meetings/conference calls and managing technical aspects of contracts.
- Establish technical standards for technical investigations and periodically update the TC on state-of-the-science techniques used for advanced data analysis, emissions inventory preparation, meteorological modeling, and photochemical modeling of ozone.
- Participate in the synthesis of CCOS results to reformulate/improve the conceptual model for ozone formation in central California.
- Participate in the exploration of post CCOS activities.
- Coordinate activities with the Principal Investigator for the California Regional PM10/PM2.5 Air Quality Study (CRPAQS).
- Interact with the Policy Committee on technical program design.

3.2 Timeline

The work effort is expected to require about 25-30% of the RPE's time for one year. The amount of effort per month is expected to fluctuate during the year, but 25-30% is expected to be the average over one year based on previous experience with RPEs and similar positions for CCOS and other comparable studies. Depending on the availability of funds and the performance of the RPE, it is reasonable to expect that the contract could be extended for additional years provided that additional funds are available and authorized by approved contract amendment(s) for further activities on assigned tasks.

The projected timeline for contractor selection and the project is as follows:

RFQ release October 29, 2004
RFQ responses due November 12, 2004
Review Committee evaluation completed approximately November 19, 2004
Policy Committee approval approximately November 23, 2004
Contract negotiations approximately November 24 – December 1, 2004
Study Agency contract execution December 16, 2004
Project timeline one year following contract execution

4. RFQ Scope of Work

The scope of work is limited to identified tasks as described in Sections 1 and 3.1 of this RFQ.

Additional tasks to develop supporting information or analysis must receive a prior approval from the Program Manager. Unapproved additional tasks are not reimbursable.

5. Project Direction

5.1 Management

The CCOS is a large-scale program involving many sponsors and participants. Three entities are involved in the overall management of the Study. The San Joaquin Valleywide Air Pollution Study Agency, a joint powers agency (JPA) formed by the nine counties in the Valley, directs the fund-raising and contracting aspects of the Study. A Policy Committee comprised of four voting blocks (State, local, and federal government, and the private sector) provides guidance on Study objectives and funding levels. The Policy Committee approves all proposal requests, contracts and reports. A Technical Committee parallels the Policy Committee in membership and provides overall technical guidance on proposal requests, direction and progress of work, contract work statements, and reviews of all technical reports produced from the study. On a day-to-day basis, the California Air Resources Board (ARB) is responsible for management of the Study under the direction of the Program Manager, Chief of the Modeling and Meteorology Branch, in the ARB's Planning & Technical Support Division.

The contractor or team selected to serve as the Research Program Evaluator will report to the ARB Project Manager, who is also the Chair of the CCOS TC and who manages the technical direction and coordination of CCOS. The ARB writes and monitors contracts with the participants and is the primary interface between contractors, the Policy and Technical Committees, and the JPA. Contract performance is not to begin

until a contract is fully approved by the San Joaquin Valleywide Air Pollution Study Agency.

5.2 Coordination with California Regional PM10/PM2.5 Air Quality Study (CRPAQS)

Coordination with current CRPAQS data analysis, emission inventory preparation, and photochemical modeling efforts may be advantageous to completion of the required tasks. Contact with those efforts through the Project Manager is encouraged.

5.3 Reporting and Other Requirements

The contractor shall deliver brief, monthly, written progress reports to the ARB Program Manager, Mr. John DaMassa. Payment to the contractor will not be made until receipt of the monthly progress report.

The contractor shall deliver to the ARB Program Manager a monthly invoice. With respect to the payment period completed, the invoice shall set forth in detail by task, in accordance with the contract budget, charges for time expended on the project, including classification of personnel involved in such time expenditure, and the monthly, weekly, or hourly rates for such personnel, as appropriate. The invoice shall also contain an itemization of all materials used for the project, including the purpose of its use and its cost.

6. RFQ Response Submittal

6.1 Deadline

RFQ responses are due no later than: 4:30 p.m. PST, Friday, November 12, 2004.
Address all submissions to:

John DaMassa
Chief, Modeling & Meteorology Branch
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

Attn: CCOS Research Program Evaluator RFQ

For routing that requires a street address, substitute "1001 I Street" for the P.O. Box.

6.2 Contacts

Technical issues: Mr. John DaMassa 916 324-7167 jdamassa@arb.ca.gov
Procedural issues: Mr. James W. Sweet 559 230-5810 james.sweet@valleyair.org

7. RFQ Required Contents

Proposals must be signed by a duly authorized official of the responder and must state that the proposal is valid for a period of not less than ninety (90) days from the date of submittal. The respondents' name and address as used in contractual agreements should be provided. The name, address, title, telephone number, fax number and email address of the person(s) authorized to execute agreements and the person(s) acting as principal for conduct of the proposal should be provided.

Information in the proposals will become public property subject to disclosure under the Public Records Act. Any information included in the proposal, which constitutes a trade secret or is otherwise proprietary or confidential, should be clearly marked with that designation. Proposals should convey a maximum of technical content related to the relevant task with a minimum of extraneous material. Proposals should convey a high degree of technical understanding and innovation while demonstrating the ability to present complex scientific results to technically qualified decision-makers. The proposal should be clear and concise. The response to the RFQ is expected to be brief, with text of the proposed approach to completing the tasks limited to less than 20 pages, not inclusive of qualification information, budget and timeline.

The response to the RFQ must include:

1. Qualifications of the respondent(s).
2. Details of previous extensive hands-on experience in advanced data analysis, emission inventory development, meteorology, and photochemical modeling.
3. Approach to completing tasks identified in sections 1, and 3.1 of this RFQ.
4. Discussion of any missing tasks identified by the respondent.
5. Hourly billing rates and overhead rates.

8. Process

8.1 Addenda and Supplements to the RFQ

In the event that it becomes necessary to revise any part of this RFQ, or if additional information is necessary to enable the responder to make adequate interpretation of the provisions of this RFQ, a supplement to the RFQ will be provided to each responder.

8.2 Evaluation Criteria for Qualifications of Respondents

Respondents will be rated on the following key factors:

1. RFQ response on the ability and expertise to perform the requested services. This should include a brief statement of qualifications for the proposed participants and a description of the duties they will perform, including a specific

discussion of relatively recent project experience. Greater detail may be incorporated by reference to a corporate website (preferred) or as a standard package. Extensive corporate experience is not as important as the qualifications of the principals who will be dedicated to the proposed task.

2. Extent of proposed action(s) to meet the goals of the RFQ.
3. Comparison of cost to other respondents.

8.3 Selection Process

The CCOS Technical Committee will evaluate all responses to the RFQ received in accordance with the required deadline and instructions, and will recommend a contractor for selection by the Policy Committee. The Technical and Policy Committees retain the right to reject all proposals and conduct direct negotiations with a selected contractor if all proposals are considered to be substantially non-responsive to key issues.

8.4 Contract Negotiation and Approval

Contract negotiations will be conducted after approval of a contractor by the Policy Committee. All agreements must be approved and executed by the Study Agency. Standard contract language is available for advance review by request to the Program Manager.

Government Code Section 1090 generally prohibits a public official from being financially interested in a contract which he or she has made or participated in an official capacity. Under certain circumstances, persons who perform work pursuant to a contract with a government agency may be subject to the restrictions of Government Code Section 1090. With respect to the CCOS, this means that, based on participation in the planning of the Study, certain consultants are precluded from participating in all or some of the post-planning contracts. This preclusion would apply to these consultants as either a prime contractor or a subcontractor. In most cases, whether a particular consultant is eligible to bid will depend on an analysis of all of the circumstances surrounding the consultant's earlier participation in the CCOS and the work that the consultant now proposes to perform. Any response to this RFQ which includes a paid participant who is ineligible based on Government Code Section 1090 will be rejected during the review of the proposals.

Questions concerning the eligibility of a potential bidder must be directed to the Study Agency attorney at the address provided below prior to the preparation of a proposal.

Mr. Philip Jay
San Joaquin Valleywide Air Pollution Study Agency Counsel
San Joaquin Valley Unified Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93727

Appendix

Background and Status Information on the Central California Ozone Study

BACKGROUND

The Central California Ozone Study (CCOS) is a multi-year program of meteorological and air quality monitoring, emission inventory development, data analysis, and air quality simulation modeling. The goals of CCOS are to: 1) obtain suitable aerometric and emission databases to update, evaluate, and improve model applications for representing urban and regional-scale ozone episodes in central and northern California to meet the regulatory requirements for the state and federal 1-hour and federal 8-hour ozone standards; 2) determine the contributions of transported and locally generated ozone and the relative benefits of volatile organic compound (VOC) and oxides of nitrogen (NO_x) emission controls in upwind and downwind areas; and 3) assess the relative contributions of ozone generated from emissions in one air basin to federal and state exceedances in neighboring air basins.

The goals of CCOS are being met through a process that includes analysis of existing data; execution of a large-scale field study in summer 2000 to acquire a comprehensive database to support modeling and data analysis; analysis of the data collected during the field study; and the development, evaluation, and application of an air quality simulation model for northern and central California. CCOS is also intended to provide progressive improvements in the understanding of the relationships among emissions, transport, and ozone standard exceedances in the study area during the decade since the 1990 San Joaquin Valley Air Quality Study (SJVAQS) Atmospheric Utility Signatures, Predictions and Experiments (AUSPEX) and SJVAQS/AUSPEX Regional Model Adaptation Program (SARMAP) modeling. The data collected by CCOS is expected to support data analysis and modeling for the federal eight-hour ozone standard.

The CCOS field measurement program was conducted during a four-month period from June 1, 2000 to October 2, 2000. Summary of Field Operations - CCOS Volume III (Fujita et al., 2001), documents the meteorological and air quality conditions during the summer 2000 ozone season and during individual intensive operational periods (IOPs), describes the daily forecasting and decision-making protocols for launching IOPs, and documents the parameters that were measured, locations, measurement methods, times, and levels of data capture. The Field Study Plan - CCOS Volume I (Fujita et al., 1999 - version 1, 06/11/99; version 2, 09/07/99; and version 3, 11/24/99) and the Field Operations Plan - CCOS Volume II (Fujita et al., 2000 - version 1, 04/28/00; and version 2, 05/31/00) provide additional background information. These documents are available at the following web site: <http://www.arb.ca.gov/airways/ccos/ccos.htm>.

STATUS

The database of CCOS measurements is complete except for incorporation of some of the aircraft measurements, and early modeling exercises are being conducted for the episodes detected during the measurement period. Several groups are actively engaged in CCOS modeling under Policy Committee direction, including NOAA, the Bay Area Air Quality Management District, and the California Air Resources Board. Additional modeling has been initiated by Study Agency member agencies under agreements with Desert Research Institute, Alpine Geophysics LLC, and ENVIRON.

Further information on the current status of modeling efforts may be obtained by contacting Mr. John DaMassa, Program Manager for CCOS.

Ozone Modeling Episodes

Episode	Type	Dates
July 1999	Routine network	July 8-13, 1999
June 2000	CCOS	June 14-15, 2000
Jul/Aug 2000	CCOS	July 29 to Aug 2, 2000
Sept 2000	CCOS	Sept 16-20, 2000
Aug 2002	Routine network	Aug 8-16, 2002
Aug 1990	SARMAP	Aug 3-6, 1990

Design Values and Observed Episode Peak 1-Hour Values

Concentrations in bold are greater than the Ozone NAAQS of 12 pphm (124 ppb)

Regional Statistics (Ozone ppb)								
	1-Hour Design Value		Episode Measured Peak					
REGION	2000 to 2002	2001 to 2003	July 1999	June 2000	Jul/Aug 2000	Sept 2000	Aug 2002	Aug 1990‡
<i>SJV North</i>	123	122	132 (7/13)	114 (6/15)	131 (8/2)	113 (9/20)	138 (8/14)	150 (8/6)
<i>SJV Central</i>	151	151	135* (7/11)	139 (6/15)	129 (7/30)	165 (9/18)	158 (8/10)	150 (8/5)
<i>SJV South</i>	142	150	127 (7/10)	140 (6/14)	151 (8/2)	145 (9/19)	151 (8/12)	150 (8/6)
<i>BAAQMD</i>	124	123	154 (7/12)	152 (6/15)	126 (7/31)	100 (9/19)	123 (8/9)	120 (8/5)
<i>SMAQMD</i>	132	138	147 (7/10)	126 (6/15)	133 (8/1)	123 (9/19)	156 (8/14)	160 (8/7)
SJVAPCD County Statistics (Ozone ppb)								
	Design Value		Episode Measured Peak					
COUNTY	2000 to 2002	2001 to 2003†	July 1999	June 2000	Jul/Aug 2000	Sept 2000	Aug 2002	Aug 1990‡
San Joaquin	111	106	132 (7/12)	103 (6/15)	122 (8/2)	96 (9/20)	108 (8/14)	130 (8/6)
Stanislaus	123	119	119 (7/12)	97 (6/15)	131 (8/2)	106 (9/20)	135 (8/14)	150 (8/6)
Merced	121	121	132 (7/13)	114 (6/15)	120 (8/2)	113 (9/20)	138 (8/14)	N/A
Madera	115	115	104 (7/13)	94 (6/15)	92 (8/1)	98 (9/19)	119 (8/13)	N/A
Fresno	151	151	135* (7/11)	139 (6/15)	129 (7/30)	165 (9/18)	151 (8/12)	150 (8/5)
Kings	124	121	113* (7/11)	121 (6/15)	113 (8/2)	122 (9/20)	110 (8/11)	90 (8/5)
Tulare	126	124	125 (7/10)	129 (6/15)	108 (8/1)	107 (9/18)	124 (8/14)	110 (8/6)
Kern	142	142	127 (7/10)	140 (6/14)	151 (8/2)	145 (9/19)	151 (8/12)	150 (8/6)

* The peak day for Fresno and Kings County is at the beginning of the episode on 8 July 1999. Fresno recorded 155 ppb. Kings County recorded a 116 ppb.

‡ At the time of the Aug. 1990 SARMAP episode, measured O₃ was only reported to the nearest pphm (10 ppb).

Design Values and Observed Episode Peak 8-Hour Values

Concentrations in bold are greater than the Ozone NAAQS of 8 pphm (84 ppb)

Regional Statistics (Ozone ppb)								
REGION	8-Hour Design Value		Episode Measured Peak					
	2000 to 2002	2001 to 2003	July 1999	June 2000	Jul/Aug 2000	Sept 2000	Aug 2002	Aug 1990‡
<i>SJV North</i>	101	102	117 (7/13)	94 (6/14)	112 (8/2)	96 (9/20)	125 (8/14)	110 (8/6)
<i>SJV Central</i>	115	111	123 (7/11)	110 (6/14)	109 (8/1)	120 (9/18)	119 (8/14)	117 (8/5)
<i>SJV South</i>	112	115	111 (7/10)	111 (6/14)	112 (8/2)	113 (9/19)	119 (8/13)	108 (8/6)
<i>BAAQMD</i>	82	86	86 (7/9)	114 (6/15)	89 (7/31)	76 (9/19)	99 (8/10)	N/A
<i>SMAQMD</i>	101	100	107 (7/9)	91 (6/15)	108 (8/1)	100 (9/20)	137 (8/14)	N/A
SJVAPCD County Statistics (Ozone ppb)								
COUNTY	Design Value		Episode Measured Peak					
	2000 to 2002	2001 to 2003†	July 1999	June 2000	Jul/Aug 2000	Sept 2000	Aug 2002	Aug 1990‡
San Joaquin	81	81	113 (7/12)	84 (6/14)	93 (8/2)	73 (9/20)	87 (8/12)	102 (8/6)
Stanislaus	95	96	104 (7/12)	86 (6/14)	107 (8/2)	92 (9/20)	113 (8/14)	110 (8/6)
Merced	101	102	117 (7/13)	94 (6/14)	112 (8/2)	96 (9/20)	125 (8/14)	N/A
Madera	91	93	95 (7/13)	80 (6/14)	83 (8/1)	88 (9/20)	101 (8/13)	N/A
Fresno	115	111	123 (7/11)	110 (6/14)	109 (8/1)	120 (9/18)	119 (8/14)	117 (8/5)
Kings	99	95	104 (7/11)	101 (6/15)	105 (8/2)	105 (9/20)	103 (8/10)	80 (8/6)
Tulare	105	107	111 (7/10)	102 (6/15)	105 (7/29)	99 (9/18)	112 (8/14)	100 (8/5)
Kern	112	115	108 (7/10)	111 (6/14)	112 (8/2)	113 (9/19)	119 (8/13)	108 (8/6)

‡ At the time of the Aug. 1990 SARMAP episode, measured O₃ was only reported to the nearest pphm (10 ppb).

**TABLE 1
PROPOSAL BUDGET SUMMARY**

DIRECT COSTS:

1. Labor & Employee Fringe Benefits (provide detailed breakdown by task and employee on separate sheet [including subcontractors])	\$ _____
2. Equipment (provide detailed breakdown on separate sheet)	\$ _____
3. Travel & Subsistence	\$ _____
4. Electronic Data Processing	\$ _____
5. Photocopying/Printing/Mail/Telephone/FAX	\$ _____
6. Materials and Supplies	\$ _____
7. Chemical Analyses (provide detailed breakdown by type of analysis on separate sheet)	\$ _____
8. Miscellaneous (please specify)	\$ _____
TOTAL DIRECT COST:	\$ _____

INDIRECT COSTS:

11. Overhead (specify rate)	\$ _____
12. General & Administrative Expenses (specify rate)	\$ _____
13. Other Indirect Costs (please specify)	\$ _____
14. Fee or Profit (specify rate)	\$ _____
TOTAL INDIRECT COST:	\$ _____

TOTAL DIRECT AND INDIRECT COST: \$ _____