PLANT TEXAS 2050
A UT Grand Challenge

Austin Family Reunion
at the

Lady Bird Johnson Wildflower center

September 20th, 2018

Community Organization
Digital Resource Guide
Click an organization's logo to visit their website
Making Texas resilient is our grand challenge.

TEXAS IS CHANGING

Today, Texas’ population is nearly 28 million. By 2050, that number is predicted to double.

Add to that environmental stress from prolonged droughts, record-breaking heat waves, and destructive floods, and the things we rely on to live — water, energy, dependable infrastructure, and an ecosystem to support them — will be at unprecedented risk.

Limited resources will be in even greater demand.

That’s our current trajectory, but we can still change course.

Planet Texas 2050 brings together over 100 researchers from 14 difference colleges and schools across UT campus to tackle this grand challenge.

The first year of research is complete and we look forward to including you in our future efforts.

Here is what we have been doing in the past year...
OPTIMAL AVERAGING OF WATER RESOURCES

Planet Texas 2050 hydrologists and geologists will attempt to answer important questions about the water cycle in Texas: How much water is actually in Texas, and what methods are best for representing these volumes? This team will assess and combine methods currently used by different agencies and stakeholder groups and determine the techniques that yield the most accurate estimates, and under what scales (both time and spatial). This will help to make an account of all the water in Texas’ aquifers, rivers, ponds, reservoirs, and soil—as well as water in the atmosphere—to help us better understand where water is located and how these sources interact. Researchers will incorporate these data into a single analysis platform that can be connected to municipal water usage, which will provide decision-makers with invaluable information as they plan for future droughts and floods in cities with growing populations.

TEXAS METRO OBSERVATORY

Planet Texas 2050 researchers will build a communication and data platform focused on economic, environmental, health, demographic, and governmental information for each of the state's metropolitan regions. The Texas Metro Observatory will allow researchers, community members, nonprofit organizations, public sector staff, policymakers, and industry to access the most complete data repository for the state—data that is clean, accurate, and cross-tabulated—with the benefit of interactive maps, dynamic infographics, and robust data visualizations. It will also provide an online platform for database users to exchange ideas and questions about Texas' communities.

POPULATION DYNAMICS IN PREMODERN SOCIETIES

While the rise of mega-cities is a modern trend, urban centers also played an important role in past societies, and these ancient cities encountered many of the challenges we face today. Which past societies failed, which ones thrived—and why? The Planet Texas 2050 team is using archaeology, hydrology, geomorphology, and archaeogenetics to find out. Currently, researchers are examining Maya water management; epigenetic signs of violence in Mesoamerica; Roman aqueducts; and genetic evidence for health and population mobility in human remains from Greek and Roman frontier cities on the Black Sea coast. Other team researchers are gathering data about landforms and water sources in Texas and their relation to settlement patterns over the last 10,000 years. By learning how our predecessors responded to resource scarcity and climate threats, we can better prepare for a future in Texas with nearly twice as many people.

TEXAS WATER STORIES: LOCAL NARRATIVES OF HYDROLOGIC CHANGE AND ADAPTATION

Planet Texas 2050 scientists will be measuring, mapping, and studying water sources throughout the state. At the same time, our researchers will be talking with communities in three key regions—West Texas, Central Texas, and the Panhandle—to collect people's stories, memories, and persistent narratives about this vital resource. Stories may reflect conflict, nationality, ethnicity, and/or generational beliefs, but each story can help us better understand how different communities value water, whether they freely use or conserve it, and how urgent water availability is to them. These stories will help researchers understand how different groups view the concepts of sustainability and adaptability—information that is critical for policymakers hoping to build consensus or influence behavior.
ARTIST-IN-RESIDENCE: LORENZ GRAYBELT

Sculptor and performance artist Marie Lorenz will design a video map of the water that flows down Texas’ Colorado River—one of the state’s primary water sources—into the Gulf of Mexico. During its 862-mile journey from Lubbock to Matagorda Bay, the river’s waters change from rugged and rural to urban and unidentifiable. The water becomes part of city “graybelts”: the drainage, storm water, and sewer infrastructure that most people never see. Lorenz will invite local participants to join her on this Colorado River trek in a handmade boat while she explores its path and records interviews with those she meets along the way who have connections to the land and the river. “Graybelt” will help researchers understand how personal experience with our environment affects our perceptions, behaviors, and awareness of critical resources.

TRANSPORTATION-RELATED AIR POLLUTANTS AND HEALTH

As cities become more densely populated, people will be forced to live in very close proximity to highways, which will increase their exposure to transportation-related air pollution. Proximity to these pollutants has significant health effects. For children, this ranges from reduced lung function and increased infant bronchitis to behavioral complications. For adults, consistent exposure to roadway pollution leads to coronary heart disease, cerebrovascular and respiratory disease, asthma, chronic-obstructive pulmonary disease, and dementia. Planet Texas 2050 scientists have already begun measuring outdoor air pollution on Austin’s highways and at residences situated at various distances from major roadways. These data will give researchers a baseline for Austin’s pollution levels today so they can make more accurate predictions about the future.

URBAN WATERSHED EVOLUTION

Watersheds — the area of drainage where all water collects to a given stream — serve as microcosms and give scientists unique insights into how climate changes and urban development affect cities, either negatively or positively. Geologists, ecologists, environmental engineers and marine biologists will map, quantify, and study the connections among urban growth and the ecology of Texas’ watersheds. They will also examine natural isotopic tracers and use microbial source tracking to better understand the impacts of developing cities on watersheds to help decision-makers evaluate human and ecological tradeoffs when proposing policies and designing urban spaces.

DATA X

DataX is the first of its kind and underscores all of Planet Texas 2050. It’s a next generation integrated data analytics platform designed by experts and powered by the supercomputers at the Texas Advanced Computing Center. It will provide the computational tools necessary for researchers to understand, manage, and examine critical data from around the state. Existing data—from water availability to flood plain mapping to urban growth models and more—will be integrated into one portal and will be added to continuously as new data become available, both from Planet Texas 2050 researchers and from organizations around Texas.

These data will then be used to create simulations and projections that help policymakers, educators, and citizens better understand the challenges their communities are facing today as well as the challenges their towns could face in 30 years. DataX will show us all the possible futures for Texas so that we can intervene now and put ourselves on the best path forward.
The University of Texas at Austin Lady Bird Johnson Wildflower Center is the official state botanic garden and arboretum of Texas. The Center promotes its mission to inspire the conservation of native plants through its internationally recognized sustainable gardens, education and outreach programs, research projects, and consulting work.

Our Mission:
Inspiring the conservation of native plants

The Wildflower Center was founded by Lady Bird Johnson and Helen Hayes as the National Wildflower Research Center in 1982 and later renamed the Lady Bird Johnson Wildflower Center in 1997. It is a signature piece of Mrs. Johnson’s environmental legacy and is complementary to the Lyndon B. Johnson Presidential Library and the Lyndon B. Johnson School of Public Affairs on the university’s campus. Originally opened on land in East Austin, the Center moved to its current site on a transition zone between the Edwards Plateau and Texas Blackland Prairies ecoregions in 1995.

The Center has achieved great success since its founding, evolving from a private nonprofit research organization narrowly focused on Texas wildflowers to a major botanic garden and research unit of the university known for plant conservation, landscape restoration and sustainable approaches to landscape design. The Center is making a difference for the health of the planet through its research, demonstration projects, education programs and the development of national-scale programs to promote sustainable landscapes.

Our vision thus embodies the university’s charge to change the world and serve the state and nation through education and research programs.

“Our Center works for more than the lovely blossoms in our open spaces. We are concerned for all of North America’s native plants, from the smallest sprout to the tallest tree.”

~ Lady Bird Johnson

Learn more about the Lady Bird Johnson Wildflower Center:

History
Commitment to Sustainability
The Environmental Science Institute is a multi-disciplinary institute for basic scientific research in environmental studies.

ESI coordinates cross-departmental environmental science instruction; facilitates education and outreach in science, technology, engineering and math (STEM) fields; and disseminates advances in the area of environmental science that are important locally and globally.

Public engagement initiatives include *Hot Science - Cool Talks*, talks with STEM professionals sharing their latest research with the community; and *Scientist-in-Residence* where K-12 science teachers are paired up with STEM graduate students.

The Meadows Center for Water and the Environment at Texas State University inspires research, innovation and leadership that ensures clean, abundant water for the environment and all humanity.

Across Texas and around the world, our faculty and staff help communities and organizations address water and natural resource challenges through research, education, stewardship and leadership.

COMMUNITY-BASED LEARNING
The community-based learning program enables students to earn course credit for service in over 150 courses offered through 26 disciplines and in every academic college at UT Austin. Community-based learning courses represent mutually beneficial collaboration among students, faculty and community partners. Offerings include:

First-year programs  Community-based learning has been integrated into select first-year programs, including those in the McCombs School of Business, the College of Liberal Arts and the School of Undergraduate Studies.

LCCE-Austin City Hall Fellows  Students build capacity for the City and organize with Austin residents to explore and define community revitalization priorities.

Multi-Discipline Community-Based Learning Programs  The LCCE facilitates the networking of community-based learning courses across disciplines to serve a single purpose.

UT Service Scholars  Through this partnership of the DDCE and the LBJ School of Public Affairs, students perform 50 hours of community service each semester prior to graduation.

COMMUNITY ENGAGEMENT
Community Engagement Dialogues  This series facilitates candid discussions among faculty at UT, community leaders and students around topics that are important to community and neighborhood residents.

Community Engagement Incubator  The Community Engagement Center serves to incubate promising local nonprofits whose missions align with that of the DDCE.

Regional Foundation Library (RFL)  Serving as a bridge between the grant-seeking and grant-making communities, the RFL provides research, education and training to nonprofits, students and community members.

ENGAGED SCHOLARSHIP
Social Justice Institute (SJI)  The SJI brings together faculty, students, staff and community partners around social justice-oriented projects including community collaborations, activist research grants and the Abriendo Brecha Conference.

Faculty Learning Community (FLC)  The FLC provides community-based learning faculty the time and space to network and to discuss engaged scholarship.

STUDENT ENGAGEMENT PROGRAMMING
The Project  A 14-month, student-led community-building initiative, The Project encourages students, community members, instructors and LCCE staff to discuss the priorities of a single underserved Austin-area community and plan an annual day of service.

Google Community Leaders Program  The Google CLP is a multi-stakeholder digital inclusion program anchored by a partnership among local universities, the City of Austin and Google Fiber through which students work in communities to address issues of the digital divide.
STUDENT ENGAGEMENT PROGRAMMING (Continued)

**Be the Change Day of Service** In partnership with South Asian Americans Leading Together, the Be the Change day of service commemorates the life of Gandhi and draws over 1,000 volunteers.

**Alternative Breaks** UT Austin students travel to communities outside Central Texas to undertake short-term projects with community agencies and learn about challenges facing those communities.

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**RECOGNITION**

**United to Serve** A system-wide initiative of UT Austin to unite each of the nine campuses in service during National Volunteer Week, United to Serve highlights the engagement efforts of system campuses.

**Tower Awards** The Tower Awards honor excellence in service among the students, faculty and staff at UT Austin.

**President’s Volunteer Service Awards** This premier volunteer awards program encourages U.S. citizens or lawfully admitted permanent residents of the U.S. through presidential recognition to live a life of service.

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**For more information contact:**

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**Visit us online:**

http://ddce.utexas.edu/communityengagement

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**On social media:**

Facebook: Longhorn Center for Community Engagement
Twitter: utlcce
Instagram: utlcce
Established in 1940, the Hogg Foundation for Mental Health envisions a future in which the people of Texas thrive in communities that support mental health and well-being. Using a variety of approaches, including grant-making, convening, research, and public policy, the foundation works collaboratively to transform how communities promote mental health in everyday life.

We believe that mental health is not solely an individual responsibility, but is also a product of community conditions. The places where people live, learn, work, play and pray can have a significant impact on improving mental health.

Over the years, the foundation has awarded millions of dollars in grants to continue the Hogg family’s legacy of public service and dedication to improving mental health in Texas. The foundation is part of the Division of Diversity and Community Engagement at The University of Texas at Austin.

To learn more, visit hogg.utexas.edu.

ACDDC creates affordable living opportunities through community-engaged design. We envision inclusive and sustainable neighborhoods achieved through an empowered community, a nurturing built environment, and supportive policy and regulation.

**Our Core Capacities**

**Collecting:** We collaborate with community partners to understand barriers to opportunity.  
**Connecting:** We build inclusive systems of engagement and decision-making.  
**Creating:** We design sustainable communities.  
**Communicating:** We amplify community knowledge and experience.

**Our History**

ACDDC incorporated as a non-profit in Texas in August of 2006 and achieved 501(c)3 status the following May. ACDDC’s first project was the Skyline Terrace SRO conversion, a joint project with Foundation Communities, where ACDDC was housed until May of 2008 when we moved into our first offices in east Austin just south of the Mueller redevelopment.
The Llano River Watershed Alliance is an organization of landowners and interested stakeholders whose mission statement is to preserve and enhance the Llano River watershed by encouraging land and water stewardship through collaboration, education, and community participation.

Informational Video

Sign up for the Llano River Watershed Alliance Newsletter

THE TEXAS LIVING WATERS PROJECT

We are a collaboration of conservation groups (National Wildlife Federation, Sierra Club - Lone Star Chapter, Galveston Bay Foundation) working to ensure fresh water will always reach its natural destinations. For our wildlife, our economy and our kids.

FRESHWATER FOR EVERY LIVING THING

Texas is our home. It is a land of clear rivers, deep swimming holes, refreshing springs and thriving bays. Fresh water nourishes and sustains the wildlife that share our home with us, while at the same time supplying the ever-growing Texas economy. Fresh water allows us to fish and hunt, farm and ranch, build and prosper – all the things that make this state great. Despite persistent droughts and our own huge demand, we can still ensure that our kids will enjoy Texas’ natural heritage and a thriving economy – if we work together to protect our springs, rivers and bays today.

As this great state grows and the inevitable droughts continue their cycles, so grows the need for that can-do Texas spirit. Join us and discover new ways to conserve and protect our most precious resource. This is the greatest challenge facing Texas today and we will meet that challenge by planning ahead and embracing the best strategies and science to meet our needs. So there will always be fresh water… For everyone and every living thing.
In Central Texas, we lose farmland at a rate of 9 acres per day. The average age of farmers in Texas is nearly 60 years old. And, despite Austin’s reputation as a foodie capital, a recent UT study found 25% of Austinites are food insecure. These are disturbing statistics.

At Farmshare Austin, our mission is to grow a healthy local food community by increasing food access, teaching new farmers and preserving farmland. Farmshare Austin builds bridges between the produce grown on our 10-acre certified organic non-profit farm in Eastern Travis County and food access programs reaching food insecure communities in Central Texas. We teach new farmers and then share the bounty of the farm to increase food access.

We Grow Farmers!
Farmer Starter is an 18-week program designed to provide aspiring farmers with the essential skills and training needed to manage a sustainable farming business.
- 21 Farmer Starter graduates since 2014
- The 6th Farmer Starter class began in August 2018
- Graduates are farming in urban and rural settings on their own farms and working in many areas of the food system, including a local grain mill, food access and rural health

Mobile Markets
Farmshare provides food access to neighborhoods experiencing geographic and economic barriers to good food by bringing Mobile Farmers Markets directly to them. These farm stands operate as part of the City of Austin’s Fresh for Less Initiative. We offer produce grown on our farm, produce from other Texas farms and high-quality, shelf-stable food products, all at reduced prices.
- Over $54,000 sales since pilot program launched in Fall 2016 with over 6,000 customers
- More than 12% of total sales were with SNAP or SFC Double Dollars
- Beginning October 2018, will have 9 sites in Austin and Del Valle, including two new sites (North Communities YMCA and Hart Elementary School)

Get Involved!
Check out Farmshare’s events calendar. We have opportunities to get your hands dirty on the farm and or attend a weekend community class. Join us for the annual You Pick on December 15, 2018 where a small donation will get you as much pick-your-own produce as you can carry.

Connect with us!

Farmshare Austin • 3608 River Road • Cedar Creek, TX 78612 • farmshareaustin.org • info@farmshareaustin.org
Texas Hill Country Conservation Network (Network)

In 2017, a coalition of organizations and agencies came together to form the Texas Hill Country Conservation Network (the Network) to advance shared goals of conservation and sustainable growth in the Texas Hill Country. Working across a 17-county region of Central Texas, the Network aims to significantly scale the impact of conservation-focused organizations, universities, agencies, businesses, and individuals working to protect natural resources, rural heritage, and quality of life of this region. For more information, email ryan.spencer@txstate.edu.

Hill Country Alliance (HCA)

The Hill Country Alliance is a non-profit organization whose purpose is to raise public awareness and build community support around the need to preserve the natural resources and heritage of the Central Texas Hill Country. Since 2005, HCA has been leading the call for better growth that ensures flowing springs, clean rivers, starry night skies, and vibrant rural communities for future generations. We are always in search of passionate individuals interested in volunteering their time and energy to advance our mission. More information, including our Neighbor to Neighbor newsletter signup, can be found at www.hillcountryalliance.org.

Hill Country Conservancy

Hill Country Conservancy is a nonprofit land trust that works to:

- Protect large, strategic tracts of open space that conserve critical water features,
- Provide much-needed recreational access to nature via the Violet Crown Trail, and
- Promote a conservation ethic by cultivating awareness and transforming our community.

WE BELIEVE...

The region’s prosperity is inextricably linked to its natural landscape and quality of life. People – and companies – move here, and want to stay here, because it’s a wonderful, beautiful place to be; the future economic success of Central Texas and the Hill Country is tied to how well we balance our growth and the preservation of precious natural resources.

Get involved:

Join Wellspring: Become a ground source of funding by joining our monthly giving program.
Become a Violet Crown Trail member - Support the Violet Crown Trail project and bring us closer to completing the next section of trail by becoming a Violet Crown Trail Member.
Join EPIC - Emerging Professionals in Conservation (EPIC) is an outdoors club dedicated to exploring and preserving the natural beauty of the Texas Hill Country. By joining EPIC, you join a network of professionals who care about keeping Austin green, love having fun in nature, and are champions for conservation.
The Greater Edwards Aquifer Alliance (GEAA) builds statewide support for conservation and sustainable management of the Edwards and Trinity aquifers, springs and contributing watersheds, flora and fauna, and the quality of life, history, and culture of the Texas Hill Country. We have 52 member organizations, including religious congregations, civic groups, university clubs, homeowner and environmental organizations. Several of our member organizations were initiated by GEAA to address issues in their communities. Our member groups are scattered throughout the twenty-one county Edwards and Trinity aquifer region and are as diverse as the region that we represent. Each member group formally agrees to support GEAA's Edwards Aquifer Protection Plan and collaborates to set policy and prioritize issues.

GEAA educates the public, teachers, and students by providing resources, publishing educational materials and presenting lectures on the geology and hydrology of the Edwards and Trinity karst aquifers. GEAA has produced several reports and research studies related to water quality, including Watershed Stewardship for the Edwards Aquifer Region: A Low Impact Development Manual, and mapping ten years of sewage leak data into user friendly interactive maps. GEAA conferences, most recently Planning for Growth in Comal County, have engaged thousands of citizens and their elected officials in identifying problems and planning on how to preserve aspects most valued and beloved by their communities, foremost of which is the preservation of clean water and the watersheds that provide recharge to sustain springs and rivers. GEAA promotes sustainable development practices - engaging local government agencies by presenting the region’s first Low Impact Development (LID) Conference in 2009 to currently implementing a model LID retrofit project funded by the City of San Antonio’s Edwards Aquifer Protection Program and through our Community Rain Garden Program. The GEAA Technical Assistance Program relies on research on specific impacts to our Karst water supplies as the basis for proactive campaigns to address these impacts in specific locations and region wide. We strive to enhance public understanding of our unique karst landscape, commitment to individual actions to protect our water resources, and to engage citizens in advocating policy and practices to promote sustainable use of natural resources and rational development of the Hill Country region. If you would like to get active in the efforts to save the Edwards Aquifer, you can join GEAA as an individual member, propose your organization for membership, and sign up for GEAA Action Alerts.
WHAT IS PEAS?

Partners for Education Agriculture and Sustainability (PEAS) is dedicated to connecting communities to the natural world, delivering TEKS-aligned science lessons with a sub-focus on health and nutrition for classes throughout the school year. Join the 17 AISD schools already working with PEAS to provide outdoor education and garden-based learning opportunities while supporting social emotional learning and whole child education.

While registration is closed for 2018-19, mark your calendars to get on PEAS’ 2019-20 schedule starting in January 2019 by filling out the Registration Form and paying the $300 deposit ($150 for Title 1 schools) to secure your school's spot. Joining our list early increases the opportunity that we can help you seek supplemental funding.

Gardening and outdoor education provide an authentic work space for applied learning while engaging kids in hands-on self-directed opportunities to cultivate and refine skills in science, math, social studies, language arts, health, PE, and fine arts. Our programs promote healthy living, teach respect for the natural world, and complement social emotional learning. PEAS’ students engage with their school community and participate in creative learning opportunities in natural spaces.
Call for Ideas

The Center for Place-Based Initiatives has hosted two cycles of the Call for Ideas program, which asks Central Texans to submit ideas to improve health.

More than half of ideas came from individuals, not organizations. Most mentioned ZIP code: 78702 (East Austin)

Ideas serve cities and neighborhoods across five counties — though more than a dozen would impact all of Central Texas.

Ideators represent

- Environment
- Health & Wellness
- Nutrition & Gardening
- Community Coalitions
- Advocacy

Top Themes

- Mental Health
- Nutrition
- Physical Activity
- Clinical Care
- Parks & Trails
- Healthy Food Access
- Chronic Disease
- Patient Navigation & Care Coordination
- Gardening & Urban Farms
- Resource & Referral

208 Ideas from 192 ideators

49% Organizations
51% Individuals

WILLIAMSON COUNTY
11 SUBMISSIONS
TRAVIS COUNTY
176 SUBMISSIONS
HAYES COUNTY
16 SUBMISSIONS
BASTROP COUNTY
3 SUBMISSIONS
CALDWELL COUNTY
1 SUBMISSION
Call for Ideas

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