

AIR QUALITY RESEARCH PROGRAM

**Texas Commission on Environmental Quality
Contract Number 582-10-94300
Awarded to The University of Texas at Austin**

**Quarterly Report
June 1, 2012 through August 31, 2012**

Submitted to

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September 4, 2012

Texas Air Quality Research Program

Quarterly Progress Report

September 4, 2012

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.

On April 30, 2010, the Texas Commission on Environmental Quality (TCEQ) contracted with the University of Texas at Austin to administer the AQRP. For the 2010-2011 biennium, the AQRP had approximately \$4.9 million in funding available. Following discussions with the TCEQ and an Independent Technical Advisory Committee (ITAC) concerning research priorities, the AQRP released a call for proposals in May, 2010. Forty-five proposals, requesting \$12.9 million in research funding were received by the due date of June 25, 2010. These proposals were reviewed by the ITAC for technical merit, and by the TCEQ for relevancy to the State's air quality research needs. The results of these reviews were forwarded to the AQRP's Advisory Council, which made final funding decisions in late August, 2010. As of November 30, 2011, all projects have been completed. Final reports on all but one project have been posted to the AQRP website.

In June 2011, the TCEQ renewed the AQRP for the 2012-2013 biennium. Funding of \$1,000,000 for the FY 2012 period was awarded in February 2012. An additional \$1,000,000 for the FY 2013 period was awarded in June 2012. At the same time an additional \$160,000 was awarded for FY 2012, to support funding for additional air quality projects recommended by the TCEQ. A call for proposals was released in May 2012. Thirty-two proposals, requesting \$5 million in research funding were received. The proposals were reviewed by the ITAC and the TCEQ. The Advisory Council selected 14 projects for funding. Investigators have been notified of their funding status and the contracting process has commenced.

BACKGROUND

Section 387.010 of HB 1796 (81st Legislative Session), directs the Texas Commission on Environmental Quality (TCEQ, Commission) to establish the Texas Air Quality Research Program (AQRP).

Sec. 387.010. AIR QUALITY RESEARCH. (a) The commission shall contract with a nonprofit organization or institution of higher education to establish and administer a program to support research related to air quality.

(b) The board of directors of a nonprofit organization establishing and administering the research program related to air quality under this section may not have more than 11 members, must include two persons with relevant scientific expertise to be nominated by the commission, and may not include more than four county judges selected from counties in the Houston-Galveston-Brazoria and Dallas-Fort Worth nonattainment areas. The two persons with relevant scientific expertise to be nominated by the commission may be employees or officers of the commission, provided that they do not participate in funding decisions affecting the granting of funds by the commission to a nonprofit organization on whose board they serve.

(c) The commission shall provide oversight as appropriate for grants provided under the program established under this section.

(d) A nonprofit organization or institution of higher education shall submit to the commission for approval a budget for the disposition of funds granted under the program established under this section.

(e) A nonprofit organization or institution of higher education shall be reimbursed for costs incurred in establishing and administering the research program related to air quality under this section. Reimbursable administrative costs of a nonprofit organization or institution of higher education may not exceed 10 percent of the program budget.

(f) A nonprofit organization that receives grants from the commission under this section is subject to Chapters 551 and 552, Government Code.

The University of Texas at Austin was selected by the TCEQ to administer the program. A contract for the administration of the AQRP was established between the TCEQ and the University of Texas at Austin on April 30, 2010 for the 2010-2011 biennium, and was renewed in June 2011 for the 2012-2013 biennium. 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).

RESEARCH PROJECT CYCLE

The Research Program is being implemented through a 9 step cycle. 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 strategic research priorities. The AQRP Director, in consultation with the ITAC, and the TCEQ develop research priorities; the research priorities are released along with a Request for Proposals.
- 2.) Project proposals relevant to the research priorities are solicited. The Request for Proposals can be found at <http://aqrp.ceer.utexas.edu/>.
- 3.) The Independent Technical Advisory Committee (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'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. The Council also provides comments on the strategic research priorities.
- 6.) All Investigators are notified of the status of their proposals, either funded, not funded, or not funded at this time, but being held for possible reconsideration if funding becomes available.
- 7.) Funded projects are assigned a Project Manager at UT-Austin and a Project Liaison at TCEQ. The project manager at UT-Austin 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 Project Manager has responsibility for documenting progress toward project measures of success for each project. The Project Manager works with the researchers, and the TCEQ to create an approved work plan for the project. The Project Manager also works with the researchers, TCEQ and the Program's Quality Assurance officer to develop an approved QAPP for each project. The 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 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 Program web site; research briefings are developed for the public and air quality decision makers; and a bi-annual research conference/data workshop is held.

Steps 1 – 9 have all been completed for the initial (2010-2011) biennium. Steps 1 – 6 have been completed for the 2012 – 2013 biennium. A summary of the 2012-2013 activities is described below.

In the prior reporting period, the research priorities for the 2012-2013 funding cycle were published in the State of the Science document, and released together with the Request for Proposals (RFP). Activities during the current reporting period have focused on the receipt and review of the proposals submitted in response to that RFP.

The AQRP received thirty-two (32) proposal submissions, requesting \$5 million in funding, by the due date of 5:00pm central time on June 15, 2012. The ITAC conducted the scientific and technical review of the proposals via a conference call on June 26, 2012 and in a meeting held in Austin, Texas, on June 29, 2012. Ten proposals were highly recommended for funding; five proposals were recommended for funding; and seventeen proposals were not recommended for funding.

The project proposals and ITAC recommendations were forwarded to TCEQ. The TCEQ evaluated the project recommendations from the ITAC and provided comment on the relevancy of the projects to the State's air quality research needs. The TCEQ recommended for funding twelve (12) of the fifteen (15) proposals that the ITAC recommended.

Several of the highly recommended and recommended proposals were projects associated with the NASA DISCOVER-AQ field campaign. Dr. James Crawford of NASA provided additional input on whether any of the proposed projects were duplicative of projects already funded.

Prior to the issuance of the RFP, two proposals were submitted to the AQRP for consideration in the FY 2012-2013 funding cycle. The TCEQ supported these proposals and indicated they would provide additional funding the AQRP to support these proposals. Because these proposals were not a direct response to the RFP, and were not competing for the same funding, they were not included in the proposals discussed above. They were however, reviewed independently by the ITAC and the TCEQ, both of which recommended the proposals be funded.

On August 2, 2012, the recommendations from the ITAC and the TCEQ were presented to the Advisory Council, as well as an overview of the strategic research priorities developed as part of the State of the Science project. The Council members expressed concern about the large number of projects associated with the DISCOVER-AQ field campaign and the geographic distribution of the funding. They felt that the highly recommended and recommended projects represented good science, but recommended considering additional projects that address mobile source (vehicular) emissions, and that address air quality issues relevant to regions that have not been as extensively studied as southeast Texas (e.g. central Texas).

The Council recommended that the twelve (12) proposals recommended by both the ITAC and the TCEQ be funded, as well as the two (2) additional proposals. They also recommended that a targeted RFP be published for the distribution of any remaining 2012-2013 funding. The Council members agreed to solicit and provide input regarding high priority needs for various areas within the state of Texas.

At this time, all principal investigators have been notified of the status of their proposals. Those that were selected for funding have been assigned an AQRP Project Manager and a TCEQ Liaison. The contracting process has begun. An amended Master Agreement will be issued to those entities which had projects funded in FY 2010-2011. A new Master Agreement will be issued to those entities newly funded by the AQRP.

RESEARCH PROJECTS

Research Projects for FY 2010-2011 are now completed. All projects have submitted final invoices and those invoices have been paid. The Final Report for each project, with the exception of one, is posted on the AQRP website at <http://aqrp.ceer.utexas.edu/projects.cfm>.

A summary of the projects approved for funding for FY 2010-2011 follows.

Project 10-006 Active – February 16, 2011 Completed - November 30, 2011

Quantification of Industrial Emissions of VOCs, NO₂ and SO₂ by SOF and Mobile DOAS

Chalmers University – Johan Mellqvist
University of Houston – Bernhard Rappenglueck

Funded Amount: \$484,662
(\$262,179 Chalmers, \$222,483 UH)

Expended Amount: \$480,128.11
(\$262,179 Chalmers, \$217,949.11 UH)

Amount Returned to AQRP: \$4,533.89
(\$0 Chalmers, \$4,533.89 UH)

Project 10-008 Active – October 21, 2010 Completed - September 30, 2011

Factors Influencing Ozone-Precursor Response in Texas Attainment Modeling

Rice University – Daniel Cohan
ENVIRON International – Greg Yarwood

Funded Amount: \$178,796
(\$128,851 Rice, \$49,945 ENVIRON)

Expended Amount: \$176,567.10
(\$126,622.32 Rice, \$49,944.78 Environ)

Amount Returned to AQRP: \$2,228.90
(\$2,228.68 Rice, \$0.22 Environ)

Project 10-009 Active – September 8, 2010 Completed - November 30, 2011

Additional Flare Test Days for TCEQ Comprehensive Flare Study

University of Texas at Austin – Vincent Torres

Funded Amount: \$591,332

Expended Amount: \$591,306.66

Amount Returned to AQRP: \$25.34

Project 10-015 Active – March 4, 2011 Completed - November 30, 2011

An Assessment of Nitryl Chloride Formation Chemistry and its Importance in Ozone Non-attainment areas in Texas

ENVIRON International – Greg Yarwood

Funded Amount: \$201,280

Expended Amount: \$201,278.63

Amount Returned to AQRP: \$1.37

Project 10-020 Active – March 5, 2011 Completed - November 30, 2011

NO_x Reactions and Transport in Nighttime Plumes and Impact on Next-Day Ozone

ENVIRON International – Greg Yarwood

Funded Amount: \$202,498

Expended Amount: \$202,493.48

Amount Returned to AQRP: \$4.52

Project 10-021 Active – October 11, 2010 Completed - August 31, 2011

Dry Deposition of Ozone to Built Environment Surfaces

University of Texas at Austin – Richard Corsi

Funded Amount: \$248,786

Expended Amount: \$248,786.41

Amount Returned to AQRP: -\$0.41

Project 10-022 Active - February 16, 2011 Completed - November 30, 2011

Development of Speciated Industrial Flare Emission Inventories for Air Quality Modeling in Texas

Lamar University – Daniel Chen

Funded Amount: \$150,000

Expended Amount: \$132,790.80

Amount Returned to AQRP: \$17,209.20

Project 10-024 Active – February 16, 2011 Completed - September 30, 2011

Surface Measurements and One-Dimensional Modeling Related to Ozone Formation in the Suburban Dallas-Fort Worth Area

Rice University – Robert Griffin
University of Houston – Barry Lefer
University of New Hampshire – Jack Dibb
University of Michigan – Allison Steiner

Funded Amount: \$458,957
(\$225,662 Rice, \$98,134 Houston, \$70,747 New Hampshire \$64,414 Michigan)

Expended Amount: \$444,001.74
(\$223,769.99 Rice, \$88,914.46 Houston, \$70,719.78 New Hampshire, \$60,597.51 Michigan)

Amount Returned to AQRP: \$14,955.26
(\$1,892.01 Rice, \$9,219.54 Houston, \$27.22 New Hampshire, \$3,816.49 Michigan)

Project 10-029 Active – December 1, 2010 Completed - November 30, 2011

Wind Modeling Improvements with the Ensemble Kalman Filter

Texas A&M University – John Nielsen-Gammon

Funded Amount: \$80,108 **Expended Amount:** \$78,276.97

Amount Returned to AQRP: \$1,831.03

Project Status:

A Draft Final Report has been submitted for review. The Project Investigator has reported a problem with the model being developed under this project. The team is currently working to correct the problem and will submit an updated draft of the Final Report once the model has been updated.

Project 10-032 Active - February 9, 2011 Completed - November 30, 2011

SHARP Data Analysis: Radical Budget and Ozone Production

University of Houston – Barry Lefer
UCLA – Jochen Stutz
University of New Hampshire – Jack Dibb

Funded Amount: \$248,652
(\$176,314 UH, \$23,054 New Hampshire, \$49,284 UCLA)

Expended Amount: \$242,335.97
(\$176,314 UH, \$18,850.65 New Hampshire, \$47,171.32 UCLA)

Amount Returned to AQRP: \$6,316.03
(\$0.00 UH, \$4,203.35 New Hampshire, \$2,112.68 UCLA)

Project 10-034 Active – February 2, 2011 Completed - November 30, 2011

Dallas Measurements of Ozone Production

University of Houston – Barry Lefer

Funded Amount: \$195,054 **Expended Amount:** \$186,657.54

Amount Returned to AQRP: \$8,396.46

Project 10-042 Active – October 8, 2010 Completed - November 30, 2011

Environmental Chamber Experiments to Evaluate NOx Sinks and Recycling in Atmospheric Chemical Mechanisms

ENVIRON International – Greg Yarwood

Funded Amount: \$237,481 **Expended Amount:** \$237,479.31

Amount Returned to AQRP: \$1.69

Project 10-044 Active – March 25, 2011 Completed - November 30, 2011

Airborne Measurements to Investigate Ozone Production and Transport in the Dallas-Fort Worth (DFW) Area during the 2011 Ozone Season

University of Houston – Maxwell Shauck

Funded Amount: \$279,642 **Expended Amount:** \$277,846.38

Amount Returned to AQRP: \$1,795.62

Project 10-045 Active - January 22, 2011 Completed - September 30, 2011

Quantification of Hydrocarbon, NOx, and SO2 emissions from Petrochemical Facilities in Houston: Interpretation of the 2009 FLAIR dataset

UCLA – Jochen Stutz
UNC - Chapel Hill – William Vizquete
Aerodyne – Scott Herndon
Washington State University – George Mount

Funded Amount: \$398,042
(\$149,773 UCLA, \$33,281 UNC, \$164,988 Aerodyne, \$50,000 Washington State)

Expended Amount: \$391,199.38
(\$142,930.28 UCLA, \$33,281 UNC, \$164,988.10 Aerodyne, \$50,000 Washington State)

Amount Returned to AQRP: \$6,842.62
(\$6,842.72 UCLA, \$0.00 UNC, -\$0.10 Aerodyne, \$0.00 Washington State)

Projects 10-DFW Active - February 1, 2011 Completed - August 31, 2011
& 11-DFW

Dallas – Fort Worth Field Study

UT-Austin – Vincent Torres

Funding Awarded: \$88,809
(\$37,857 10-DFW (FY 10 Funds) \$50,952 11-DFW (FY 11 Funds))

Expended Amount: \$66,951.17
(\$37,689.42 10-DFW, \$29,261.75 11-DFW)

Amount Returned to AQRP: \$21,857.83
(\$267.68 10-DFW, \$21,690.36 11-DFW)

Project 11-SOS Active - February 8, 2012 Completed Date – April 30, 2012

State of the Science

UT-Austin – David Allen

Funded Amount: \$36,000 **Expended Amount:** \$36,000

Amount Returned to AQRP: \$0.00

The final project for FY 2010-2011, the State of the Science review, was completed in April 2012. The purpose of this project was to determine the high priority scientific and technical issues that could be addressed in the 2012-2013 biennium. This document was released in May 2012 with the Request for Proposals for 2012-2013.

As stated above, thirty-two proposals, requesting \$5 million in research funding were received. The review process resulted in the Advisory Council selecting the 14 projects shown in Table 1 below for funding. Investigators have been notified of their funding status and the contracting process has commenced.

Table 1: 2012 – 2013 Projects Selected for Funding

Proposal Number	Proposal Title	PI	Lead Institution	Collaborating Institutions
12-004	DISCOVER-AQ Ground Sites Infrastructure Support	Vincent Torres	The University of Texas at Austin	None
12-005	Quantification of industrial emissions of VOCs, NO ₂ and SO ₂ by SOF and mobile DOAS during DISCOVER AQ	Johan Mellqvist	Chalmers University of Technology	University of Houston
12-006	Environmental chamber experiments and CMAQ modeling to improve mechanisms to model ozone formation from HRVOCs	Gookyoung Heo	University of California, Riverside	TAMU
12-011	Investigation of Global Modeling and Lightning NO _x Emissions as Sources of Regional Background Ozone in Texas	Chris Emery	Environ	Princeton University
12-012	Interactions Between Organic Aerosol and Noy: Influence on Oxidant Production	Lea Hildebrandt	The University of Texas at Austin	Environ
12-013	Development of Transformation Rate of SO ₂ to Sulfate for the Houston Ship Channel using the TexAQS 2006 Field Study Data	Ralph Morris	Environ	None
12-016	Ozonesonde launches from the University of Houston and Smith Point, Texas in Support of DISCOVER AQ	Gary Morris	Valparaiso University	University of Houston
12-018	The Effects of Uncertainties in Fire Emissions Estimates on Predictions of Texas Air Quality	Elena McDonald-Buller	The University of Texas at Austin	ENVIRON

Proposal Number	Proposal Title	PI	Lead Institution	Collaborating Institutions
12-022	Surface Measurements of PM, VOCs, and Photochemically Relevant Gases in Support of DISCOVER-AQ	Robert Griffin	Rice University	University of Houston
12-024	Surface Measurement of Trace Gases in Support of DISCOVER-AQ in Houston in Summer 2013	Xinrong Ren	University of Maryland	NOAA
12-028	Implementation and evaluation of new HONO mechanisms in a 3-D Chemical Transport Model for Spring 2009 in Houston	Barry Lefer	University of Houston	University of California - Los Angeles, ENVIRON, University of North Carolina - Chapel Hill
12-032	Collect, Analyze, and Archive Filters at two DISCOVER-AQ Houston Focus Areas: Initial Characterization of PM Formation and Emission	Rebecca Sheesley	Baylor University	None
12-TN1	Investigation of surface layer parameterization of the WRF model and its impact on the observed nocturnal wind speed bias	Pius Lee	NOAA	None
12-TN2	Development of IDL-based geospatial data processing framework for meteorology and air quality modeling	HyunCheol Kim	NOAA	None

At this time, Project Managers and TCEQ Liaisons have been assigned to each project. Principal Investigators are compiling their Work Plans (Scope of Work, Budget, and Quality Assurance Project Plan (QAPP)) for review as the project administration focuses on the contracting process.

FINANCIAL STATUS REPORT

Initial funding for fiscal year 2010 was established at \$2,732,071.00. In late May 2010 an amendment was issued increasing the budget by \$40,000. Funding for fiscal year 2011 was established at \$2,106,071, for a total award of \$4,878,142 for the FY 2010/2011 biennium. As of August 31, 2012, \$58,890.57 remains unspent. These funds will be used in conjunction with the FY 2012 and 2013 funds and will be fully expended by March 2013.

In February 2012, funding of \$1,000,000 was awarded for FY 2012. In June 2012, an additional \$160,000 was awarded in FY 2012 funds and \$1,000,000 was awarded in FY 2013 funds, for a total of \$2,160,000 in funding for the FY 2012/2013 biennium.

All of these funds were distributed across several different reporting categories as required under the contract with TCEQ. The reporting categories are:

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 ITAC meetings.

Project Management – limited to 8.5% of the funds allocated for Research Projects

Each research project will be 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 a whole, 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.

During the reporting period six staff members were involved, part time, in the administration of the AQRP. Dr. David Allen, Principal Investigator and AQRP Director, is responsible for the overall administration of the AQRP. James Thomas, AQRP Manager, is responsible for assisting Dr. Allen in the program administration. Maria Stanzione, AQRP Grant Manager, with assistance from Rachael Bushn and Melanie Allbritton assisted with program organization and financial management. This included assisting with the issuance of the RFP, the proposal review process, the contracting process, invoice review and payment, and other invoicing functions. Denzil Smith is responsible for the AQRP Web Page development and for data management.

Table 2: AQRP Administration Budget

**Administration Budget (includes Council Expenses)
FY 2010/2011**

Budget Category	FY10 Budget	FY11 Budget	Total	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary	\$202,816.67	\$163,120.24	\$365,936.91	\$365,936.91	\$0	\$0
Fringe Benefits	\$38,665.65	\$31,173.03	\$69,838.68	\$69,838.68	\$0	\$0
Travel	\$346.85	\$0	\$346.85	\$346.85		\$0
Supplies	\$15,096.14	\$4.51	\$15,100.65	\$15,096.14		\$4.51
Equipment	\$0	\$0	\$0			\$0
Total Direct Costs	\$256,925.31	\$194,297.78	\$451,223.09	\$451,218.58	\$0	\$4.51
Authorized Indirect Costs	\$20,281.69	\$16,310.22	\$36,591.91	\$36,591.91		\$0
10% of Salaries and Wages						
Total Costs	\$277,207	\$210,608	\$487,815	\$487,810.49	\$0	\$4.51
Fringe Rate	22%	22%		19%		

**Administration Budget (includes Council Expenses)
FY 2012/2013**

Budget Category	FY12 Budget	FY13 Budget	Total	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary	\$80,440	\$70,040	\$150,480	\$28,220.55	\$68.16	\$122,191.29
Fringe Benefits	\$14,666	\$12,606	\$27,272	\$4,764.85	\$1,347.60	\$21,159.55
Travel	\$350	\$350	\$700	\$0		\$700.00
Supplies	\$10,000	\$10,000	\$20,000	\$275.10		\$19,724.90
Equipment	\$0	\$0	\$0			\$0
Total Direct Costs	\$105,456	\$92,996	\$198,452	\$33,260.50	\$1,415.76	\$163,775.74
Authorized Indirect Costs	\$8,044	\$7,004	\$15,048	\$2,228.28		\$12,819.72
10% of Salaries and Wages						
Total Costs	\$113,500	\$100,000	\$213,500	\$35,488.78	\$1,415.76	\$176,595.46
Fringe Rate	22%	22%		17%		

Fringe benefits for the administration of the AQRP were initially budgeted to be 22% of salaries and wages across the term of the project. It should be noted that this was an estimate, and actual fringe benefit expenses have been reported for each month. The fringe benefit amount and percentage fluctuate each month depending on the individuals being paid from the account, their salary, their FTE percentage, the selected benefit package, and other variables. For example, the amount of fringe benefits are greater for a person with family medical insurance versus a person with individual medical insurance. At the end of the project, the overall total of fringe benefit expensed is expected to be at or below 22% of the total salaries and wages. Actual fringe benefit expenses for the months of June and July are included in the spreadsheets above. The amount for August is estimated.

Actual indirect costs for the months of June and July are included in Table 2. The amount for August is estimated. The accounting records for the month of August do not close until after the due date of this report, thereby requiring the estimate.

As discussed in previous Quarterly Reports, the AQRP Administration requested and received permission to utilize funds in future fiscal years. This is for all classes of funds including Administration, ITAC, Project Management, and Contractual. As of the writing of this report, the FY 10 funds have been fully expended. The intent is to fully expend the FY 11 funds, by March 2013. This same procedure will be followed for the FY 12 funds.

In June 2011, UT-Austin received a Contract Extension for the AQRP. This extension will continue the program through the end of the 2012/2013 biennium.

ITAC

The ITAC met in Austin, Texas, on June 29, 2012, to complete their review and ranking of the proposals. ITAC expenses incurred include lodging and travel costs for members to travel to Austin, Texas, for the full day meeting. As the meeting was a full day meeting, lunch was provided to the meeting participants. As of August 31, 2012, expenses for all but two of the ITAC members have been paid.

Table 3: ITAC Budget

ITAC Budget FY 2010/2011

Budget Category	FY10 Budget	FY11 Budget	Total Budget	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary						
Fringe Benefits						
Travel	\$16,378.86	\$16,714.53	\$33,093.39	\$22,372.76	\$1,759.00	\$8,961.63
Supplies	\$1,039.95	\$4,130.66	\$5,170.61	\$1,324.62		\$3,845.99
Total Direct Costs	\$17,418.81	\$20,845.19	\$38,264	\$23,697.38	\$1,759.00	\$12,807.62
Authorized Indirect Costs						
10% of Salaries and Wages						
Total Costs	\$17,418.81	\$20,845.19	\$38,264	\$23,697.38	\$1,759.00	\$12,807.62

ITAC Budget FY 2012/2013

Budget Category	FY12 Budget	FY13 Budget	Total Budget	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary						
Fringe Benefits						
Travel	\$10,000	\$0	\$10,000	\$0	\$0	\$10,000
Supplies	\$500	\$0	\$500	\$0		\$500
Total Direct Costs	\$10,500	\$0	\$10,500	\$0	\$0	\$10,500
Authorized Indirect Costs						
10% of Salaries and Wages						
Total Costs	\$10,500	\$0	\$10,500	\$0	\$0	\$10,500

Project Management

As there were no active Research Projects in June and July 2012, there were no Project Management costs.

In order to fully fund the DFW Field Study Logistics project, funds were moved from the FY 11 Project Management account to the FY 11 Contractual account. Once all expenses had posted for that project, there were enough funds remaining to return those funds to the Project Management account. During the grant period ending May 31, 2012, \$345.75 of the FY 11 Contractual funds were returned to the FY 11 Project Management account. The remaining \$21,690.25 was returned in June 2012.

In August 2012, Project Managers were assigned to the FY 2012-2013 Research Projects.

Table 4: Project Management Budget

Project Management Budget FY 2010/2011

Budget Category	FY10 Budget	FY11 Budget	Total Budget	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary	\$145,337.70	\$106,907.22	\$252,244.92	\$233,254.14		\$18,990.78
Fringe Benefits	\$28,967.49	\$22,142.56	\$51,110.05	\$44,835.37		\$6,274.68
Travel	\$0	\$0	\$0	\$0		\$0
Supplies	\$778.30	\$260.00	\$1,038.30	\$911.98		\$126.32
Total Direct Costs	\$175,083.49	\$129,309.78	\$304,393.27	\$279,001.49	\$0.00	\$25,391.78
Authorized Indirect Costs	\$14,533.77	\$10,690.22	\$25,223.99	\$22,883.42		\$2,340.57
10% of Salaries and Wages						
Total Costs	\$189,617.26	\$140,000.00	\$329,617.26	\$301,884.91	\$0.00	\$27,732.35

**Project Management Budget
FY 2012/2013**

Budget Category	FY12 Budget	FY13 Budget	Total Budget	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary	\$60,700	\$46,000	\$106,700	\$0		\$106,700
Fringe Benefits	\$11,230	\$8,400	\$19,630	\$0		\$19,630
Travel	\$500	\$0	\$500	\$0		\$500
Supplies	\$7,500	\$6,000	\$13,500	\$0		\$13,500
Total Direct Costs	\$79,930	\$60,400	\$140,330	\$0	\$0	\$140,330
Authorized Indirect Costs	\$6,070	\$4,600	\$10,670	\$0		\$10,670
10% of Salaries and Wages						
Total Costs	\$86,000	\$65,000	\$151,000	\$0	\$0	\$151,000

Research Projects

Table 5 on the following 2 pages illustrates the 2010-2011 Research Projects, including the funding awarded to each project and the total expenses reported on each project as of August 31, 2012.

As of the end of August there was \$18,346.09 of FY 2011 funding available in Research Projects. The FY 10 Research/Contractual budget was originally funded at \$2,286,000. After all transfers, it has been increased by \$1,827.93. The FY 11 Research/Contractual budget was originally funded at \$1,736,063. After all transfers, it has been decreased by \$1,445,19 (the amount transferred to ITAC). This is an overall net increase of \$382.74 to the Research/Contractual funds (and net reduction in Project Management funds).

The remaining FY 2011 Research/Contractual funds will be awarded to one of the 2012-2013 Research Projects, and will be fully expended by March 2013.

A spreadsheet is not included in this report for FY 2012 and 2013 funds, as no expenditures have yet occurred. FY 2012 funds in the amount of \$950,000 and FY 2013 funds in the amount of \$835,000 are budgeted for Research Projects.

Table 5: Contractual Expenses

Contractual Expenses				
FY 10 Contractual Funding		\$2,286,000		
FY 10 Contractual Funding Transfers		\$1,827.93		
FY 10 Total Contractual Funding		\$2,287,827.93		
Project Number		Amount Awarded (Budget)	Cumulative Expenditures	Remaining Balance
10-008	Rice University	\$128,851	\$126,622.32	\$2,228.68
10-008	Environ International	\$49,945	\$49,944.78	\$0.22
10-009	UT-Austin	\$591,332	\$591,306.66	\$25.34
10-021	UT-Austin	\$248,786	\$248,786.41	-\$0.41
10-022	Lamar University	\$150,000	\$132,790.80	\$17,209.20
10-032	University of Houston	\$176,314	\$176,314	\$0
10-032	University of New Hampshire	\$23,054	\$18,850.65	\$4,203.35
10-032	UCLA	\$49,284	\$47,171.32	\$2,112.68
10-034	University of Houston	\$195,054	\$186,657.54	\$8,396.46
10-042	Environ International	\$237,481	\$237,479.31	\$1.69
10-045	UCLA	\$149,773	\$142,930.28	\$6,842.72
10-045	UNC - Chapel Hill	\$33,281	\$33,281	\$0
10-045	Aerodyne Research Inc.	\$164,988	\$164,988.10	-\$0.10
10-045	Washington State University	\$50,000	\$50,000	\$0
10-DFW	UT-Austin	\$37,857	\$37,689.42	\$167.58
FY 10 Total Contractual Funding Awarded		\$2,286,000		
FY 10 Contractual Funding Expended (Init. Projects)			\$2,244,812.59	
FY 10 Contractual Funds Remaining Unspent after Project Completion				\$41,187.41
FY 10 Additional Projects				
	Data Storage	\$7,015.34	\$7,015.34	\$0
10-SOS	State of the Science	\$36,000.00	\$36,000.00	\$0
FY 10 Contractual Funds Expended to Date*			\$2,287,827.93	
FY 10 Contractual Funds Remaining to be Spent				\$0

FY 11 Contractual Funding		\$1,736,063		
FY 11 Contractual Funding Transfers		-\$1,445.19		
FY 11 Total Contractual Funding		\$1,734,617.81		
Project Number		Amount Awarded (Budget)	Cumulative Expenditures	Remaining Balance
10-006	Chalmers University of Tech	\$262,179	\$262,179	\$0
10-006	University of Houston	\$222,483	\$217,949.11	\$4,533.89
10-015	Environ International	\$201,280	\$201,278.63	\$1.37
10-020	Environ International	\$202,498	\$202,493.48	\$4.52
10-024	Rice University	\$225,662	\$223,769.99	\$1,892.01
10-024	University of New Hampshire	\$70,747	\$70,719.78	\$27.22
10-024	University of Michigan	\$64,414	\$60,597.51	\$3,816.49
10-024	University of Houston	\$98,134	\$88,914.46	\$9,219.54
10-029	Texas A&M University	\$80,108	\$78,276.97	\$1,831.03
10-044	University of Houston	\$279,642	\$277,846.38	\$1,795.62
11-DFW	UT-Austin	\$50,952	\$29,261.75	\$21,690.25
FY 11 Total Contractual Funding Awarded		\$1,758,099		
FY 11 Contractual Funds Expended (Init. Projects)			\$1,713,287.06	
FY 11 Contractual Funds Remaining Unspent after Project Completion				\$44,811.94
FY 11 Additional Projects				
	Data Storage	\$2,984.66	\$2,984.66	\$0.00
FY 11 Contractual Funds Expended to Date*			\$1,716,271.72	
FY 11 Contractual Funds Remaining to be Spent				\$18,346.09
Total Contractual Funding		\$4,022,063.00		
Total Contractual Funding Transfers		\$382.74		
Total Contractual Funding Available		\$4,022,445.74		
Total Contractual Funds Expended to Date*			\$4,004,099.65	
Total Contractual Funds Remaining				\$18,346.09

*(Expenditures Reported as of May 31, 2012.)

Conclusion

The ITAC FY 2011 budget has \$12,807.62 remaining. These funds will be utilized for the remaining ITAC expenses for the meeting held in June 2012. It is anticipated that some or all of the remaining funds may be moved to support research projects in the 2012-2013 biennium. The amount will be determined during the next quarter.

The Project Management FY 2011 budget will have approximately \$27,000 remaining after all August expenses are posted. These funds will be used to cover Project Management expenses until the funds are fully expended. Use of these funds may allow the release of FY 12 Project Management funds to be used for Research projects. This will be assessed during the next quarter.

The Research/Contractual category has approximately \$18,000 remaining. These funds will be used to fund research projects in the FY 2012-13 biennium (though they will be fully expended by March 31, 2013.) It should be noted that all FY 10-11 Research funds were allocated to projects, and an additional \$22,036 was moved from Project Management to Research to cover additional expenses related to the DFW Field Study. Several projects returned funds to the AQRP when they concluded, thus the remaining balance. As these funds were committed to Research projects until the projects ended, the AQRP was unable to utilize the funds for any other purpose.

In summary, the remaining FY 2011 funds of approximately \$58,000.00 are expected to be fully expended by March 31, 2013.

Each 2012-2013 Research Project will be funded from a specific fiscal year. The assignments will be made during the next quarter. Once all budgets have been approved and assignments made the program managers will assess whether any Research Project funds remain available, and will contact the ITAC, TCEQ, and Council to determine how to proceed in the allocation of those funds.

Appendix A

Financial Reports by Fiscal Year

FY 10 and 11

(Expenditures reported as of August 31, 2012.)

Administration Budget (includes Council Expenses)

FY 2010

Budget Category	FY10 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$202,816.67	\$202,816.67		\$0
Fringe Benefits	\$38,665.65	\$38,665.65		\$0
Travel	\$346.85	\$346.85		\$0
Supplies	\$15,096.14	\$15,096.14		\$0
Equipment	\$0			\$0
Other				
Contractual				
Total Direct Costs	\$256,925.31	\$256,925.31		\$0
Authorized Indirect Costs	\$20,281.69	\$20,281.69		\$0
10% of Salaries and Wages				
Total Costs	\$277,207	\$277,207.00	\$0	\$0

Administration Budget (includes Council Expenses)

FY 2011

Budget Category	FY11 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$163,120.24	\$163,120.24	\$0	\$0
Fringe Benefits	\$31,173.03	\$31,173.03	\$0	\$0
Travel	\$0			\$0
Supplies	\$4.51			\$4.51
Equipment				
Other	\$0			\$0
Contractual				
Total Direct Costs	\$194,297.78	\$194,293.27	\$0	\$4.51
Authorized Indirect Costs	\$16,310.22	\$16,310.22		\$0
10% of Salaries and Wages				
Total Costs	\$210,608	\$210,603.49	\$0	\$4.51

**ITAC Budget
FY 2010**

Budget Category	FY10 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary				
Fringe Benefits				
Travel	\$16,385.47	\$16,385.47	\$0	\$0
Supplies	\$1,033.34	\$1,033.34		\$0
Equipment				
Other				
Total Direct Costs	\$17,418.81	\$17,418.81	\$0	\$0
Authorized Indirect Costs				
10% of Salaries and Wages				
Total Costs	\$17,418.81	\$17,418.81	\$0	\$0

**ITAC Budget
FY 2011**

Budget Category	FY11 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary				
Fringe Benefits				
Travel	\$16,714.53	\$5,993.90	\$1,759.00	\$8,961.63
Supplies	\$4,130.66	\$284.67		\$3,845.99
Equipment				
Other				
Total Direct Costs	\$20,845.19	\$6,278.57	\$1,759.00	\$12,807.62
Authorized Indirect Costs				
10% of Salaries and Wages				
Total Costs	\$20,845.19	\$6,278.57	\$1,759.00	\$12,807.62

**Project Management Budget
FY 2010**

Budget Category	FY10 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$145,337.70	\$145,337.70		\$0
Fringe Benefits	\$28,967.49	\$28,967.49		\$0
Travel	\$0	\$0		\$0
Supplies	\$778.30	\$778.30		\$0
Equipment				
Other				
Total Direct Costs	\$175,083.49	\$175,083.49	\$0	\$0
Authorized Indirect Costs	\$14,533.77	\$14,533.77		\$0
10% of Salaries and Wages				
Total Costs	\$189,617.26	\$189,617.26	\$0	\$0

**Project Management Budget
FY 2011**

Budget Category	FY11 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$106,907.22	\$87,916.44	\$0	\$18,990.78
Fringe Benefits	\$22,142.56	\$15,867.88	\$0	\$6,274.68
Travel	\$0			\$0
Supplies	\$260.00	\$133.68		\$126.32
Equipment				
Other				
Total Direct Costs	\$129,309.78	\$103,918.00	\$0	\$25,391.78
Authorized Indirect Costs	\$10,690.22	\$8,349.65		\$2,340.57
10% of Salaries and Wages				
Total Costs	\$140,000.00	\$112,267.65	\$0	\$27,732.35

AQRP Budget

FY 2010

Budget Category	FY10 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$202,816.67	\$202,816.67	\$0.00	\$0.00
Fringe Benefits	\$38,665.65	\$38,665.65	\$0.00	\$0.00
Travel	\$346.85	\$346.85	\$0.00	\$0.00
Supplies	\$15,096.14	\$15,096.14	\$0.00	\$0.00
Equipment	\$0	\$0.00	\$0.00	\$0.00
Other	\$0	\$0.00	\$0.00	\$0.00
Contractual	\$2,287,827.93	\$2,287,827.93	\$0.00	\$0.00
ITAC	\$17,418.81	\$17,418.81	\$0.00	\$0.00
Project Management	\$189,617.26	\$189,617.26	\$0.00	\$0.00
Total Direct Costs	\$2,751,789.31	\$2,751,789.31	\$0.00	\$0.00
Authorized Indirect Costs	\$20,281.69	\$20,281.69	\$0.00	\$0.00
10% of Salaries and Wages				
Total Costs	\$2,772,071.00	\$2,772,071.00	\$0.00	\$0.00

AQRP Budget

FY 2011

Budget Category	FY11 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$163,120.24	\$163,120.24	\$0.00	\$0.00
Fringe Benefits	\$31,173.03	\$31,173.03	\$0.00	\$0.00
Travel	\$0	\$0.00	\$0.00	\$0.00
Supplies	\$4.51	\$0.00	\$0.00	\$0.00
Equipment	\$0	\$0.00	\$0.00	\$0.00
Other	\$0	\$0.00	\$0.00	\$0.00
Contractual	\$1,734,617.81	\$1,716,271.72	\$0.00	\$18,346.09
ITAC	\$20,845.19	\$6,278.57	1,759.00	\$12,807.62
Project Management	\$140,000.00	\$112,267.65	\$0.00	\$27,732.35
Total Direct Costs	\$2,089,760.78	\$2,029,111.21	\$1,759.00	\$58,890.57
Authorized Indirect Costs	\$16,310.22	\$16,310.22	\$0.00	\$0.00
10% of Salaries and Wages				
Total Costs	\$2,106,071.00	\$2,045,421.43	\$1,759.00	\$58,890.57

Appendix B

Financial Reports by Fiscal Year

FY 12 and 13

(Expenditures reported as of August 31, 2012.)

Administration Budget (includes Council Expenses)

FY 2012

Budget Category	FY12 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$80,440.00	\$28,220.55	\$68.16	\$52,151.29
Fringe Benefits	\$14,666.00	\$4,764.85	\$1,347.60	\$8,553.55
Travel	\$350.00	\$0.00		\$350.00
Supplies	\$10,000.00	\$275.10	\$0	\$9,724.90
Equipment	\$0.00			\$0.00
Other				
Contractual				
Total Direct Costs	\$105,456.00	\$33,260.50	\$1,415.76	\$70,779.74
Authorized Indirect Costs	\$8,044.00	\$2,228.28		\$5,815.72
10% of Salaries and Wages				
Total Costs	\$113,500.00	\$35,488.78	\$1,415.76	\$76,595.46

Administration Budget (includes Council Expenses)

FY 2013

Budget Category	FY13 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$70,040.00	\$0.00		\$70,040.00
Fringe Benefits	\$12,606.00	\$0.00		\$12,606.00
Travel	\$350.00	\$0.00		\$350.00
Supplies	\$10,000.00	\$0.00		\$10,000.00
Equipment				
Other	\$0.00	\$0.00		\$0.00
Contractual				
Total Direct Costs	\$92,996.00	\$0.00	\$0.00	\$92,996.00
Authorized Indirect Costs	\$7,004.00	\$0.00		\$7,004.00
10% of Salaries and Wages				
Total Costs	\$100,000.00	\$0.00	\$0.00	\$100,000.00

ITAC Budget

FY 2012

Budget Category	FY12 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary				
Fringe Benefits				
Travel	\$10,000.00			\$10,000.00
Supplies	\$500.00			\$500.00
Equipment				
Other				
Contractual				
Total Direct Costs	\$10,500.00	\$0.00	\$0.00	\$10,500.00
Authorized Indirect Costs				
10% of Salaries and Wages				
Total Costs	\$10,500.00	0.00	\$0.00	\$10,500.00

ITAC Budget

FY 2013

Budget Category	FY13 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary				
Fringe Benefits				
Travel	\$0.00	\$0.00		\$0.00
Supplies	\$0.00	\$0.00		\$0.00
Equipment				
Other				
Contractual				
Total Direct Costs	\$0.00	\$0.00	\$0.00	\$0.00
Authorized Indirect Costs				
10% of Salaries and Wages				
Total Costs	\$0.00	\$0.00	\$0.00	\$0.00

Project Management Budget

FY 2012

Budget Category	FY12 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$60,700.00			\$60,700.00
Fringe Benefits	\$11,230.00			\$11,230.00
Travel	\$500.00			\$500.00
Supplies	\$7,500.00			\$7,500.00
Equipment				
Other				
Contractual				
Total Direct Costs	\$79,930.00	\$0.00	\$0.00	\$79,930.00
Authorized Indirect Costs	\$6,070.00			\$6,070.00
10% of Salaries and Wages				
Total Costs	\$86,000.00	0.00	\$0.00	\$86,000.00

Project Management Budget

FY 2013

Budget Category	FY13 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$46,000.00			\$46,000.00
Fringe Benefits	\$8,400.00			\$8,400.00
Travel	\$0.00			\$0.00
Supplies	\$6,000.00			\$6,000.00
Equipment				
Other				
Contractual				
Total Direct Costs	\$60,400.00	\$0.00	\$0	\$60,400.00
Authorized Indirect Costs	\$4,600.00			\$4,600.00
10% of Salaries and Wages				
Total Costs	\$65,000.00	0.00	\$0.00	\$65,000.00

AQRP Budget

FY 2012

Budget Category	FY12 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$80,440.00	\$28,220.55	\$68.16	\$52,151.29
Fringe Benefits	\$14,666.00	\$4,764.85	\$1,347.60	\$8,553.55
Travel	\$350.00	\$0.00	\$0.00	\$350.00
Supplies	\$10,000.00	\$275.10	\$0.00	\$9,724.90
Equipment	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00	\$0.00
Contractual	\$950,000.00	\$0.00	\$0.00	\$950,000.00
ITAC	\$10,500.00	\$0.00	\$0.00	\$10,500.00
Project Management	\$86,000.00	\$0.00	\$0.00	\$86,000.00
Total Direct Costs	\$1,151,956.00	\$33,260.50	\$1,415.76	\$1,117,279.74
Authorized Indirect Costs 10% of Salaries and Wages	\$8,044.00	\$2,228.28	\$0.00	\$5,815.72
Total Costs	\$1,160,000.00	\$35,488.78	\$1,415.76	\$1,123,095.46

AQRP Budget

FY 2013

Budget Category	FY13 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$70,040.00	\$0.00	\$0.00	\$70,040.00
Fringe Benefits	\$12,606.00	\$0.00	\$0.00	\$12,606.00
Travel	\$350.00	\$0.00	\$0.00	\$350.00
Supplies	\$10,000.00	\$0.00	\$0.00	\$10,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00	\$0.00
Contractual	\$835,000.00	\$0.00	\$0.00	\$835,000.00
ITAC	\$0.00	\$0.00	\$0.00	\$0.00
Project Management	\$65,000.00	\$0.00	\$0.00	\$65,000.00
Total Direct Costs	\$992,996.00	\$0.00	\$0.00	\$992,996.00
Authorized Indirect Costs 10% of Salaries and Wages	\$7,004.00	\$0.00	\$0.00	\$7,004.00
Total Costs	\$1,000,000.00	\$0.00	\$0.00	\$1,000,000.00