

AIR QUALITY RESEARCH PROGRAM

**Texas Commission on Environmental Quality
Contract Number 582-22-20017
Awarded to The University of Texas at Austin**

**Quarterly Report
November 15, 2021 – February 14, 2022**

Submitted to

**Jocelyn Mellberg
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, TX 78753**

Prepared by

**David T. Allen, Principal Investigator
The University of Texas at Austin
10100 Burnet Rd. MC R7100
Austin, TX 78758**

March 21, 2022

The preparation of this report was financed through a grant from the Texas Commission on Environmental Quality (TCEQ), administered by The University of Texas at Austin (UT) through the Air Quality Research Program (AQRP). The contents, findings, opinions, and conclusions are the work of the author(s) and do not necessarily represent findings, opinions, or conclusions of the TCEQ.

TABLE OF CONTENTS

Table of Contents.....	3
Overview.....	4
Program Activities for the Year.....	4
Background.....	5
Research Project Cycle.....	6
Independent Technical Advisory Committee.....	7
Table 1. Independent Technical Advisory Committee Members.....	8
TCEQ Relevancy Review.....	8
Advisory Council.....	8
Table 2. Advisory Council Members.....	10
Financial Status Report.....	11
Program Administration.....	11
Table 3: Administration Budgets.....	11
ITAC.....	12
Table 4: ITAC Budgets.....	12
Project Management.....	12
Table 5: Project Management Budgets.....	12
Research Projects.....	13
Table 6: FY 22-23 Contractual/Research Project Budgets.....	Error! Bookmark not defined.

Texas Air Quality Research Program

Quarterly Report

November 15, 2021 – February 14, 2022

OVERVIEW

The goals of the State of Texas Air Quality Research Program (AQRP) are:

- (i) to support scientific research related to Texas air quality, in the areas of emissions inventory development, atmospheric chemistry, meteorology, and air quality modeling,
- (ii) to integrate AQRP research with the work of other organizations, and
- (iii) to communicate the results of AQRP research to air quality decision-makers and stakeholders.

PROGRAM ACTIVITIES FOR THE QUARTER

Between November 15, 2021 and February 14, 2022 the AQRP program efforts were focused primarily on finalizing the research priorities for the biennium, seating the Advisory Council and Independent Technical Advisory Committee (ITAC), and updating all required Request for Proposal (RFP) documents in preparation for the public announcement of the RFP.

A list of candidates for the Advisory Council was approved by the Texas Commission on Environment Quality (TCEQ) on January 3, 2022. The AQRP Director, Dr. David Allen, invited the candidates to serve. The Advisory Council was seated by the candidates listed in Table 2. The Advisory Council remotely attended the first meeting of the biennium on March 8, 2022 to discuss the proposed research priorities document. Recommended research priorities, with input from the Advisory Council, were presented to the TCEQ on March 9, 2022. An approved research priorities document was received from the TCEQ on March 11, 2022.

TCEQ approved a list of potential ITAC members in December 2021. The AQRP Director invited each potential member. ITAC members who have accepted the invitation are listed in Table 1. One additional ITAC member is still being confirmed. The final seated ITAC will be updated in the next quarterly report.

The University of Texas at Austin (UT) began updating the internal RFP documentation (Subaward Agreement, Work Plan Guidelines, and other documentation) with current UT policies and procedures. Updated RFP documents will be accessible at http://aqrp.ceer.utexas.edu/proposal_info.cfm in the next quarter.

The Financial Status Report (FSR) section of this report includes accounting through February 2022 from Fiscal Year (FY) 2022-2023 (FY 22-23).

Throughout the reporting period, the the AQRP Program Manager communicated regularly with the TCEQ regarding program deadlines, updates, and detailed monthly FSR for January 2022, as required, and any addition information as requested by the TCEQ.

BACKGROUND

Section 387.010 of House Bill (HB) 1796 (81st Legislative Session), directs the Texas Commission on Environmental Quality (TCEQ) to establish the Texas Air Quality Research Program (AQRP). The University of Texas at Austin (UT) was selected by the TCEQ to administer the program. A contract for the administration of the AQRP was established between the TCEQ and UT.

Consistent with the provisions in HB 1796, up to 10% of the available funding is to be used for program administration; the remainder (90%) of the available funding is to be used for research projects, individual project management activities, and meeting expenses associated with an Independent Technical Advisory Committee (ITAC).

A new AQRP contract was executed for the 2022-2023 biennium and funding of \$750,000 per year was awarded.

RESEARCH PROJECT CYCLE

The Research Program is implemented through a nine-step cycle each biennium. The steps in the cycle are described from project concept generation to final project evaluation for a single project cycle.

- 1) The project cycle is initiated by developing (in year 1) or updating (in subsequent years) the research priorities. The Air Quality Research Program (AQRP) Director, in consultation with the Independent Technical Advisory Committee (ITAC), the Advisory Council (the Council) and the Texas Commission on Environmental Quality (TCEQ), develop research priorities; the research priorities are released along with a Request for Proposals (RFP).
- 2) Project proposals relevant to the research priorities are solicited. The RFP will be found at <http://aqrp.ceer.utexas.edu/> once released.
- 3) The ITAC performs a scientific and technical evaluation of the proposals.
- 4) The project proposals and ITAC recommendations are forwarded to the TCEQ. The TCEQ evaluates the project recommendations from the ITAC and comments on the relevancy of the projects to the State of Texas's air quality research needs.
- 5) The recommendations from the ITAC and the TCEQ are presented to the Council and the Council selects the proposals to be funded.
- 6) All Investigators are notified of the status of their proposals, either intent to fund, not funded, or contingent (not funded at this time, but being held for possible reconsideration if funding becomes available).
- 7) Intent to fund projects are assigned an AQRP Project Manager at UT Austin and a Project Liaison at TCEQ. The AQRP Project Manager is responsible for ensuring that project objectives are achieved in a timely manner and that effective communication is maintained among investigators involved in multi-institution projects. The AQRP Project Manager has responsibility for documenting progress toward project measures of success for each project. The AQRP Project Manager works with the researchers, and the TCEQ, to create an approved work plan for the project.

The AQRP Project Manager also works with the researchers, TCEQ, and the Program's Quality Assurance officer to develop an approved Quality Assurance Project Plan (QAPP) and Work Plan for each project. Subaward Agreements are issued. The AQRP Project Manager reviews monthly, annual, and final reports from the researchers and works with the researchers to address deficiencies.

- 8) The AQRP Director and the AQRP Project Manager for each project describe progress on the project in the ITAC and Council meetings dedicated to on-going project review.
- 9) The project findings are communicated through multiple mechanisms. Final reports are posted to the AQRP web site (<http://aqrp.ceer.utexas.edu/>); research briefings are developed for the public and air quality decision makers; and a bi-annual research conference/data workshop is held.

During this quarter, the AQRP performed step 1.

Independent Technical Advisory Committee

The Air Quality Research Program (AQRP) funding is to be used primarily for research projects, and one of three groups responsible for selecting the projects is the Independent Technical Advisory Committee (ITAC). The ITAC is composed of between 9 and 15 individuals with scientific expertise relevant to the AQRP. The ITAC is charged with recommending technical approaches, establishing research priorities, and reviewing, commenting, and advising on all projects to ensure that the projects facilitate air quality improvement in Texas. Members of the ITAC consist of the Texas Commission on Environmental Quality (TCEQ) Project Director (or designee), and representatives with air quality expertise from research institutions with extensive expertise in air quality research in Texas. The members of the ITAC are listed in Table 1. The members of the ITAC are drawn from Texas universities active in air quality research, national laboratories that have participated in air quality studies in Texas, and institutions that have expertise not available in Texas and that have participated in air quality studies in Texas.

The ITAC membership is intentionally drawn from air quality researchers who have experience in Texas. These researchers and their colleagues will likely have interest in responding to the requests for research proposals issued by the AQRP. This raises potential confidentiality and conflict of interest issues, and the contract between TCEQ and the University of Texas at Austin requires that the AQRP maintain and implement an appropriate written policy on conflict of interest. Specifically, for the ITAC, all members are required to certify:

Confidentiality: As a member of Independent Technical Advisory Committee (ITAC), I understand that I will have access to proposals submitted to the Air Quality Research Program (AQRP). Subject to any legal requirements, I agree to keep the information in these proposals confidential until the selection process is completed and it is appropriate to release information to the public. I understand that there may be certain information that comes to me in my role as a member of ITAC that retains its confidential nature even after the process is concluded. I also understand that I will review said proposals and may have access to the reviews made by other ITAC members. I agree to keep these reviews and the identity of the reviewers confidential until such time as this information is released to the public. (NOTE: For the reviews and reviewers, this information may never be released.)

Conflict of Interest: As a member of ITAC, I agree that I will not evaluate, comment on, or vote on proposals in which I or my home institution is involved, including but not limited to, any financial interest, or in which I have another form of conflict of interest. I understand that ITAC members with conflicts of interest must leave the meeting room or the conference line when a proposal with which they have a conflict is discussed, voted on or otherwise being considered. I understand that I must recuse myself from participating in or attempting to influence at any time the ITAC's or the AQRP Council's consideration or decision concerning such proposals. I agree to bring any issues concerning a possible conflict of interest to the attention of the Director of the AQRP or the TCEQ Air Quality Deputy Director. If there is a question of interpretation regarding whether a conflict of interest exists, I agree that the decision regarding whether a conflict of interest exists will be made by the Director of the Air Quality Research Program or the TCEQ Air Quality Deputy Director.

All members of the ITAC agree to abide by these conflicts of interest and confidentiality provisions prior to participating in the review of proposals. Table 1 shows the currently accepted ITAC members. The finalized member table will be updated in the next quarterly report.

Table 1. Independent Technical Advisory Committee Members

Name	Title	Organization
David Allen	Gertz Regents Professor in Chemical Engineering, Professor and Director, AQRP	The University of Texas at Austin
Mark Estes	Adjunct Faculty	St. Edwards University
Joost de Gouw	Research Physicist, Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado, Senior Scientist and Fellow	National Oceanic and Atmospheric Administration (NOAA)
Tracey Holloway	Gaylord Nelson Distinguished Professor	University of Wisconsin-Madison
Rebecca Sheesley	Associate Professor	Baylor University
Stephanie Shirley	Senior Technical Specialist	Texas Commission on Environmental Quality (TCEQ)
Will Vizquete	Professor	University of North Carolina at Chapel Hill (UNC)
Yuxuan Wang	Associate Professor	The University of Houston
Christine Wiedinmyer	Associate Director of Science, Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado	National Oceanic and Atmospheric Administration (NOAA)
Greg Yarwood	Principal	Ramboll
Renyi Zhang	Harold J. Haynes Endowed Chair, Distinguished Professor	Texas A&M University

TCEQ Relevancy Review

The Texas Commission on Environmental Quality (TCEQ) reviews proposals for relevancy to the State’s air quality research needs. TCEQ approval is required for a project to receive funding from the Program.

Advisory Council

The final group responsible for selecting Air Quality Research Program (AQRP) research projects is the Advisory Council (the Council). The Council consists of between 7 and 11 members. Two Council members with relevant scientific expertise are nominated by the Texas Commission on Environmental Quality (TCEQ). As defined in the AQRP contract, up to four members of the Council can be county judges from the Houston-Galveston-Brazoria (HGB) and Dallas-Fort Worth (DFW) non-attainment counties. Additional members should have a general background in air quality and business practices, and can include elected officials, business community representatives, environmental group representatives, and members of the general public. The Council’s responsibilities are to attend meetings with TCEQ Management and the AQRP to understand the statewide project goals for the funding period, to select for funding the projects

reviewed by the Independent Technical Advisory Committee (ITAC) and ranked by the TCEQ, and to assist with the presentation of project final results at locations throughout the state.

Table 2. Advisory Council Members

Name	Title	Organization
Daniel Baker	Senior Partner	Environmental Reaction Engineering Experts (E REX)
Laurie Barker	Special Counsel	TCEQ
Lyle Hufstetler	Clean Cities Coordinator	Alamo Area Council of Governments (AACOG)
Chris Klaus	Senior Program Manager	North Central Texas Council of Governments (NCTCOG)
Graciela Lubertino	Principal Data Analyst	Houston-Galveston Area Council (H-GAC)
Chris Owen	Senior Technical Specialist	TCEQ
Chris Rabideau	Staff Environmental Scientist	Chevron
Cyrus Reed	Conservation Director	Sierra Club

FINANCIAL STATUS REPORT

The Air Quality Research Program (AQRP) contract was awarded for FY 22-23 for \$750,000 per year. Funds were distributed across several different reporting categories as required under the contract with TCEQ. The reporting categories are listed below in detail.

Program Administration: Limited to 10% of the overall funding per fiscal year. This category includes all staffing, materials and supplies, and equipment needed to administer the overall AQRP. It also includes the costs for the Council meetings.

ITAC: These funds are to cover the costs, largely travel expenses, for the Independent Technical Advisory Committee (ITAC) meetings.

Project Management: Limited to 8.5% of the funds allocated for Contractual budget category. Each research project is assigned a Project Manager to ensure that project objectives are achieved in a timely manner and that effective communication is maintained among investigators in multi-institution projects. These funds are to support the staffing and performance of project management.

Research Projects / Contractual: These are the funds available to support the research projects that are selected for funding.

Program Administration

Program Administration includes salaries and fringe benefits for those overseeing the program, as well as materials and supplies, travel, equipment, and other expenses. This category allows indirect costs in the amount of 10% of salaries and wages.

Dr. David Allen, Principal Investigator and AQRP Director, is responsible for the overall administration of the AQRP. RoseAnna Goewey, AQRP Program Manager, assists Dr. Allen with program and grant management.

The University of Texas at Austin’s federally negotiated fringe rates for full-time/benefits eligible employees is 30.9%. Rates are estimated to have a 0.5% increase for full/part-time benefits eligible employees in subsequent years. The part-time/non-benefits eligible rate is expected to remain at 4.7% for the foreseeable future.

Table 3: Administration Budget FY 22-23

Budget Category	FY22 Budget	FY23 Budget	Total Budget	Expenses*	Remaining Balance
Personnel/Salary	\$51,800.00	\$51,800.00	\$103,600.00	\$324.57	\$103,275.43
Fringe Benefits	\$16,006.00	\$16,265.00	\$32,271.00	\$100.29	\$32,170.71
Supplies	\$2,014.00	\$1,755.00	\$3,769.00	\$40.17	\$3,728.83
Total Direct Costs	\$69,820.00	\$69,820.00	\$139,640.00	\$465.03	\$139,174.97
Authorized Indirect Costs (10% of Salaries and Wages)	\$5,180.00	\$5,180.00	\$10,360.00	\$32.46	\$10,327.54
Total Costs	\$75,000.00	\$75,000.00	\$150,000.00	\$497.49	\$149,502.51

*Expenses as of Feb. 2022

ITAC

There are no ITAC expenditures in this reporting quarter. Table 4 details the FY 22-23 ITAC budget.

Table 4: ITAC Budget FY 22-23

Budget Category	FY22 Budget	FY23 Budget	Total Budget	Expenses*	Remaining Balance
Travel	\$5,000.00	\$5,000.00	\$10,000.00	\$0.00	\$10,000.00
Supplies	\$625.00	\$625.00	\$1,250.00	\$0.00	\$1,250.00
Total Direct Costs	\$5,625.00	\$5,625.00	\$11,250.00	\$0.00	\$11,250.00
Authorized Indirect Costs (10% of Salaries and Wages)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Costs	\$5,625.00	\$5,625.00	\$11,250.00	\$0.00	\$11,250.00

*Expenses as of Feb. 2022

Project Management

There are no Project Management expenditures in this reporting quarter. Table 5 details the FY 22-23 Project Management Budget.

Table 5: Project Management Budget FY 22-23

Budget Category	FY22 Budget	FY23 Budget	Total Budget	Expenses*	Remaining Balance
Personnel/Salary	\$38,000.00	\$38,000.00	\$76,000.00	\$0.00	\$76,000.00
Fringe Benefits	\$11,438.00	\$11,932.00	\$23,370.00	\$0.00	\$23,370.00
Supplies	\$3,012.00	\$2,518.00	\$5,530.00	\$0.00	\$5,530.00
Other	\$1,875.00	\$1,875.00	\$3,750.00	\$0.00	\$3,750.00
Total Direct Costs	\$54,325.00	\$54,325.00	\$108,650.00	\$0.00	\$108,650.00
Authorized Indirect Costs (10% of Salaries and Wages)	\$3,800.00	\$3,800.00	\$7,600.00	\$0.00	\$7,600.00
Total Costs	\$58,125.00	\$58,125.00	\$116,250.00	\$0.00	\$116,250.00

*Expenses as of Feb. 2022

RESEARCH PROJECTS

Research projects have not been selected in this reporting quarter. Table 6 shows the FY 22-23 Research Project budget. The FY 22-23 budget allocates \$1,222,500.00 for research projects.

Table 6: FY 22-23 Contractual/Research Project Budget

FY 22 Contractual Funding	\$611,250.00		
FY 22 Total Contractual Funding	\$611,250.00		
Institution	Project Number	Amount Awarded	Cumulative Expenditures
			Remaining Balance
<i>PENDING</i>		\$611,250.00	\$0.00
<i>SUBAWARD HOLDING</i>			\$611,250.00
FY 22 Total Contractual Funding Awarded		\$0.00	
FY 22 Contractual Funds Expended (Init. Projects)			\$0.00
FY 22 Contractual Funds Remaining to be Spent			\$611,250.00
FY 22 Contractual Funding Carry-Forward		\$0.00	
FY 23 Contractual Funding		\$611,250.00	
FY 23 Total Contractual Funding		\$611,250.00	
Institution	Project Number	Amount Awarded	Cumulative Expenditures
			Remaining Balance
<i>PENDING</i>		\$611,250.00	\$0.00
<i>SUBAWARD HOLDING</i>			\$611,250.00
FY 23 Total Contractual Funding Awarded		\$0.00	
FY 23 Contractual Funds Expended (Init. Projects)			\$0.00
FY 23 Contractual Funds Remaining to be Spent			\$611,250.00
Total Contractual Funding		\$1,222,500.00	
Total Contractual Funding PENDING AWARD		\$1,222,500.00	
Total Contractual Funding Remaining to be Awarded		\$1,222,500.00	
Total Contractual Funds Expended to Date			\$0.00
Total Contractual Funds Remaining to be Spent			\$1,222,500.00