edwards aquifer
AUTHORITY

INTERLOCAL COOPERATION CONTRACT NO. 26-009-AMS
BETWEEN THE
EDWARDS AQUIFER AUTHORITY
AND
TEXAS A&M AGRILIFE RESEARCH
FOR UNDERSTANDING THE LINK BETWEEN LAND MANAGEMENT AND
RECHARGE OF THE EDWARDS AQUIFER

This INTERLOCAL COOPERATION CONTRACT (Contract) is made and entered into under the Texas Interlocal Cooperation Act (ICA), Chapter 791, Texas Government Code, by and between the EDWARDS AQUIFER AUTHORITY (EAA), a conservation and reclamation district and a political subdivision of the State of Texas, with its principal place of business located at 900 E. Quincy Street, San Antonio, Texas 78215, and TEXAS A&M AGRILIFE RESEARCH (AgriLife or Contractor), a member of the Texas A&M University System (A&M System) and an agency of the State of Texas, with its principal place of business located at 400 Harvey Mitchell Parkway S, Suite 300, College Station, TX 77845-4375. Each of these entities is, at times, referred to in this Contract individually as a "Party," and both are referred to collectively as "Parties."

RECITALS

WHEREAS, the EAA was created by the Edwards Aquifer Authority Act, Act of May 30, 1993, 73rd Leg., R.S., ch. 626, 1993 Tex. Gen. Laws 2350, as amended (Act); and

WHEREAS, under Section 1.02 of the Act, the EAA was created by virtue of Article XVI, Section 59 of the Texas Constitution, and is a governmental agency and body politic and corporate vested with the full authority to exercise the powers and to perform the functions specified in the Act; and

WHEREAS, under Section 1.08(a) of the Act, the EAA has all the powers, rights and privileges necessary to manage, conserve, preserve, and protect the Edwards Aquifer (Aquifer) and to increase the recharge of, and prevent the waste or pollution of water in, the Aquifer; and

WHEREAS, under Section 1.27 of the Act, the EAA may conduct research; and

WHEREAS, under Section 1.11(d)(2) of the Act, and other applicable law, the EAA may enter into contracts; and

WHEREAS, under Section 49.057(a), Texas Water Code, the EAA may contract with all persons, firms, partnerships, corporations, or other entities, public or private, deemed necessary by the EAA Board of Directors (Board) for the conduct of the affairs of the EAA; and

WHEREAS, under Section 49.211(a), Texas Water Code, the EAA has the functions,

powers, authority, rights, and duties that will permit it to accomplish the purposes for which it was created or the purposes authorized by the Constitution, the Texas Water Code, or any other law; and

WHEREAS, under Section 49.213(b), Texas Water Code, the EAA may enter into contracts with any person or any public or private entity in the performance of any purpose or function permitted by the EAA; and

WHEREAS, under Section 49.2l3(c)(7), Texas Water Code, the EAA may enter into contracts with persons or any public or private entities on the terms and conditions the Board may consider desirable, fair, and advantageous for, among other things, the exercise of any rights, powers, and duties granted to the EAA; and

WHEREAS, this Contract is an interlocal contract entered into under the authority of the ICA, Chapter 791, Texas Government Code; and

WHEREAS, under Section 791.003(4)(A) and (5) of the ICA, the EAA is a "local government"; and

WHEREAS, AgriLife is an agency of the State of Texas and a member of the A&M System; therefore, under Section 771.002(1)(B) of the Texas Government Code, AgriLife is an "agency" of the State of Texas; and

WHEREAS, under Section 791.011 of the ICA, a local government may contract with a state agency, as that term is defined in 771.002 of the Texas Government Code; and

WHEREAS, under Section 791.011(g), a state agency "that makes purchases or provides purchasing services under an interlocal contract for a state agency, as that term is defined under Section 771.002, must comply with Chapter 2161 [relating to historically underutilized businesses] in making the purchase or providing the services"; and

WHEREAS, under Section 791.003(3) of the ICA, the activities that are the subject of this Contract are governmental functions and services in that they involve the public health and welfare, planning, administrative functions, and/or other governmental functions in which the Parties are mutually interested; and

WHEREAS, the purpose of this Contract is to pursue a research project that is of mutual interest and benefit to the Parties, and which is intended to further the instructional and research objectives of AgriLife in a manner consistent with its status as an agency of the State of Texas; and

WHEREAS, the EAA and AgriLife have been authorized by their respective governing bodies to enter into this Contract; and

WHEREAS, it is in the public interest that the EAA and AgriLife enter into this Contract.

AGREEMENT

NOW THEREFORE, for and in consideration of the mutual promises and agreements set forth in this Contract, the EAA and AgriLife agree as follows:

ARTICLE I – TERM; DESCRIPTION OF THE PROJECT

Section 1.1. Term. This Contract is effective and commences on the date that it has been executed by both Parties (Effective Date) and, unless earlier terminated under this Article 3, terminates December 31, 2031 (Termination Date). The term of this Contract may be modified or extended only by written agreement of EAA and AgriLife.

Section 1.2. Statement of Work. AgriLife shall use reasonable efforts to perform the research project described in the Statement of Work attached as Exhibit A (the "Project"). The Statement of Work may only be changed by written amendment to this Contract signed by authorized representatives of both Parties.

Section 1.3. Deliverables. AgriLife shall furnish EAA with the deliverables specified in the Statement of Work.

Section 1.4. Principal Investigator. AgriLife appoints Bradford Wilcox as the "Principal Investigator" to supervise the Project on AgriLife's behalf. If, for any reason, the Principal Investigator is unable to continue to serve in that role and a successor acceptable to both Parties is not available, either Party may terminate this Contract as provided in Section 3.2. EAA acknowledges that the Principal Investigator is not authorized to amend or waive, on behalf of AgriLife, any terms of this Contract.

Section 1.5. Nothing in this Contract limits the freedom of AgriLife researchers to engage in similar inquiries made independently under other grants or agreements with other similar entities or collaborators.

Section 1.6 Title. AgriLife will retain title to all equipment, supplies, and other items purchased or fabricated under this Contract except those expressly made part of a deliverable.

ARTICLE II – PRICE AND PAYMENT

Section 2.1 Price. As compensation for the performance of the Project, EAA shall pay AgriLife a cost-reimbursable, not-to-exceed amount of $1,248,500 in U.S. dollars in accordance with the budget in Exhibit B.

Section 2.2. Payment. AgriLife shall submit monthly invoices to EAA no later than the 30th day of the month for each previous month's billing cycle and EAA shall remit payment to AgriLife within 30 days of receipt of invoice. AgriLife shall incur costs in accordance with AgriLife's policies and procedures. The invoice must include an itemization of the Services rendered, and any costs and expenses incurred during the billing cycle. As applicable, documentation in the invoice packet must be sufficiently itemized and provide detail for all

purchases and expenses which allow the EAA to clearly discern purchases made. Alcohol purchases will NOT be reimbursed under any circumstances. Mileage will be reimbursed at the current IRS approved rate, if submitted. In no event will the EAA pay per diem-related expenses; expenses will be paid at cost with appropriate documentation. AgriLife may make transfers between budget line items without EAA approval. AgriLife shall submit invoices to the following address: Paul Bertetti, Sr. Director of Aquifer Science Research and Modeling at pbertetti@edwardsaquifer.org, and the EAA Accounting Department at accouting@edwardsaquifer.org. EAA shall remit payment to AgriLife within 30 days of receipt of invoice to the following address:

Texas A&M AgriLife Research – Sponsored Research Services
400 Harvey Mitchell Parkway S, Suite 300
College Station, TX 77845-4375
awards@tamu.edu

ARTICLE III – TERMINATION

Section 3.1. Termination for Convenience. Either Party may terminate this Contract for any or no reason effective upon 30 days' written notice to the other Party.

Section 3.2. Termination for Cause. Either Party may terminate this Contract, effective upon written notice to the other Party, if the other Party materially breaches any term of this Contract and fails to cure such breach within 15 days after receiving written notice of the breach. If the breach is incurable, the non-breaching Party may terminate this Contract effective immediately upon written notice to the breaching Party.

Section 3.3. Actions in the Event of Early Termination. Upon receipt of a notice of termination under this Article, AgriLife shall immediately stop all work in progress, including all work performed by its employees, agents, or subcontractors. Insofar as possible, all work in progress will be brought to a logical termination point. Within thirty (30) days of the final invoice following termination, the EAA shall pay AgriLife all moneys then due and owing for the Project rendered, and costs and expenses reasonably incurred up to the time of termination or; or AgriLife shall return to EAA any funds that have been received under this Contract but remain unexpended at the date of termination, except for those funds needed to pay for non-cancelable obligations. AgriLife will deliver to the EAA copies of all finished and unfinished documents, data, studies, surveys, drawings, maps, reports, photographs, and other materials prepared by AgriLife, and each Party shall be free to utilize such documents, data, studies, surveys, drawings, maps, reports, photographs, and other materials for internal noncommercial research and development purposes only.

ARTICLE IV – INDEPENDENT CONTRACTOR

Section 4.1. No Employment Relationship. The Parties understand and agree that this Contract does not create a fiduciary relationship between them, that they are separate entities, that AgriLife is an independent entity with respect to the performance of the Project and is not subject to the direct or continuous control and supervision of the EAA, and that nothing in this Contract

is intended to make either Party a subsidiary, joint venturer, partner, employee, agent, servant or representative of the other Party for any purpose whatsoever. AgriLife shall provide any and all equipment and materials necessary for the performance of the Project. The EAA shall have no right of direction or control of AgriLife, or its employees and agents, except in the results to be obtained, and in a general right to order the performance of the Project to start or stop as agreed to herein, to inspect the progress of the Project, and to receive reports. AgriLife shall accommodate reasonable requests from the EAA to allow EAA employees, agents or representatives to accompany and observe AgriLife's personnel in carrying out the Project under this Contract.

ARTICLE V – AGRILIFE PERSONNEL AND SUBCONTRACTORS

Section 5.1. Personnel. AgriLife will provide any and all personnel necessary for its performance of the Project. AgriLife will be responsible for its employees and agents in all respects, including, without limitation, their compliance with applicable laws and their safety

Section 5.2. Subcontractors. In performing the Project under this Contract, AgriLife may retain and utilize as its subcontractors, to the extent that they are not already employees of AgriLife, those individuals identified to and approved in writing by the EAA, in advance. The EAA, in consultation with AgriLife, shall have the right to terminate, limit, or alter, at any time, the participation of any subcontractor utilized by AgriLife. No additional subcontractors may be retained by AgriLife to perform any portion of the Project under this Contract without the prior written consent of the EAA, provided that no such consent shall be necessary for the retention of any subcontractor previously approved by the EAA and identified by AgriLife on the Effective Date.

ARTICLE VI – INSURANCE

Section 6.1. Insurance Coverages. EAA acknowledges that AgriLife is an agency of the State of Texas and liability for property damage, personal injury and death caused by AgriLife employees is provided solely by the provisions of the Texas Tort Claims Act (Texas Civil Practice and Remedies Code, Chapters 101 and 104). The liability of AgriLife is limited under this state law and AgriLife is self-insured up to such limits. Following this limited exposure, AgriLife is protected by the doctrine of sovereign immunity.

ARTICLE VII – ASSUMPTION OF RISK AND INDEMNIFICATION

THIS ARTICLE INTENTIONALLY LEFT BLANK

ARTICLE VIII – CONFIDENTIAL INFORMATION

Section 8.1. Definitions. "Confidential Information" means nonpublic information, other than Excluded Information, disclosed by one party (the "Discloser") to the other (the "Recipient") during the term of this Contract and: if disclosed in a printed document or otherwise fixed in a tangible medium, the Confidential Information must bear an appropriate and conspicuous marking; or if disclosed orally, visually, or is not otherwise fixed in a tangible medium, the Discloser must identify the Confidential Information as being such at the time of disclosure and confirm such in

writing to the Recipient within 15 days after disclosure.

"Excluded Information" means information that: Is or becomes publicly known or available other than as a result of a breach of this Contract by the Recipient; was already in the possession of the Recipient as the result of disclosure by an individual or entity that was not then obligated to keep that information confidential; the Discloser had disclosed or discloses to an individual or entity without confidentiality restrictions; or the Recipient had developed or develops independently before or after the disclosing party discloses equivalent information to the Recipient.

Section 8.2. Handling of Confidential Information. The Recipient shall handle Confidential Information with the same care that the Recipient uses to protect its own information of comparable sensitivity, but not less than reasonable care.

Section 8.3. Use of Confidential Information. The Recipient may use Confidential Information only for purposes of this Contract and may disclose Confidential Information only to the Recipient's directors, regents, officers, employees, agents, consultants, advisors, and other representatives (Representatives) having a need to know the Confidential Information for purposes of this Contract, provided that they are subject to confidentiality obligations not less restrictive than those set forth in this Article 8 and that the Recipient remains responsible for its Representatives' compliance with the obligations under this Article 8.

Section 8.4. Required Disclosure of Confidential Information. If the Recipient is legally required to disclose Confidential Information, the Recipient shall, to the extent allowed by law, promptly give the Discloser written notice of the requirement to provide the Discloser a reasonable opportunity to pursue appropriate process to prevent or limit the disclosure. If the Recipient complies with the terms of this Section 8.4, disclosure of that portion of the Confidential Information, which the Recipient is legally required to disclose, will not constitute a breach of this Article 8.

Section 8.5. Disposal of Confidential Information. The Recipient shall, upon request of the Discloser, promptly return or destroy all materials embodying Confidential Information other than materials in electronic backup systems or otherwise not reasonably capable of being readily located and segregated without undue burden or expense. The Recipient may also securely retain one copy in its files solely for record purposes.

Section 8.6. No License or Right to Invention or Patent. The furnishing of any Confidential Information does not grant the Recipient any license or right under any invention or patent owned or controlled by the Discloser.

Section 8.7. Survival. The confidentiality obligations under this Article 8 will survive the termination of this Contract for a period of three years from the effective date of termination of this Contract.

ARTICLE IX – OWNERSHIP OF MATERIAL

Section 9.1. "Background Intellectual Property." It is possible that one or both Parties may possess rights in "Background Intellectual Property," that is, intellectual property not otherwise subject to this Contract, which would be useful or essential to the practice or commercialization of the results of this Contract. For example, AgriLife might own a patent which would be infringed by the EAA when it attempted to commercialize the results of this Contract unless a license was obtained from AgriLife. Where the Parties determine that background technology may exist, consideration should be given to negotiating a separate intellectual property license agreement for license rights that will allow the practice and commercialization of the results of this Contract.

Section 9.2. Project Works. "Project Work" means a copyrightable work authored in the performance of the Project. Ownership of Project Works will be as follows, with authorship to be determined in accordance with U.S. copyright law:

a. Title to any Project Work authored solely by AgriLife personnel vests in AgriLife (an "AgriLife Work"). For avoidance of doubt, ownership of any EAA confidential information contained in AgriLife's owned research intellectual property is retained by the EAA;

b. Title to any Project Work authored solely by EAA personnel vests in the EAA. For avoidance of doubt, ownership of any AgriLife confidential information contained in the EAA's owned research intellectual property is retained by the AgriLife; and

c. Title to any Project Work authored jointly by personnel of AgriLife and the EAA (a "Joint Work") vests jointly in AgriLife and the EAA. Unless the Parties agree otherwise in writing and subject to the terms of this Article 9, either Party may license, assign, and otherwise exploit its rights to Joint Works without the other Party's consent and with no duty to account to the other party for any revenue from such exploitation.

Section 9.3. Project Invention. "Project Invention" means a patentable invention or discovery that is both (a) conceived in the performance of the Project, and (b) actually reduced to practice in the performance of the Project or constructively reduced to practice and such constructive reduction to practice occurs within a reasonable time before or after completion of the Project and before time bars under U.S. patent law. Ownership of Project Inventions will be as follows, with inventorship to be determined in accordance with U.S. patent law:

a. Title to any Project Invention invented solely by AgriLife personnel vests in AgriLife (an "AgriLife Invention"). For avoidance of doubt, ownership of any EAA confidential information contained in AgriLife's owned research intellectual property is retained by the EAA;

b. Title to any Project Invention invented solely by EAA personnel vests in the EAA. For avoidance of doubt, ownership of any AgriLife confidential information contained in the EAA's owned research intellectual property is retained by AgriLife; and

c. Title to any Project Invention invented jointly by personnel of AgriLife and the EAA (a "Joint Invention") vests jointly in AgriLife and the EAA.

Unless the Parties agree otherwise in writing and subject to the terms of this Article 9, the Parties will be independent owners under 35 U.S.C. § 262 of any Joint Invention.

Section 9.4. Disclosure. AgriLife shall promptly disclose in writing to the EAA each Project Work and Project Invention in sufficient detail as to allow for the EAA's evaluation (each a "Project IP Disclosure"). Each Project IP Disclosure will be AgriLife's Confidential Information.

Section 9.5. Use of Invention and Work. AgriLife grants to the EAA a nonexclusive, royalty-free license to use any AgriLife Invention and AgriLife Work for the EAA's internal noncommercial research and development purposes only. AgriLife reserves all rights not expressly granted in this Contract and disclaims the grant of any implied right to the EAA.

Section 9.6. Option Period. For a period of 90 days from the receipt by the EAA of a Project IP Disclosure (the "Option Period") AgriLife grants the EAA, to the extent that AgriLife has the legal right to do so, an exclusive option to negotiate a commercial license to AgriLife's rights in the disclosed Project Invention or Project Work. At any time during the Option Period, the EAA may exercise its option by written notice to AgriLife. Upon exercise, AgriLife and the EAA shall negotiate diligently and in good faith, for a period not to exceed 90 days ("Negotiation Period"), an exclusive, sublicensable (or nonexclusive and non-sublicensable, at the EAA's option) royalty-bearing commercial license to AgriLife's rights in the disclosed Project Invention or Project Work. The terms of such license must be commercially reasonable and must provide, in the case of an exclusive license, for diligent development of the Project Invention or Project Work towards commercialization by the EAA and for the retention by AgriLife of the royalty-free right to use the Project Invention or Project Work for teaching, research, public service, and other educational and academic purposes.

Section 9.7. Patent Protection. During the Option Period or Negotiation Period, AgriLife may, at its sole election and expense, file for patent protection for the Project Invention. The EAA may also request that AgriLife file for patent protection for the Project Invention, and in such case, the EAA shall reimburse AgriLife for its patent expenses within 30 days of receiving an invoice for such expenses. If the Option Period lapses without exercise, or the Negotiation Period lapses without the execution of a license agreement, neither AgriLife nor AgriLife will have any further obligation to EAA as to such Project Invention or Project Work except as provided in Section 9.5. AgriLife and EAA may extend the Option Period or Negotiation Period by written agreement.

Section 9.8. Delivery of Documents upon Termination. Upon termination of this Contract under Sections 1.1 or 3.1, all deliverables set out in Exhibit A (Statement of Work), whether complete or incomplete, that may take the form of such information, documents, property, or and materials that are not already in the possession of the EAA will be delivered by AgriLife to the EAA within thirty (30) days of termination.

Section 9.9. Nondisclosure of Documents. Both Parties recognize that each Party is subject to the provisions of Chapter 552, Texas Government Code. If a request for public information is

filed with one of the Parties under Chapter 552, any information, property, or materials produced, created, or supplied under this Contract that is subject to disclosure under Chapter 552 may be disclosed by the Party to any third party without the prior written consent of the other Party. If such a request is filed, the Party receiving the request shall promptly give notice to the other Party of the request and provide a schedule of the documents provided.

Section 9.10. Record Copies. AgriLife shall retain a record copy of all information, documents, property, or materials developed in the course of performing the Project for a minimum of three (3) years. Upon request of the EAA, such information, documents, property, or materials will be promptly supplied to the EAA, including after the Expiration Date or the termination of this Contract under Section 3.1. The EAA will reimburse Participant for the actual cost of time and expenses of reproduction of such materials if requested.

Section 9.11. Limitations. Nothing in this Contract grants either party any rights to any of the other Party's intellectual property that is not a Project Invention or Project Work.

ARTICLE X – PERFORMANCE

THIS ARTICLE INTENTIONALLY LEFT BLANK

ARTICLE XI – PUBLICATIONS

Section 11.1 AgriLife may publish the results of the Project, except for EAA's Confidential Information, after providing EAA with a 30-day period in which to review each publication to identify Project Inventions and to identify any inadvertent disclosure of Confidential Information. If necessary to permit the preparation and filing of U.S. patent applications, AgriLife may agree to an additional review period not to exceed 60 days. Such delay may not be imposed on the filing or publication of any student thesis or dissertation. Failure by EAA to respond within 30 days will constitute de facto agreement by EAA that no delay in publication is necessary. Any further extension requires agreement between EAA and AgriLife.

ARTICLE XII – DISCLAIMER OF WARRANTIES

Section 12.1. EAA acknowledges that research is, by definition, experimental in nature and so the outcome of the Project is inherently uncertain and unpredictable. As such, AgriLife has not made and does not make any representation, guarantee, or warranty, express or implied, regarding the results of the Project. Except as expressly provided in this Contract, AgriLife makes no warranties of merchantability or fitness for a particular purpose, or any other warranties, express or implied, and hereby disclaims all such warranties as to any matter including, without limitation, warranties as to: (a) the Project and any results of the Project; (b) data, reports, information, or research provided by AgriLife or EAA; and (c) any invention, copyrightable work, or product, or ownership thereof, whether tested, conceived, discovered, or developed in the Project or in connection with conducting the Project.

ARTICLE XIII – AMENDMENTS

Section 13.1. Amendments. This Contract, including Exhibits, may be amended only by written agreement of the Parties.

Section 13.2. Delegation to the General Manager. The Board of Directors of the EAA delegates the authority to the General Manager to enter into amendments to this Contract without further authorization by the Board consistent with the General Manager's authority to enter into contracts under Section 5.01 of the EAA's Bylaws.

ARTICLE XIV – GENERAL PROVISIONS

Section 14.1. Force Majeure. Neither Party will be liable or responsible to the other Party nor be deemed to have breached this Contract for failure or delay in fulfilling or performing any obligation under this Contract if and to the extent such failure or delay is caused by or results from causes beyond the affected Party's reasonable control, including, but not limited to, acts of God, strikes, riots, flood, fire, epidemics, natural disaster, embargoes, war, insurrection, terrorist acts, or any other circumstances of like character; provided, however, that the affected Party has not caused such force majeure event(s), uses reasonable efforts to avoid or remove such causes of nonperformance, and continue performance with reasonable dispatch when such causes are removed. The affected Party shall provide the other Party with prompt written notice of any delay or failure to perform that occurs due to force majeure, including describing the force majeure event(s) and the actions taken to minimize the impact of such event(s).

Section 14.2 Use of Name. EAA may not use the name or any adaptation of the name of AgriLife, the A&M System, or any of its employees in any way except in factual statements that, in context, are not misleading or imply an endorsement.

Section 14.3 Governing Law. The substantive laws of the State of Texas (and not its conflicts of law principles) govern all matters arising out of or relating to this Contract and all the transactions it contemplates.

Section 14.4. Venue. Exclusive venue for any claim arising out of or relating to this Contract must be in Brazos County, Texas. Each Party acknowledges that such venue would be a convenient forum.

Section 14.5. Notices. Any notices required or permitted under this Contract must be in writing and will be deemed given: (a) three business days after it is deposited and postmarked with the U.S. Postal Service, postage prepaid, certified mail, return receipt requested, (b) the next business day after it is sent by overnight carrier, (c) on the date sent by email transmission with electronic confirmation of receipt by the Party being notified, or (d) on the date of delivery if delivered personally. Each Party may change its notice address by sending to the other Party a notice of the new address. Notices must be addressed as follows:

AGRILIFE:
TEXAS A&M AGRILIFE RESEARCH
ATTENTION: Travis Young, Associate Director, Contract Negotiations, SRS
400 Harvey Mitchell Parkway S, Suite 300
College Station, TX 77845-4375
awards@tamu.edu

EAA:
EDWARDS AQUIFER AUTHORITY
ATTENTION: Shelly Hendrix, Sr. Director of Finance/CFO
900 E. Quincy Street
San Antonio, Texas 78215
contracting@edwardsaquifer.org

Section 14.6. Entire Agreement. This Contract contains the entire understanding of the Parties as to its subject matter and supersedes all other written and oral agreements between the Parties as to that subject matter. The Parties may execute other contracts, but those will not alter this Contract unless expressly stated in writing. This Contract may only be amended if expressly stated in a written agreement signed by an authorized representative of each Party. Each Party hereby objects to any different or additional terms on any purchase order, invoice, acknowledgement, or similar form.

Section 14.7. Assignment. This Contract is assignable only with the written consent of both Parties. Any purported assignment in violation of this Section 14.7 will be void.

Section 14.8. Non-Waiver of Immunity. EAA acknowledges that AgriLife, as an agency of the State of Texas, possesses certain rights and privileges, is subject to certain limitations and restrictions, and only has authority as is granted to it under Texas law. Nothing in this Contract is intended to waive or relinquish AgriLife's sovereign immunity or any other exemptions, remedies, privileges, or immunities as may be provided by law, or to exceed the authority granted to AgriLife under Texas law. Furthermore, nothing in this Contract is intended as any waiver by either Party of any immunity from suit to which it is entitled under Texas law.

Section 14.9. Non-Waiver. The failure of either Party at any time to require performance by the other Party of any provision of this Contract will in no way affect the right to require such performance at any time thereafter nor will the waiver by either Party of a breach of any provision be taken or held to be a waiver of any succeeding breach of such provision or as a waiver of the provision itself.

Section 14.10. Intentionally Left Blank.

Section 14.11. Authority to Contract. (a) Each Party represents and warrants for the benefit of the other Party that: (1) it has the legal authority to enter into this Contract under Section 791.011(a), Texas Government Code, and/or other applicable law; (2) it has the legal authority to perform the Project contracted for under this Contract; (3) this Contract has been duly approved by its governing body as provided by Section 791.011(d), Texas Government Code, and has been

duly and properly executed; (4) no other authorizations or approvals are or will be necessary in order to approve this Contract and to enable that Party to enter into and comply with the terms and conditions of this Contract; (5) the person executing this Contract on behalf of each Party has the authority to bind that Party; and (6) the Party is empowered by law to execute any other agreement or documents and to give such other approvals, in writing or otherwise, as are or may hereafter be required to implement and comply with this Contract. (b) AgriLife represents and warrants that it believes that the contractual payment to be made under this Contract is in an amount that fairly compensates it for the Project performed under the Contract as required by Section 791.011(e), Texas Government Code.

Section 14.12. Payment from Current Revenues. As required by Section 791.011(d)(3), Texas Government Code, the EAA is making all payments required under this Contract from current revenues available to the EAA.

Section 14.13. Mediation. The Parties will encourage the prompt and equitable settlement of all controversies or claims related to this Contract. The aggrieved party shall notify the other party by providing a detailed description of the alleged controversies or claims; the parties shall negotiate their differences directly and in good faith for a period of no less than thirty (30) days after any party receives written notification of the existence of a dispute. If such an informal resolution is not successful within a reasonable period of time from written notification of the dispute, either party may submit the dispute to a mutually acceptable licensed attorney who is an experienced mediator and is located in Brazos County, Texas, to work with them to resolve their differences utilizing non-binding mediation. This mediation is a compromise negotiation for purposes of Rule 408 of the Federal Rules of Evidence and Texas Rules of Evidence and is an alternative dispute resolution procedure subject to Section 154.073 of the Texas Civil Practice & Remedies Code. If, after non-binding mediation occurs, the dispute is not resolved, the parties are free to exercise all other legal and equitable rights. Nothing in this section will prevent or delay either party from instituting formal proceedings at any time to: (a) avoid the expiration of any applicable limitations period, (b) obtain equitable relief, or (c) preserve a superior position with respect to other creditors.

Section 14.14. Compliance with Laws and Regulations. Each Party shall comply with all laws and regulations applicable to the performance of its obligations under this Contract.

Section 14.15. Severability. Each provision of this Contract is severable. If any provision is rendered invalid or unenforceable by statute or regulations or declared null and void by any court of competent jurisdiction, the remaining provisions will remain in full force and effect if the essential terms of this Contract remain valid, legal, and enforceable.

Section 14.16. Survival. Any provision of this Contract that may reasonably be interpreted as being intended by the Parties to survive the termination of this Contract will survive the termination of this Contract.

Section 14.17. Counterparts. This Contract may be signed in counterparts each one of which is considered an original but all of which constitute a single instrument.

IN WITNESS WHEREOF, this Contract is executed as of the day and date executed by both parties as specified in Section 1.1.

EDWARDS AQUIFER AUTHORITY

By:_____
Roland Ruiz
General Manager

ATTEST:

By:_____
Jennifer Wong-Esparza
Assistant to the Board Secretary

APPROVED AS TO FORM:

_____
Deborah Trejo
Legal Counsel
Edwards Aquifer Authority

TEXAS A&M AGRILIFE RESEARCH

By:_____
Dr. Cliff Lamb
Director, Texas A&M AgriLife Research

ATTEST:

By:_____
Travis Young
Associate Director, Contract Negotiations, SRS

EXHIBIT A
STATEMENT OF WORK

BACKGROUND

In alignment with its core mission, the EAA conducts and promotes research aimed at maintaining and/or improving the water quantity and quality of the San Antonio Segment of the Edwards Balcones Fault Zone Aquifer (Aquifer). The EAA has a particular interest in understanding the potential for nature-based solutions as a way of achieving these aims. Recent acquisition of property under management of the EAA has provided an opportunity for conducting research related to understanding the potential of nature-based solutions. The purpose of this project is to outline ways that AgriLife, in collaboration with the EAA, can advance a nature-based solution agenda. In particular, the EAA is interested in answering the question: *Do nature-based improvements effectively enhance the quantity and/or quality of recharge?*

The goal of this project is to better understand the connection between land management and recharge dynamics within the recharge and contributing zones of the Aquifer. In particular, the project seeks to determine if there are nature-based solutions that may lead to enhanced groundwater recharge or water quality. Through this statement of work, the EAA seeks to:

1. Improve its understanding of infiltration mechanics in the contributing and recharge zones.
2. Acquire baseline water and sediment budget data such that future work related to nature-based solutions may be better quantified and understood.
3. Improve its understanding of the impact of specific land management practices such as woody plant control, grazing management, and urban development on recharge dynamics.
4. Improve its understanding of ephemeral streams and their role in aquifer recharge
5. Understand the extent to which recharge may occur on upland areas (dispersed recharge) compared to recharge occurring in stream channels.

PROJECT STUDY AREA

The project will be conducted within three EAA-managed properties in the greater San Antonio area as shown in Figure 1 and listed below.

Name	Aquifer Zone	Acres
Field Research Park (FRP)	Recharge Zone	151
Maverick Ranch (Maverick)	Contributing Zone	600
Dischinger-Brehmer Ranch (Dischinger)	Recharge Zone	1,189

Each of the sites are mostly wooded with the FRP having 65% woodland, Maverick having 88% woodland and the Dischinger having 80% woodland.

The FRP has been under EAA management since 2019 and now has a well-developed set of installations for monitoring precipitation, ground water, streamflow, evapotranspiration, and soil water. In addition, a number of restoration practices including erosion mitigation, water-spreading and vegetation rehabilitation have been put in place. The other two properties have been recently

acquired and have as of yet had few monitoring or restoration activities.

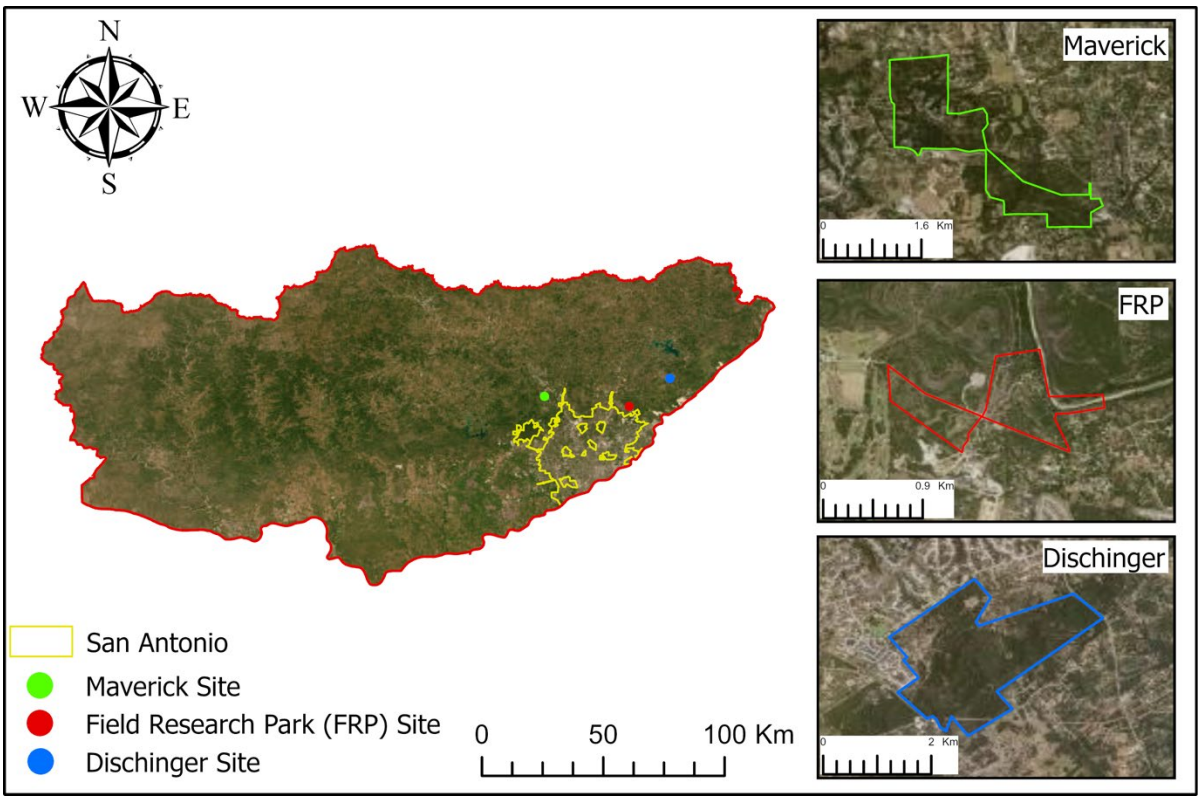


Figure 1. Location of study sites

OBJECTIVES

AgriLife, with collaboration from EAA staff where noted, will complete the following objectives during the five-year project term.

OBJECTIVE 1: In collaboration with EAA staff, conduct a detailed analysis of ongoing data collection activities at the FRP. Data currently being collected includes (1) precipitation (2) small catchment runoff (3) groundwater dynamics (4) soil moisture and (5) evapotranspiration.

Timeline: Data analysis will be an ongoing activity for the duration of the project

Background: Ongoing data collection activities at the FRP offer the opportunity to provide deeper insights into with respect to water budgets, streamflow, erosion processes, and groundwater recharge. Specific data collection activities are summarized below in Figure 2. Time series for each are presented in Figure 3.

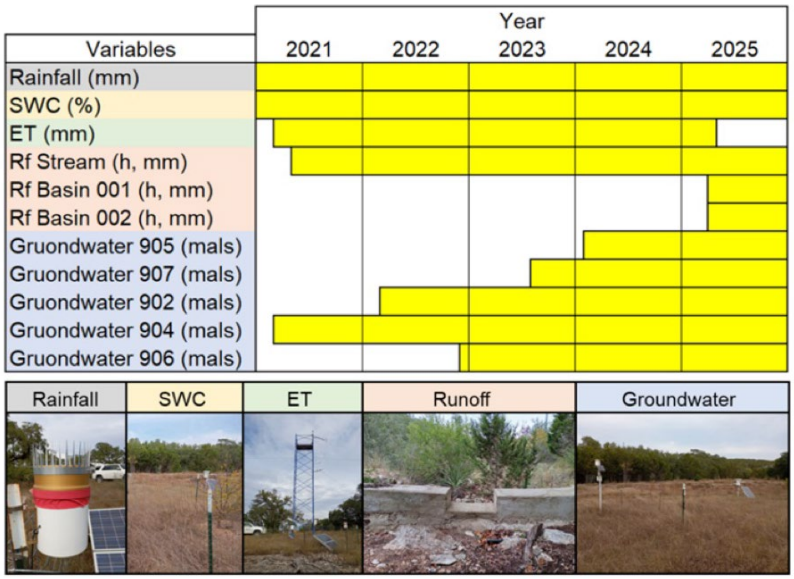


Figure 2. Ongoing data collection activities at the FRP

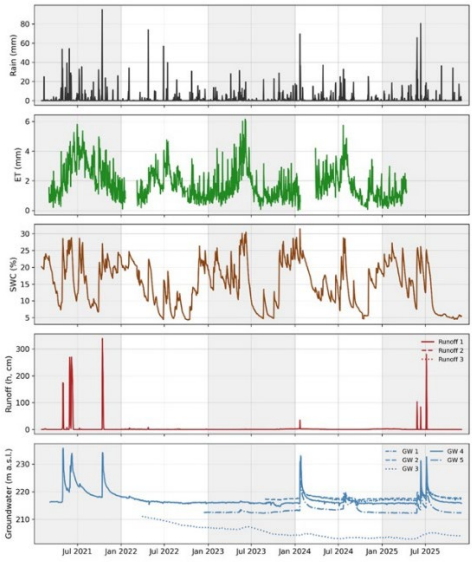


Figure 3. Time series of hydroclimatic fluxes and subsurface responses in the Edwards Plateau Recharge Zone. From top to bottom, panels show daily rainfall, evapotranspiration (ET), soil water content (SWC), surface runoff (three catchments, cm), and groundwater levels (five boreholes, m a.s.l.).

These data offer the opportunity to better understand recharge dynamics in the recharge zone as influenced by rainfall, evapotranspiration, streamflow and soil water. Specifically, in collaboration with EAA staff, AgriLife will:

1. Quantify how rainfall event size, intensity, and frequency regulate the timing of groundwater recharge at the FRP site which is overlying the in Upper Glen Rose and Middle Trinity Aquifers which should provide valuable information for karst systems in general, and support understanding of intraformational flow regimes between the Edwards and Trinity Aquifers.

2. Assess the extent to which daily evapotranspiration dynamics constrain or modulate groundwater recharge, identifying periods when atmospheric demand limits vertical water transfer.
3. Identify critical soil water content thresholds that enable vertical percolation and groundwater recharge, and to characterize the temporal coupling between soil moisture dynamics and recharge responses.
4. Evaluate the temporal coupling and relationships between surface runoff and groundwater dynamics, as indicators of episodic vertical hydrological connectivity.

Deliverable: Submit at least one publication, the focus of which will be highlighting the water budget dynamics in semi-arid karst systems.

OBJECTIVE 2: Examine patterns of urban expansion in the Aquifer region and determine if there is a relationship between urban/suburban cover and groundwater recharge.

Timeline: Most of this analysis can be conducted in years 1 and 2 of the project.

Background: Urban and suburban development in the Edwards Aquifer region has been significant. To understand this impact in terms of areal extent, rate of expansion, and areas where expansion has been the greatest, AgriLife will:

1. Map and quantify changes in urban and suburban land cover in the Edwards Aquifer region over the past four decades (1985-2024) and estimate the rate and timing of urban growth
2. Assess the spatial distribution of urban development and identify dominant growth patterns, including hotspots, corridors, and edge expansion, into natural landscapes.
3. Develop predictive AI models of urban expansion to generate short- to medium- to long- term growth scenarios (5, 10, up to 40 years into the future) and evaluate implications for groundwater recharge under future development scenarios.

A flow chart outlining the logic flow and approach to achieving these tasks appears in Figure 4.

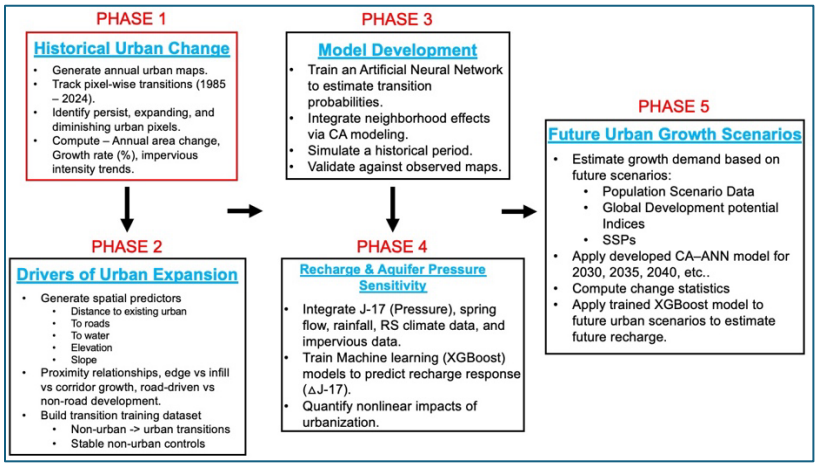


Figure 4. A flow chart outlining approach for assessing urban expansion

Deliverable: Submit at least one publication describing expansion of urban and suburban areas in the Edwards Aquifer region.

OBJECTIVE 3: Conduct detailed surveys of soil health including direct measurements of soil physical, chemical, and biological indices of soil health.

Timeline: AgriLife will conduct soil health inventory at each of the three sites. We anticipate that soil health data collection and analysis will continue for the duration of the project. In Year 1, focus will be on the small catchments in the FRP. This initial phase will allow methodology refinement, as well as provide information to help guide future field campaigns. Scheduling of soil health field campaigns will be conducted in consultation with EAA staff.

Background: The entire Edwards Plateau has been subject to historic degradation, primarily by overgrazing. This degradation has led to lasting damage to soil health. In the last 50 years, however, many of these rangelands have recovered, as a result of either improved grazing practices or conservation efforts to restore rangelands. At the same time, another large change has taken place across the Edwards Plateau: woody plant encroachment (WPE), whereby open grasslands and savannas transition to woodlands. A working hypothesis is that in some cases, WPE has facilitated recovery of soil health in formerly degraded landscapes. In order to test this hypothesis, AgriLife will conduct a comprehensive evaluation of soil health in each of the EAA properties to:

1. Compare the physical, chemical and hydrological properties of soils in wooded areas with those of soils in intercanopy areas.
2. Compare the microbial community composition of soils in wooded areas with that of soils in intercanopy areas.
3. Compare the soil carbon profile and nitrogen properties of soils in wooded areas with those of soils in intercanopy areas.
4. Compare plant metabolic activity and carbon status in wooded areas with those in intercanopy areas.
5. Compare soil health characteristics for different ecological sites such as woodland, grassland, oak mott, regrowth juniper thicket, and open woodland.

The specific soil health attributes to be measured are summarized in Table 1.

Table 1: Soil health properties to be measured in each plot, organized by functional category, with corresponding sampling depths and methods.

Category	Property	Sample type	Method
Soil physical property	Infiltrability	Soil surface	Automated infiltrometers
	Aggregate stability	Soil (0–10 cm)	Wet sieving
	Bulk density	Soil (0–10 cm)	Oven drying fixed-volume soil core
	Penetration resistance	Surface to 20 cm at	Field penetrometer

Category	Property	Sample type	Method
		5-cm intervals	
	Texture	Soil (0–10 cm)	Soil texture analyzer (PARIO)
	Water retention at field capacity	Soil (0–10 cm)	Pressure plate extractor
Soil chemical property	pH	Soil (0–30 cm)	pH meter
	Carbon –Total C –Inorganic C –Organic C –Mineral-associated C –Particulate C Nitrogen	Soil (0–30 cm) <53 μm >53 μm	–CN elemental analysis –HCl acid wash –CN elemental analysis –Size fractionation by 53-μm wet sieving
	Phosphorus	0–30 cm	Mehlich-3
	Cation exchange capacity (CEC)	0–30 cm	Ammonium acetate (pH 7)
	Sugars	0–30 cm	Colorimetric assay
Soil biological property	Microbial biomass	0–30 cm	Fatty acid extraction & FAME analysis
	Root colonization by mycorrhizal fungi	0–10 cm	Microscopic grid-intercept
Plant and soil metabolic activity and carbon status	Plant non-structural carbon content –Soluble sugars –Starch –Lipids	Leaves, fine roots	Colorimetric assays
	Soil CO_2 efflux	Surface	LI-COR LI-8100 and LI-7825 CO_2 Isotope Analyzer
	Soil CO_2 efflux partitioning	Surface	LI-COR LI-7825 CO_2 Isotope Analyzer

The proposed study design for Year 1 in the FRP is highlighted in Figure 5. In subsequent years, soil health analysis will be expanded to the other properties and the major ecological types that are present will be evaluated.

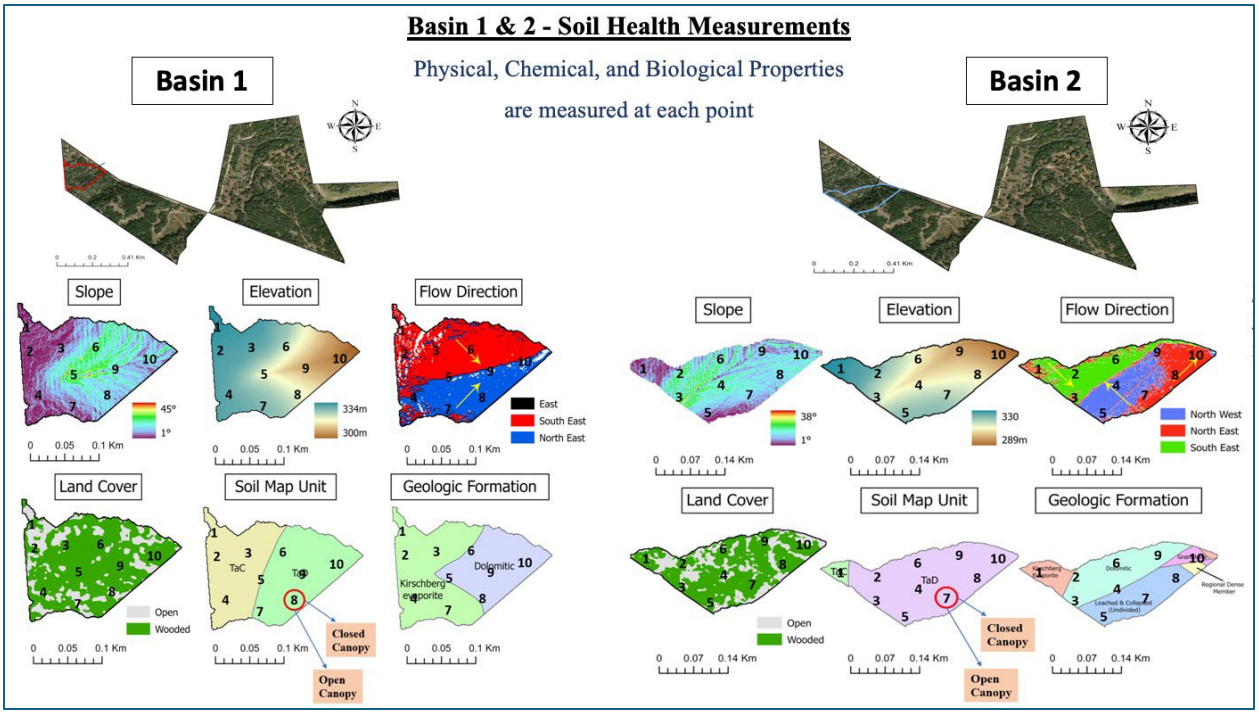


Figure 5. Proposed sampling design for assessing soil health in the FRP catchments.

Deliverable: Submit at least one publication describing soil health attributes on the Edwards Plateau. The publication will include a narrative that describes and summarizes the results as well as explaining the implications.

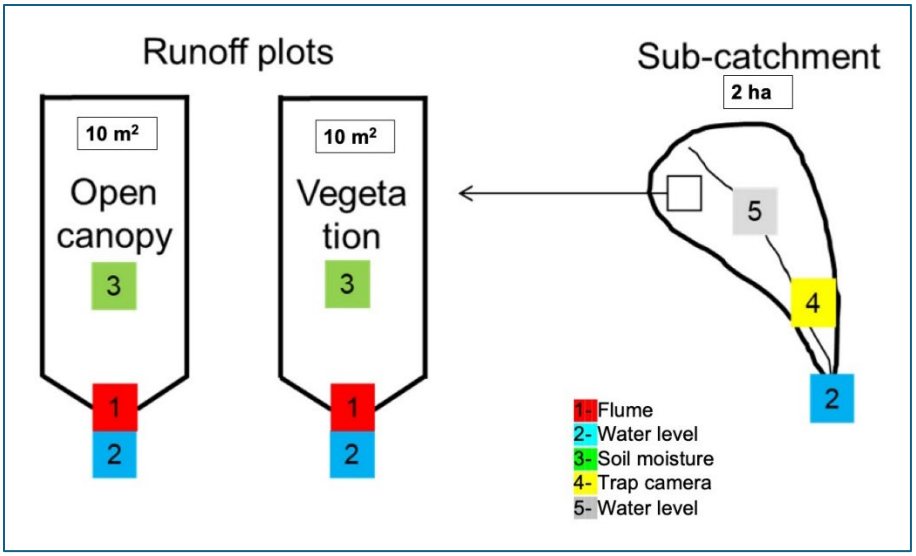
OBJECTIVE 4: Establish a network of runoff plots (2 x 4 m) for continuous monitoring of plot scale runoff.

Timeline: AgriLife will install 6 runoff plots during year 1: three each in the instrumented catchments at the FRP. During years 2 and 3, AgriLife will establish additional runoff plots in the other two sites.

Background: One of the key uncertainties with respect to recharge dynamics is the extent to which distributed recharge (recharge in upland areas) occurs and if so what is the relative magnitude. One way of exploring this issue to simultaneously measure the amount of runoff generated in uplands and associated larger catchments. The difference between upland runoff and catchment runoff is a reasonable proxy for distributed or upland recharge.

Two prototype runoff plots, installed in one of the FRP small catchments, are instrumented for continuous monitoring of runoff. AgriLife anticipates that the design of these prototype runoff plots will work for this monitoring study. One plot is under tree canopy and the other plot is in the interspace (Figure 6).

A



B

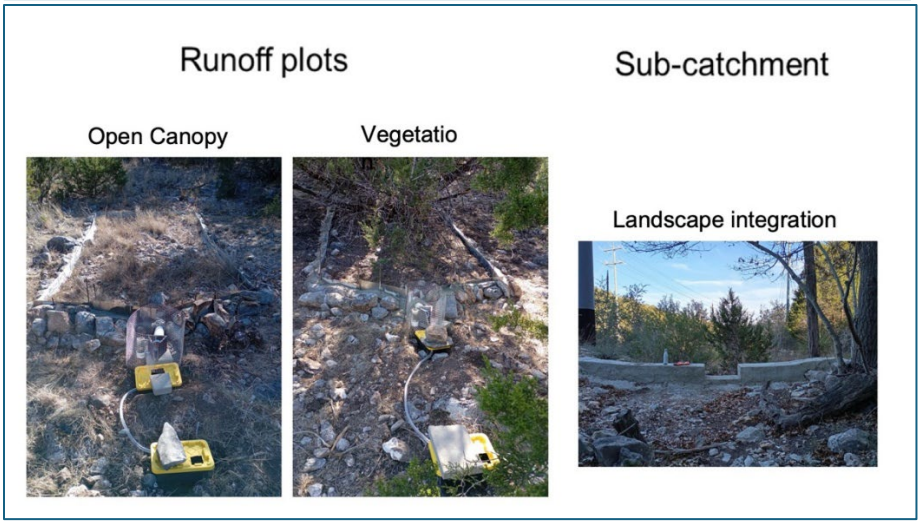


Figure 6. (A) Runoff plot configuration and (B) photograph of runoff plots and small catchment weir.

Deliverable: A network of new small runoff plots will be established in locations which will be determined by the existing location of the established instrumented catchments. Submit at least one publication from the results from this objective's activities.

OBJECTIVE 5: Establish and instrument additional small catchments for measuring surface runoff and precipitation.

Note: Reconnaissance for site selection will begin in year 1 and will be conducted in collaboration and consultation with EAA staff. Initiating small catchment research at the Maverick ranch is a high priority.

Timeline: Site identification will begin in year 1. Establishment will occur in years 2-4.

Background: Currently, experimental catchments have been instrumented at the FRP. Establishment of additional instrumented catchments can provide additional information with respect to streamflow response to rainfall, as well as, serve as locations for installing

additional runoff plots. Depending on the size of the catchment, small weirs could be installed at the catchment outlet. For larger stream channels, weirs are not a practical option but discharge could be monitored using anchored pressure transducers in the stream channel. AgriLife will work with EAA staff in determining optimum locations for additional small catchments at both the Maverick and Dischinger locations.

Deliverable: Depending on site suitability, 2-4 additional small catchments will be instrumented at the Maverick and/or Dischinger sites.

OBJECTIVE 6: Establish demonstration and test areas for comparing and contrasting various land management practices related to woody plant removal and grazing.

Note: Reconnaissance for site selection will begin in year 1 and will be conducted in collaboration and consultation with EAA staff.

Timeline: Site identification will begin in year 1. Establishment will occur in years 2-4.

Background: Most of the land within the Edwards Aquifer contributing zones and recharge zones is managed as rangeland for supporting either wildlife or domestic livestock. A common practice among landowners in the region is the practice of some form of brush control, usually mechanical in nature. There have been relatively few studies that have examined the extent to which brush control or woody plant management may impact recharge. One opportunity for utilizing these sites would be to implement various brush control treatments and evaluate their relative impact on groundwater recharge. Some example treatments that could be compared would be (1) bulldozing and stacking (2) bull dozing and leaving slash in place (3) removing shrubs with hydraulic shears and stacking slash (4) removing shrubs with hydraulic shears and leaving slash in place (5) hand clearing woody plants and (6) mulching woody plants. Another potentially study could be to implement different levels of grazing intensity, including over grazing, with the purpose of evaluating the relative differences in these practices with respect to recharge.

The final determination of land management practices chosen for demonstration be made after extensive discussions between AgriLife, EAA staff and other conservation experts. For example, AgriLife may be able to take advantage of historical brush management, or lack of it, on various tracts of the properties that are the focus of this research.

Note: This objective is to monitor water budget variables within the various treatments but does not include the cost for implementing the various brush management treatments.

Deliverable: Once the brush and/or grazing management demonstration sites have been established, AgriLife will install various instrumentation for monitoring components of the water budget including surface runoff, soil moisture, and rainfall. In addition, AgriLife will monitor vegetation response at each demonstration site. A description of the findings will be included in the final report at the end of the project. Submit at least one publication from the results from this objective's activities.

EXHIBIT B
ANNUAL BUDGET

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
SALARY						
Senior Personnel	$60,000	$34,000	$39,000	$39,000	$39,000	$211,000
Post Doc	$50,000	$52,000	$52,000	$52,000	$52,000	$258,000
Graduate Student	$34,000	$50,000	$45,000	$50,000	$50,000	$229,000
Undergraduate labor	$11,000	$10,000	$10,000	$10,000	$10,000	$51,000
TUITION	$13,000	$21,000	$21,000	$21,000	$21,000	$97,000
TRAVEL	$20,000	$20,000	$30,000	$30,000	$30,000	$130,000
MATERIAL AND SUPPLIES	$9,000	$10,000	$10,000	$10,000	$10,000	$49,000
CONTRACT HELP	$15,000	$15,000	$15,000	-	-	$45,000
LABORATORY ANALYSIS	$15,000	$15,000	$5,000	$15,000	$15,000	$65,000
TOTAL BEFORE OVERHEAD	**$227,000**	**$227,000**	**$227,000**	**$227,000**	**$227,000**	**$1,135,000**
OVERHEAD	$22,700	$22,700	$22,700	$22,700	$22,700	$113,500
TOTAL	**$249,700**	**$249,700**	**$249,700**	**$249,700**	**$249,700**	**$1,248,500**

PROJECTED BUDGET, PER OBJECTIVE

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Objective 1	$72,700	$50,000	$50,000	$50,000	$50,000	$272,700
Objective 2	$17,000	$25,000	-	-	-	$42,000
Objective 3	$100,000	$85,000	$85,000	$85,000	$85,000	$440,000
Objective 4	$50,000	$50,000	$30,000	$30,000	$30,000	$190,000
Objective 5	$5,000	$20,000	$50,000	$50,000	$50,000	$175,000
Objective 6	$5,000	$19,700	$34,700	$34,700	$34,700	$128,800
Total	**$249,700**	**$249,700**	**$249,700**	**$249,700**	**$249,700**	**$1,248,500**

BUDGET JUSTIFICATION

SALARY:

Senior Personnel: Senior personnel include Bradford Wilcox (PI), Eric Duell, and Pedro Leite. Wilcox and Duell will receive 1 month or less salary support in year 1. Pedro Leite will receive 3 months of salary support in years 1-5

Post Doc: The project will provide ½ support for one post-doctoral scientist (Patricio Magliano) for the duration of the project.

Graduate Students: The project will provide partial support to 2-3 graduate students who will be working on the analysis of suburban expansion and soil health analysis.

Undergraduate Labor: Undergraduates will provide assistance with laboratory analysis and occasional field work.

TUITION: Partial tuition support will be provided for two graduate students.

TRAVEL: Allocation of $20,000 and $30,000 for travel and lodging.

MATERIALS AND SUPPLIES: Allocation of $9,000 and $10,000 for material and supplies which will be used for monitoring equipment, miscellaneous field supplies, and material for runoff plots.

CONTRACT HELP: In the first 3 years of the project, contract help for installation of the runoff plots is anticipated.

LABORATORY ANALYSIS: Laboratory analysis that is associated with the soil health inventories.

KEY PROJECT PERSONNEL

Bradford Wilcox, professor: Dr. Wilcox will serve as the project PI and have the major responsibility of insuring that the project goals and objectives are achieved. He will be involved in all aspects of the project. Objectives 1-6.

Eric Duell, assistant professor: Dr. Duell is an expert in soil microbiology and will be involved in the soil health aspects of the project. In addition, he will be providing partial support for a graduate student who will be involved in the project. Objective 3.

Pedro Leite, assistant professor: Dr. Leite will be involved in all aspects of field data collection and analysis. He will be tasked with coordinating the soil health studies as well as overseeing installation of the runoff plots. Objectives 1-6

Patricio Magliano, post-doctoral scientist: Dr. Magliano is a post-doctoral scientist who will take the lead on data analysis and interpretation. He will also be involved in the soil health data collection and installation of the runoff plots. Dr. Magliano will be the primary manager of data collected in this project. Objectives 1,3,4,5,6.

Horia Olariu, research scientist: Dr. Olariu will be directing the analysis of suburban/urban expansion across the recharge zone in the Edwards Plateau. Objective 2

Enzo Genesi, MS graduate student: Enzo will be involved in evaluating urban/suburban expansion and the soil health project. Objective 2 and 3.

Senuri Wijekoon, Ph.D. student: Senuri will be involved in the soil health assessment. Objective 3.