

Funding Agreement for Tracking the Primary Sources of Fecal Pollution in the Recharge and Contributing Zones of Edwards Aquifer in Bexar County, TX, using Molecular Tools under the

Proposition 1 Edwards Aquifer Protection Projects within Urbanized Areas of Bexar County's Recharge and Contributing Zones Program

This Proposition 1 Edwards Aquifer Protection Projects within Urbanized Areas of Bexar County's Recharge and Contributing Zones Funding Agreement (Funding Agreement) is between the City of San Antonio (City), the San Antonio River Authority (River Authority), and the University of Texas at San Antonio (Funding Recipient), collectively the "Parties." The Parties understand and agree that this Funding Agreement documents the roles and responsibilities of each of the Parties in the City's Proposition 1 Edwards Aquifer Protection Projects within Urbanized Areas of Bexar County's Recharge and Contributing Zones Program (Program). The Parties agree to comply with the terms of this Funding Agreement (Agreement).

Background

Proposition 1, the Edwards Aquifer Protection Venue Project, authorizes the City to continue the voter-approved watershed and preservation project initiated in 2000 and continued in 2005, 2010, and 2015. A 1/8 cent sales tax is projected to collect \$100 million for this project. Of the \$100 million projected to be collected pursuant to the 2015 authorization, \$90 million will continue to be used toward the purchase of conservation easements and acquisition of real estate interests over the sensitive recharge and contributing zones of the aquifer. The remaining \$10 million is dedicated for Program-funded projects that will protect and improve Edwards Aquifer water quality. The Funding Recipient's Implementation of Tracking the Primary Sources of Fecal Pollution in the Recharge and Contributing Zones of Edwards Aquifer in Bexar County, TX, using Molecular Tools (Project) has received both Conservation Advisory Committee (CAB) and City of San Antonio City Council (Council) funding approval and is the subject of this Agreement. The primary project goal is to design and implement an efficient fecal source tracking and evaluation program for the recharge and contributing zones of Edwards Aquifer in Bexar County, Texas.

Funding

The City has authorized and will contribute \$692,452 for the Project. The funding amount is documented by the detailed information in Exhibit A. All Parties acknowledge and agree that \$692,452 is the full amount authorized by this Funding Agreement, and no additional funds will be claimed by the Funding Recipient, unless this amount is modified through an amendment executed by all of the Parties.

Agreement Term

This Agreement shall be effective as of October 1, 2017 (the "Effective Date") through and including September 30, 2020 (the "Term"). The Parties may extend this Agreement for a mutually agreeable period.

City of San Antonio Acknowledges and Agrees

1. Funding Recipient will be responsible for the work to be conducted under the Program.
2. River Authority will serve as project manager and administrator of the Program.
3. Funding Recipient will submit quarterly invoices for payment directly to City, with a copy sent concurrently to River Authority, to the following addresses:

<p>City of San Antonio Phillip Covington Special Projects Manager Edwards Aquifer Protection Program Parks and Recreation Department PO Box 839966 San Antonio, TX 78283 (210) 207-3003 phillip.covington@sanantonio.gov</p>	<p>San Antonio River Authority Karen Bishop Senior Supervisor Environmental Sciences Department PO Box 839980 San Antonio, Texas 78283 (210) 302-3642 kbishop@sara-tx.org</p>
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4. Funding shall be paid directly to the Funding Recipient after River Authority verification of satisfactory performance of work in accordance with the payment schedule attached as Exhibit B and the completion of Funding Recipient's project milestones and deliverable dates, attached as Exhibit C.

Payment will be made to the following address:

The University of Texas at San Antonio
Grants and Contracts Financial Services (GCFS)
One UTSA Circle
San Antonio, Texas 78249

River Authority Acknowledges and Agrees

1. River Authority will serve as project manager and administrator of the Program.
2. River Authority is responsible to the City to ensure quality and timely implementation of Project components and future monitoring of aquifer protection and improvement projects funded through the Program.
3. River Authority will coordinate payment to the Funding Recipient in a timely manner per Exhibits A and B.

Funding Recipient Acknowledges and Agrees

1. Work to be conducted by Funding Recipient will be under the direct supervision of Principal Investigator, Dr. Vikram Kapoor, an employee of the Funding Recipient.
2. The Project shall produce the following deliverables:
 - a. Monitoring datasets
 - b. Identification of sources of pathogenic fecal bacteria, including municipal waste/runoff and animal waste
 - c. Resolution of spatiotemporal fecal input, including source identification, potential load allocations and factors that contribute to seasonable variability of microbial concentrations
 - d. Public outreach, to include educational and outreach activities about non-point source pollution, in collaboration with the Cibolo Nature Center, and homeowner education modules
 - e. Publication of findings in scientific publications, reviews, and/or brief reports in peer-reviewed scientific journals
 - f. Incorporation of study results into UTSA Civil and Environmental Engineering Department undergraduate coursework on septic tanks, domestic pet waste, urban wildlife populations, and household wells.
3. The Project shall answer the following questions:
 - a. What, if any, are the primary sources of human fecal pollution in the recharge and contributing zones of Edwards Aquifer in Bexar County, Texas?
 - b. What, if any, are the primary sources of non-human fecal contamination (major animal sources) in the region?
 - c. What, if any, are the different factors that contribute to fecal pollution of water entering the aquifer?
 - d. What, if needed, are the types of BMPs that can be implemented to reduce the levels of fecal bacteria entering the aquifer's water?
4. The Project's major milestones and phases include:
 - a. Year 1
 - i. Purchasing of materials and disposables
 - ii. Sample site identification, site assessment, and GIS map synthesis
 - iii. Commencement and completion of sample collection
 - iv. Commencement and completion of DNA extraction and Polymerase Chain Reaction (PCR) optimization of samples
 - v. Commencement of routine sample collection, DNA extraction and PCR
 - vi. Commencement of water quality parameter testing
 - vii. Commencement of data analysis and dissemination of results

- b. Year 2
 - i. Commencement of full-day storm event sample collection
 - ii. PCR and quantitative PCR (qPCR)
 - c. Year 3
 - i. Completion of routine sample collection, DNA extraction, PCR, water quality parameters test, full day storm event sample collection, PCR and qPCR, data analysis and dissemination of results
 - ii. BMP recommendations and demonstrations
 - iii. Public Outreach with Cibolo Nature Center
 - iv. Incorporation of findings into undergraduate coursework and commencement of distribution of that information to the classes.
5. The City may rescind the funding in whole or in part if milestones are missed without providing City with appropriate notice and justification, and alternative plans and timeline or the project falls significantly behind schedule, subject to force majeure.
 6. Funding Recipient has a sixty calendar-day grace period from agreed Project end date to complete project subject to force majeure.
 7. Funding Recipient may request an extension in writing up to fifteen business days before the original project end date.
 8. Any decisions regarding the extension to the project end date shall be made by the River Authority in coordination with the City.
 9. Funding Recipient is aware that presentations may be requested by the River Authority, the City, the CAB, San Antonio City Council, or other governing or advisory bodies associated with the Program.
 10. Funding Recipient agrees to be available for presentations to the best of its ability.
 11. Funding Recipient shall acknowledge the City in any news releases or other publications relating to the work performed under this Funding Agreement. News releases or other publications must be sent to the River Authority for review before they are sent to any outside party. Failure to send any news or publication release to the River Authority for review shall not result in a breach of this Funding Agreement.
 12. Funding Recipient is aware that media interviews may be requested and/or coordinated by the City or the River Authority as a result of this project.
 13. Funding Recipient agrees to be available for interviews to the best of its ability.
 14. Funding Recipient grants the City and the River Authority, their representatives and employees the right to take photographs, videos, and other forms of media of the awarded Project.
 15. Funding Recipient authorizes the City and the River Authority, their assigns and transferees to copyright, use and publish photographs, videos, and other forms of media in print and/or electronically.

16. Funding shall be paid by the City to the Funding Recipient after the River Authority verification of satisfactory performance of work in accordance with the payment schedule attached as Exhibit B and the completion of the Funding Recipient's project milestones and deliverable dates, attached as Exhibit C.
17. Funding Recipient warrants and represents that it will comply with all Federal, State and Local laws and regulations applicable to Funding Recipient's use of City Funds for this project. To the extent applicable, Funding Recipient agrees to abide by the following laws in its expenditures of City Funds:
 - a. Chapter 252 of the Texas Local Government Code, or other competitive contracting processes allowed for as express exceptions to Chapter 252.
 - b. Government Code chapter 2258 and Ordinance No. 71312 regarding Prevailing Wage Rate regulations required for certain contracts, including ensuring that its construction contractor shall collect and monitor weekly certified payrolls and perform site visits to ensure the prevailing wage is being paid to all workmen. City has the right to audit certified payroll records as necessary in accordance with this Agreement. Upon audit of the records and certified payrolls under this section, should the City or its auditors find any violations, Funding Recipient shall cause its contractor to forfeit as a penalty to the City \$60.00 for each laborer, workman, or mechanic employed, for each calendar day, or portion thereof, that such laborer, workman or mechanic is paid less than the said stipulated rates for any work done under said contract, by the contractor or any subcontractor. The establishment of prevailing wage rates in accordance with Chapter 2258, Texas Government Code shall not be construed to relieve Funding Recipient from its obligation under any federal or state law regarding the wages to be paid to or hours worked by laborers, workmen or mechanics insofar as applicable to the work to be performed under this Agreement.
18. At any time during normal business hours and as often as City may deem necessary, upon three (3) days written notice, Funding Recipient shall make all of its records pertaining to this Agreement available to City or any of its authorized representatives, and shall permit City or any of its authorized representatives to audit, examine, and make excerpts and/or copies of same.
19. Funding Recipient agrees and represents that it will cooperate with City and River Authority, at no charge to the City or River Authority, to satisfy, to the extent required by law, any and all requests for information received by City or River Authority under the Texas Public Information Act or related laws pertaining to this Agreement.
20. Funding Recipient shall not transfer, pledge or otherwise assign this Agreement, any interest in and to same, or any claim arising thereunder, without first procuring the written approval of City. Any attempt at transfer, pledge or other assignment shall be void ab initio and shall confer no rights upon any third person.
21. Beginning the month after the project's commencement date as reflected in Exhibit C, Funding Recipient shall provide status reports to the City through the River Authority on the first Friday monthly. Said status report shall include project activity toward

milestones in the prior month and shall note any changes to the schedule of deliverables, if any.

No Third Party Rights

- A. This Agreement is not intended, nor shall it be construed, to create any third party beneficiary rights in any person who is not a party hereto, unless otherwise expressly herein provided.
- B. Nothing in this Agreement shall be deemed or construed by the Parties hereto, or any third party, to create the relationship of principal and agent, partners, joint venturers or any other similar such relationship between the parties hereto. It is understood and agreed that no provision contained herein, nor any acts of the Parties hereto, creates a relationship other than the relationship of independent contracting entities.

Publication and Academic Rights

Funding Recipient is a state institution of higher education that engages in research services compatible with, consistent with, and beneficial to its academic role and mission; therefore, Funding Recipient's Principal Investigator has the right to publish or otherwise publicly disclose information gained in the course of the research project under this Agreement. Funding Recipient will, however, submit any prepublication material to City for review and comment at least sixty (60) days prior to planned submission for publication. City will notify Funding Recipient of any objections within thirty (30) days of receipt. Funding Recipient shall have final authority to determine the scope and content of any publications, subject to any objections for the protection of confidential information. Funding Recipient shall acknowledge the City's contribution and describe in any publications, the scope and nature of City's contribution accurately and appropriately.

Ownership of Materials and Documents

Any and all drawings, documents or information in whatsoever form and character produced by Funding Recipient pursuant to the provisions of this Agreement is the joint property of Funding Recipient and City and either Party shall be allowed to make use of such material without requiring the approval of the other Party. Funding Recipient understands and acknowledges that as the joint owner of any and all writings, documents and information, City has the right to use all such writings, documents and information as the City desires, without restriction.

Equipment

Funding Recipient shall retain title to all equipment and structures purchased and/or fabricated by it with funds provided under this Agreement.

Liability

As government entities, Funding Recipient, River Authority and City hereby expressly acknowledge that they are governed by the Texas Tort Claims Act, which is located in Chapter 101 of the Texas Civil Practice and Remedies Code, and nothing in this Agreement shall be

construed as a waiver by either of the Parties of any of the immunities and protections from liability included therein.

Insurance

Funding Recipient, at its own expense, shall provide and maintain, during the term of this Agreement, either insurance, with or without retention, or a self-insurance program. This insurance or self-insurance shall cover liability for property damage and personal injury associated with Funding Recipient’s performance of work under this Agreement.

Notices

Any notice required by this Agreement shall be given by prepaid, first class, certified mail, return receipt requested, or by a recognized overnight courier, address as follows:

<u>In the case of City:</u> Phillip Covington Special Project Manager Edwards Aquifer Protection Program Parks and Recreation Department PO Box 839966 San Antonio, Texas 78283 (210) 207-3003 phillip.covington@sanantonio.gov	<u>In the case of River Authority:</u> Karen Bishop Senior Supervisor Environmental Sciences Department PO Box 839980 San Antonio, Texas 78283 (210) 302-3642 kbishop@sara-tx.org	<u>In the case of Funding Recipient:</u> Amy Ossola-Phillips Director Research Service Center for Engineering One UTSA Circle San Antonio, Texas 78249-1644 (210) 458-6472 ogcia@utsa.edu
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COMPLIANCE WITH SMALL, MINORITY AND WOMAN-OWNED BUSINESS ENTERPRISES POLICY, NON-DISCRIMINATION AND EQUAL EMPLOYMENT OPPORTUNITY POLICY

Funding Recipient is hereby advised that it is the policy of the City of San Antonio that Small, Minority or Woman-owned Business Enterprises (SMWBE) shall have the maximum practical opportunity to participate in the performance of public contracts. In all events, Funding Recipient shall comply with the CITY’s Small Business Economic Development Advocacy Program, contained in San Antonio Ordinance No. 2007-04-12-0396, and the amendments thereto in connection with the award of the construction contract(s). Said ordinances are incorporated herein for all purposes, as if fully set forth herein. Funding Recipient further agrees that Funding Recipient will abide by all applicable terms and provisions of CITY’s Non-Discrimination Policy, CITY’s Small, Business Economic Development Advocacy (SBEDA) Policy and CITY’s Equal Opportunity Affirmative Action Policy, these policies being available in CITY’s Department of Economic Development, Division of Internal Review and the City Clerk’s Office.

The CITY has applied the following contract-specific Affirmative Procurement Initiative to this contract : None (Waiver approved 7/17/2017).

Termination

The Parties, with or without cause, may elect to terminate this Agreement by providing sixty (60) days written notice to the other Parties. Termination of this Agreement shall not affect the rights

and obligations of the Parties accrued prior to the termination. Upon termination, City shall pay Funding Recipient for all reasonable expenses incurred or committed to be expended as of the effective termination date. Any provisions of this Agreement which by their nature extend beyond termination shall survive such termination; such provisions include but may not be limited to subsections 5, 25 and 35 of the section entitled “**Funding Recipient Acknowledges and Agrees**” herein.

Amendment

This Funding Agreement supersedes all prior agreements and understandings between the Parties regarding the Program and may only be changed by written amendment signed by all three of the Parties.

This Agreement shall be governed by, construed and enforced in accordance with the internal laws of the State of Texas.

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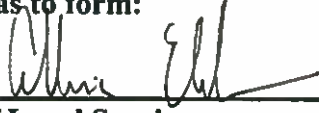
<p>The University of Texas at San Antonio</p> <hr/> <p>Can (John) Saygin Associate VP Sponsored Project Administration One UTSA Circle San Antonio, Texas 78249 (210) 458-4340</p> <p>Date: <u>9/7/2017</u></p> 	<p>City of San Antonio</p> <hr/> <p>Date: _____</p> <p>Attest:</p> <hr/> <p>City Clerk</p> <p>Approved as to form:</p> <hr/> <p>City Attorney</p>
<p>San Antonio River Authority</p>  <hr/> <p>Date: <u>9/11/17</u></p> <p>Approved as to form:</p>  <hr/> <p>Director of Legal Services</p>	

Exhibit A
Project Budget

The University of Texas at San Antonio
Proposal Budget Template



Sponsor:	San Antonio River Authority	Period 1	Premium Sharing Contribution Rates FY 9/1/16 - 8/31/17	
PVPD:	Vikram Kapoor Tracking the Primary Sources of Fecal Pollution in the Recharge and Contributing Zones of Edwards Aquifer in Bexar County, TX using Molecular Tools	Start: 10/1/2017	Emp/Family	\$1,114.18
Title:		End: 9/30/2018	Emp/Child	\$798.76
			Emp/Spouse	\$911.69
			Emp Only	\$598.14
			Part Time	\$557.09
			Part Time	\$399.38
				\$455.85
				\$299.07

Personnel. Headers in [] indicate for hourly personnel										Total Personnel Costs		\$ 80,715	\$ 16,550	\$ 97,265
Name	Role on Project	Employee Type*	Prmium Sharing	Institutional Base Salary [Hourly Rate]	# of Months [Weeks]	Percent of Effort [Hrs/wk]	Person Months	% Fringe	G4010/G5010 Salary	G4020/G5030 Fringe Benefits	Total Salary and Fringe			
Vikram Kapoor	PI	FT BE 09	Emp Only	\$ 85,000.00	2	100.00%	2	24.33%	\$ 18,889	\$ 4,596	\$ 23,485			
Drew Johnson	coPI	FT BE 09	Emp/Family	\$ 103,014.00	1	100.00%	1	27.73%	\$ 11,448	\$ 3,174	\$ 14,620			
PhD Student	GRA	PT BE 12	None	\$ 50,000.00	12	50.00%	6	18.00%	\$ 25,000	\$ 4,500	\$ 29,500			
MS Student	GRA	PT BE 12	None	\$ 45,000.00	12	50.00%	6	18.00%	\$ 22,500	\$ 4,050	\$ 26,550			
UG		Hourly	None	\$ 12.00	12	20.00	1.38	7.99%	\$ 2,880	\$ 230	\$ 3,110			
		Select	Select One				-	-	\$ -	\$ -	\$ -			
		Select	Select One				-	-	\$ -	\$ -	\$ -			
		Select	Select One				-	-	\$ -	\$ -	\$ -			
		Select	Select One				-	-	\$ -	\$ -	\$ -			
		Select	Select One				-	-	\$ -	\$ -	\$ -			
		Select	Select One				-	-	\$ -	\$ -	\$ -			
Travel													Total	\$ 3,500
G4110/G5130 Domestic conference travel (\$1,000 x2) travel for sample collection (\$1,500)														\$ 3,500
G4120/G5140 Foreign														\$ -
Other Costs (F&A Included)													Total	\$ 56,040
G4090/G5110 Materials & Supplies														\$ -
G4090/G5110 Publication Costs														\$ 55,040
G4070/G5080 Consultant Services														\$ -
G4090/G5110 Computer Services														\$ -
G4105/G5125 Equipment Rental														\$ -
G4090/G5110 User Fees														\$ -
G4090/G5116 Workshop-Seminar														\$ -
G5070 Curation (Center for Archaeological Research Only)														\$ -
G5115 Mileage Expense (Center for Archaeological Research Only)														\$ -
Other: Please Specify: conference registration fees (\$500 x2)														\$ 1,000

Direct Costs (F&A Excluded)				Total
G4050/G5080 Equipment Capital: Note: Minimum \$5,000 per item.				\$ -
1. Equipment Item 1				\$ -
2. Equipment Item 2				\$ -
3. Equipment Item 3				\$ -
Student and Participant Support				Total \$ 22,000
G4140/G5160 Scholarships and Fellowships				\$ -
G4150/G5170 Tuition & Fees				\$ 22,000
G4130/G5150 Participant Expenses				\$ -
G4130/G5155 Participant Travel				\$ -
Other Costs (F&A Excluded)				Total \$ -
G4150/G5170 Tuition & Fees for Salamed NSF Student Employee				\$ -
G4030/G5040 Alterations and Renovations				\$ -
G4100/G5120 Rentals and Off-Site Leases				\$ -
G4040/G5050 Equipment Fabrication				\$ -
G5090 Office Services (Center for Archaeological Research Only)				\$ -
Other: Please Specify:				\$ -

Subawards/Subcontracts - Indirect Costs are only charged on the first \$25,000 of a subaward								Total
Name of Subrecipient	Subrecipient Direct Costs	Subrecipient Indirect Costs	Subrecipient Total Costs	G4160/G5180 Sub < \$25k	G4170/G5190 Sub > \$25K	G4180/G5200 Sub F&A	Subrecipient Project Total	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Consortium Totals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

Indirect Rate	UTSA Federally Negotiated F&A (Indirect Cost) Rates for the period FY 9/1/15-8/31/18 (or until amended)		Total Direct Costs - Consortium F&A	
	On Campus	Off Campus	Total Consortium F&A	F&A Base
	Organized Research	47%		\$ 178,805
Instruction	47%		\$ -	
Other Sponsored Activities	35%		\$ -	
All programs	26%		\$ -	F&A Rate: 47.0%

MTDC exclusions include: Equipment Capital Expenditures, Charges for Patient Care, Student Tuition Remission, Rental Costs of off-site facilities, scholarships and fellowships, Participant Support, and the portion of each subaward in excess of \$25,000. If F&A Rate is different than negotiated rate, please enter justification.

Cost Share	Cost Shared Amount (Enter from the Cost Share Request form, only if applicable)	\$ -
	Cost Shared Percentage of Total Budget	0%

Totals	Period 1	UTSA Direct Costs	\$ 178,805
		UTSA Indirect Costs	\$ 73,698
		Sponsor Costs	\$ 252,503
		Award Costs	\$ 252,503

Sponsor:	San Antonio River Authority	Period 2	Premium Sharing Contribution Rates FY 9/1/16 - 8/31/17	
P/VPD:	Vikram Kapoor Tracking the Primary Sources of Fecal Pollution in the Recharge and Contributing Zones of Edwards Aquifer in Bexar County, TX using Molecular Tools	Start: 10/1/2018	<i>Full Time</i>	<i>Part Time</i>
Title:		End: 9/30/2019	Emp/Famly \$1,114.18	\$557.09
			Emp/Chld \$798.76	\$399.38
			Emp/Spouse \$911.69	\$455.85
			Emp Only \$598.14	\$299.07

Personnel Headers In () Indicate for hourly personnel										Total Personnel Costs		
Name	Role on Project	Employee Type*	Premium Sharing	Institutional Base Salary [Hourly Rate]	# of Months [Weeks]	Percent of Effort [Hrs/wk]	Person Months	% Fringe	G4010/G5010 Salary	G4020/G5030 Fringe Benefits	Total Salary and Fringe	
Vikram Kapoor	PI	FT_BE_09	Emp Only	\$ 87,550.00	2	100.00%	2	24.15%	\$ 19,456	\$ 4,698	\$ 24,154	
Drew Johnson	coPI	FT_BE_09	Emp/Family	\$ 106,104.00	1	100.00%	1	27.45%	\$ 11,789	\$ 3,236	\$ 15,025	
PhD Student	GRA	PT_BE_12	None	\$ 51,500.00	12	50.00%	6	18.00%	\$ 25,750	\$ 4,635	\$ 30,385	
MS Student	GRA	PT_BE_12	None	\$ 46,350.00	12	50.00%	6	18.00%	\$ 23,175	\$ 4,172	\$ 27,347	
UG		Hourly	None	\$ 12.36	12	20.00	1.38	7.99%	\$ 2,966	\$ - 237	\$ 3,203	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
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		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
Travel											Total	\$ 3,500
G4110/G5130 Domestic conference travel (\$1,000 x2) .. travel for sample collection (\$1,500)												\$ 3,500
G4120/G5140 Foreign												\$ -
Other Costs (F&A Included)											Total	\$ 31,395
G4090/G5110 Materials & Supplies												\$ 30,395
G4090/G5110 Publication Costs												\$ -
G4070/G5080 Consultant Services												\$ -
G4090/G5110 Computer Services												\$ -
G4105/G5125 Equipment Rental												\$ -
G4090/G5110 User Fees												\$ -
G4090/G5116 Workshop-Seminar												\$ -
G5070 Curator (Center for Archaeological Research Only)												\$ -
G5115 Mileage Expense (Center for Archaeological Research Only)												\$ -
Other Please Specify conference registration fees (\$500 x2)												\$ 1,000

G4050/G5060 Equipment Capital: Note: Minimum \$5,000 per item.		Total	\$
1. Equipment Item 1			\$ -
2. Equipment Item 2			\$ -
3. Equipment Item 3			\$ -
Student and Participant Support		Total	\$ 22,000
G4140/G5160 Scholarships and Fellowships			\$ -
G4150/G5170 Tuition & Fees			\$ 22,000
G4130/G5150 Participant Expenses			\$ -
G4130/G5155 Participant Travel			\$ -
Other Costs (F&A Excluded)		Total	\$ -
G4150/G5170 Tuition & Fees for Salamed NSF Student Employee			\$ -
G4030/G5040 Alterations and Renovations			\$ -
G4100/G5120 Rentals and Off-Site Leases			\$ -
G4040/G5050 Equipment Fabrication			\$ -
G5090 Office Services (Center for Archaeological Research Only)			\$ -
Other Please Specify			\$ -

Subawards/Subcontracts - Indirect Costs are only charged on the first \$25,000 of a subaward								Total	\$
Name of Subrecipient	Subrecipient Direct Costs	Subrecipient Indirect Costs	Subrecipient Total Costs	G4160/G5180 Sub < \$25K	G4170/G5190 Sub > \$25K	G4180/G5200 Sub F&A	Subrecipient Project Total		
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Consortium Totals								\$ -	

Indirect Rate	UTSA Federally Negotiated F&A (Indirect Cost) Rates for the period FY 9/1/15-8/31/18 (or until amended)		MTDC exclusions include Equipment, Capital Expenditures, Charges for Patient Care, Student Tuition Remission, Rental Costs of off-site facilities, scholarships and fellowships, Participant Support, and the portion of each subaward in excess of \$25,000	Total Direct Costs - Consortium F&A	
	On Campus	Off Campus		Total Consortium F&A	F&A Base
Organized Research	47%		If F&A Rate is different than negotiated rate, please enter justification	\$ 157,009	\$ -
Instruction	47%			\$ -	\$ 135,009
Other Sponsored Activities	35%				
All programs	26%				F&A Rate 47.0%

Cost Share	Cost Shared Amount (Enter from the Cost Share Request form, only if applicable)	\$ -
	Cost Shared Percentage of Total Budget	0%

Totals	Period 2	UTSA Direct Costs	\$ 157,009
		UTSA Indirect Costs	\$ 63,454
		Sponsor Costs	\$ 220,463
		Award Costs	\$ 220,463

Sponsor:	San Antonio River Authority	Period 3	Premium Sharing Contribution Rates FY 9/1/16 - 8/31/17		
P/VPD:	Vikram Kapoor	Start: 10/1/2019	Emp/Family	\$1,114.18	\$557.09
Title:	Tracking the Primary Sources of Fecal Pollution in the Recharge and Contributing Zones of Edwards Aquifer in Bexar County, TX using Molecular Tools	End: 9/30/2020	Emp/Child	\$798.76	\$399.38
			Emp/Spouse	\$911.69	\$455.85
			Emp Only	\$598.14	\$299.07

Personnel Headers in [] Indicate for hourly personnel										Total Personnel Costs		
Name	Role on Project	Employee Type*	Premium Sharing	Institutional Base Salary [Hourly Rate]	# of Months [Weeks]	Percent of Effort [Hrs/wk]	Person Months	% Fringe	G4010/G5010 Salary	G4020/G5030 Fringe Benefits	Total Salary and Fringe	
Vikram Kapoor	PI	FT_BE_09	Emp Only	\$ 90,177.00	2	100.00%	2	23.97%	\$ 20,039	\$ 4,903	\$ 24,942	
Drew Johnson	coPI	FT_BE_09	Emp/Family	\$ 109,287.00	1	100.00%	1	27.18%	\$ 12,143	\$ 3,300	\$ 15,443	
PhD Student	GRA	PT_BE_12	None	\$ 53,045.00	12	50.00%	6	18.00%	\$ 26,523	\$ 4,774	\$ 31,297	
MS Student	GRA	PT_BE_12	None	\$ 47,741.00	12	50.00%	6	18.00%	\$ 23,871	\$ 4,297	\$ 28,168	
UG		Hourly	None	\$ 12.73	12	20.00	1.38	7.99%	\$ 3,055	\$ 244	\$ 3,299	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
		Select	Select One	\$ -					\$ -	\$ -	\$ -	
Travel											Total	\$ 3,500
G4110/G5130 Domestic conference travel (\$1,000 x2) ... travel for sample collection (\$1,500)												\$ 3,500
G4120/G5140 Foreign												\$ -
Other Costs (F&A Included)											Total	\$ 27,795
G4090/G5110 Materials & Supplies												\$ 26,795
G4090/G5110 Publication Costs												\$ -
G4070/G5080 Consultant Services												\$ -
G4090/G5110 Computer Services												\$ -
G4105/G5125 Equipment Rental												\$ -
G4090/G5110 User Fees												\$ -
G4090/G5116 Workshop-Seminar												\$ -
G5070 Curator (Center for Archaeological Research Only)												\$ -
G5115 Mileage Expense (Center for Archaeological Research Only)												\$ -
Other: Please Specify: conference registration fees (\$500 x2)												\$ 1,000

G4050/G5060 Equipment Capital: Note: Minimum \$5,000 per item.										Total	\$	
1. Equipment Item 1												\$ -
2. Equipment Item 2												\$ -
3. Equipment Item 3												\$ -
Student and Participant Support											Total	\$ 22,000
G4140/G5160 Scholarships and Fellowships												\$ -
G4150/G5170 Tuition & Fees												\$ 22,000
G4130/G5150 Participant Expenses												\$ -
G4130/G5155 Participant Travel												\$ -
Other Costs (F&A Excluded)											Total	\$ -
G4150/G5170 Tuition & Fees for Salened NSF Student Employee												\$ -
G4030/G5040 Alterations and Renovations												\$ -
G4100/G5120 Rentals and Off Site Leases												\$ -
G4040/G5050 Equipment Fabrication												\$ -
G5090 Office Services (Center for Archaeological Research Only)												\$ -
Other: Please Specify												\$ -

Subawards/Subcontracts - Indirect Costs are only charged on the first \$25,000 of a subaward								Total	\$
Name of Subrecipient	Subrecipient Direct Costs	Subrecipient Indirect Costs	Subrecipient Total Costs	G4160/G5180 Sub < \$25K	G4170/G5190 Sub > \$25K	G4180/G5200 Sub F&A	Subrecipient Project Total		
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Consortium Totals								\$ -	\$ -

Indirect Rate	UTSA Federally Negotiated F&A (Indirect Cost) Rates for the period FY 9/1/15-8/31/16 (or until amended)	MTDC exclusions include: Equipment, Capital Expenditures, Charges for Patient Care, Student Tuition Remission, Rental Costs of off-site facilities, scholarships and fellowships, Participant Support and the portion of each subaward in excess of \$25,000	Total Direct Costs - Consortium F&A	\$	158,344
	On Campus		Total Consortium F&A	\$	-
	Organized Research	47%	F&A Base	\$	134,344
	Instruction	47%	F&A Rate		47.0%
	Other Sponsored Activities	35%	If F&A Rate is different than negotiated rate, please enter justification		
	Off Campus				
	All programs	26%			

Cost Share	Cost Shared Amount (Enter from the Cost Share Request form, only if applicable)	\$	-
	Cost Shared Percentage of Total Budget		0%

Totals	Period 3	UTSA Direct Costs	\$	156,344
		UTSA Indirect Costs	\$	63,142
		Sponsor Costs	\$	219,486
		Award Costs	\$	219,486

Sponsor: San Antonio River Authority	Summary Page
PI/PO: Vikram Kapoor	
Title: Tracking the Primary Sources of Fecal Pollution in the Recharge and Contributing Zones of Edwards Aquifer in Bexar County, TX using Molecular Tools	

		Period 1	Period 2	Period 3	Period 4	Period 5	All
	Start	10/1/2017	10/1/2018	10/1/2019			10/1/2017
	End	9/30/2018	9/30/2019	9/30/2020			9/30/2020
Personnel	Subtotal	\$ 97,265	\$ 100,114	\$ 103,049	\$ -	\$ -	\$ 300,428
G4010 G5010 Salaries		\$ 80,715	\$ 83,138	\$ 85,631	\$ -	\$ -	\$ 249,482
G4020 G5030 Fringe Benefits		\$ 18,550	\$ 18,978	\$ 17,418	\$ -	\$ -	\$ 50,946
Travel	Subtotal	\$ 3,500	\$ 3,500	\$ 3,500	\$ -	\$ -	\$ 10,500
G4110 G5130 Travel - Domestic		\$ 3,500	\$ 3,500	\$ 3,500	\$ -	\$ -	\$ 10,500
G4120 G5140 Travel - Foreign		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Expense	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4030 G5040 Construction		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4040 G5050 Equipment Fabrication		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4050 G5080 Equipment Capital		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Direct	Subtotal	\$ 56,040	\$ 31,395	\$ 27,795	\$ -	\$ -	\$ 112,230
X G5070 Curation (L5 Only)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4070 G5080 Consultants		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
X G5080 Office Services (L5 Only)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4090 G5110 Materials and Supplies		\$ 55,040	\$ 30,395	\$ 26,795	\$ -	\$ -	\$ 112,230
G4090 G5110 Publication Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4090 G5110 Computer Services		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4090 G5110 User Fees		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
? ? Other (F&A Included)		\$ 1,000	\$ 1,000	\$ 1,000	\$ -	\$ -	\$ 3,000
? ? Other (F&A Excluded)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4090 G5118 Workshop-Seminar Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
X G5115 Mileage Expense (L5 Only)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4100 G5120 Rentals & Leases		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4105 G5125 Rental Equipment		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4150 G5170 NSF G 8 Other Tuition & Fees		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Student and Participant Support	Subtotal	\$ 22,000	\$ 22,000	\$ 22,000	\$ -	\$ -	\$ 66,000
G4130 G5150 Participant Expenses		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4130 G5155 Participant Travel		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4140 G5160 Scholarships & Fellowships		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G4150 G5170 Tuition & Fees		\$ 22,000	\$ 22,000	\$ 22,000	\$ -	\$ -	\$ 66,000
Subawards	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Sponsor Costs		\$ 252,503	\$ 220,463	\$ 219,486	\$ -	\$ -	\$ 692,452
UTSA Direct Costs		\$ 178,805	\$ 157,009	\$ 158,344	\$ -	\$ -	\$ 492,158
G4180 G5200 UTSA Indirect Costs		\$ 73,698	\$ 83,454	\$ 83,142	\$ -	\$ -	\$ 200,294
UTSA F&A Base		\$ 158,805	\$ 135,009	\$ 134,344	\$ -	\$ -	\$ 428,158
Cost Share Commitment		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cost Share %		0%	0%	0%			
Direct Cost - Consortium F&A		\$ 178,805	\$ 157,009	\$ 158,344	\$ -	\$ -	\$ 492,158
Consortium F&A		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Award Costs		\$ 252,503	\$ 220,463	\$ 219,486	\$ -	\$ -	\$ 692,452

Exhibit B

Funding Schedule

Period	Dates	Amount	Payment Date
Year 1, Quarter 1	10/1/17 – 12/31/17	\$63,126.00	12/31/2017
Year 1, Quarter 2	1/1/18 – 3/31/18	\$63,126.00	3/31/2018
Year 1, Quarter 3	4/1/18 – 6/30/18	\$63,126.00	6/30/2018
Year 1, Quarter 4	7/1/18 – 9/30/18	\$63,125.00	9/30/2018
Year 2, Quarter 1	10/1/18 – 12/31/18	\$55,116.00	12/31/2018
Year 2, Quarter 2	1/1/19 – 3/31/19	\$55,116.00	3/31/2019
Year 2, Quarter 3	4/1/19 – 6/30/19	\$55,116.00	6/30/2019
Year 2, Quarter 4	7/1/19 – 9/30/19	\$55,115.00	9/30/2019
Year 3, Quarter 1	10/1/19 – 12/31/19	\$54,872.00	12/31/2019
Year 3, Quarter 2	1/1/20 – 3/31/20	\$54,872.00	3/31/2020
Year 3, Quarter 3	4/1/20 – 6/30/20	\$54,871.00	6/30/2020
Year 3, Quarter 4	7/1/20 – 9/30/20	\$54,871.00	9/30/2020
Total Requested Funding		\$692,452.00	

Exhibit C
Project Timeline

Table 1. Proposed project schedule.

S. No.	Task	Year 1			Year 2			Year 3		
		10/1/17 – 9/30/18			10/1/18 – 9/30/19			10/1/19 – 9/30/20		
1	Initial materials and disposables Purchasing	█								
2	Sample Sites: GIS map synthesis, site identification and site assessment	█	█							
3	Begin sample collection after sample sites are solidified		█	█						
4	Begin DNA extraction and PCR optimization of samples			█	█					
5	Routine sample collection, DNA extraction and PCR			█	█	█	█	█	█	
6	Test water quality parameters			█	█	█	█	█	█	
7	Full day storm events sample collection (weather dependent)				█	█	█	█	█	
8	PCR and qPCR				█	█	█	█	█	
9	Data analysis and dissemination of results			█	█	█	█	█	█	█
10	Recommendations/demonstration of BMPs and public outreach							█	█	█