Gen:Thrive Proposal

SEPTEMBER 22, 2020

GRANT PURPOSE

This grant will drive the next phase of development for Gen:Thrive, a K–12 environmental education (EE) initiative that uses GIS mapping and data visualization to track EE programs alongside equity and climate challenges in order to identify gaps in services, partnership opportunities, and strategies for effectively serving our most vulnerable communities.

PROJECT OVERVIEW

Across the nation, thousands of organizations are offering EE programs for K–12 students; however, we lack a data-driven strategy for collective impact that would allow us to scale environmental literacy programs with a focus on equity and climate resilience. In January 2019, EcoRise launched a pilot project in Texas to address this challenge, starting with a statewide survey and landscape analysis of K–12 EE programs. This first phase activated enormous community engagement, producing a preliminary ArcGIS and network map, field trend analysis, and program directory. The process involved hundreds of organizations, and the resulting deliverables have continued to spark great enthusiasm, both locally and nationally. See Appendix 2 on page 9 for a partial list of those organizations.

In the spring of 2020, EcoRise renamed the initiative Gen:Thrive and expanded upon the effort to collect data and build networks among Texas EE service providers. The effort includes engaging a wide spectrum of organizations, municipal departments, and state agencies that serve K–12 students with programming related to environmental literacy, green building, outdoor learning, e-STEM, and environmental justice. With the completion of a comprehensive survey and map this November, our next goal will be to identify strategies to bring resources to communities that lack access to EE programming and that are most vulnerable to social and environmental risks.

Project Vision & Expansion

The long-term vision of Gen:Thrive is to offer community leaders a platform from which they can conduct a landscape analysis and track K–12 environmental education programs via customizable surveys, interactive maps, and data visualization and reporting tools so that they can answer the following questions:

- Where are environmental literacy programs happening and how many of our schools are engaged in teaching environmental sustainability?
- With a lens on equity, environmental justice, and climate risk, which communities could benefit from these programs the most?
- How can service providers be more strategic and collaborative in order to scale the reach of EE programs?
- How can we more effectively demonstrate the value and connection between environmental literacy programs and health, social justice, workforce development, and educational achievement?

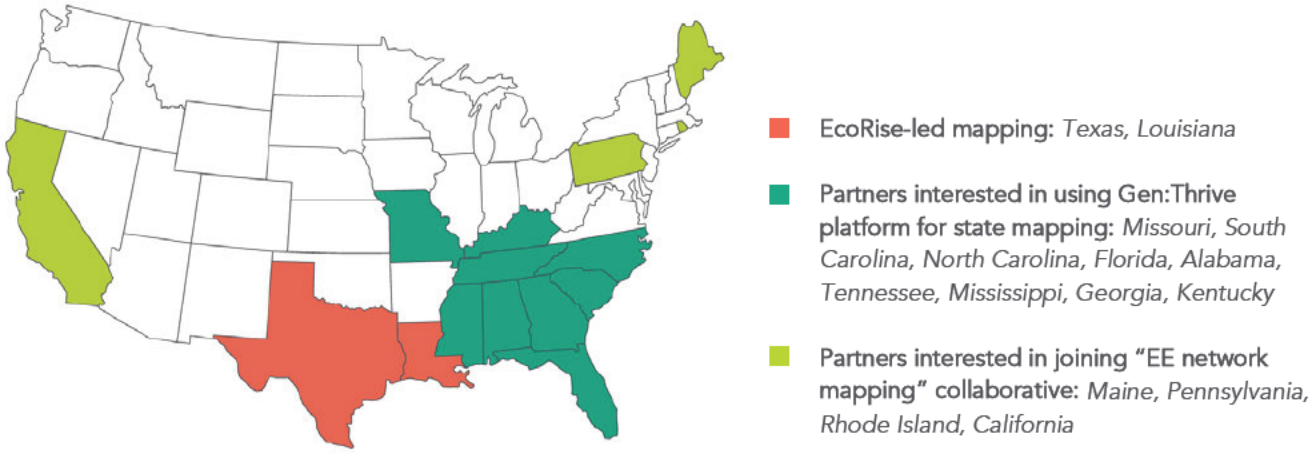
While this project has initially focused on Texas, the infrastructure and processes have been designed with the intent of replication in additional states. Earlier this year, EcoRise led a K–12 EE landscape analysis and mapping project in partnership with the Louisiana Department of Education. In early 2021, EcoRise plans to begin collaborating with partners to expand the Gen:Thrive platform to include Missouri and the Southeastern Environmental Education Alliance (Kentucky, Tennessee, Georgia, Mississippi, North Carolina, South Carolina, and Alabama).

Additionally, EcoRise will soon be convening state partners with teams in Maine, Rhode Island, and California who are engaged in similar efforts. The intent of these convenings is to share perspectives, strategies, and resources in our work related to network mapping, surveying, data analytics, community engagement, equity, and inclusion.

In addition to building the networks and technology needed to strengthen Gen:Thrive, EcoRise will also be ground-testing this tool for local action. Outside of the scope of this Pisces proposal, EcoRise will seek funding in 2021 for a school district pilot that will focus on thoroughly analyzing their EE programs and green school facilities that promote equity and climate resilience in the district. This tailored project will generate a robust district map and custom directory of EE resources as well as a final report with a needs assessment and roadmap to help the district equitably scale EE programs across the district.

Gen:Thrive & State Partnerships

The following map shows state mapping efforts and collaborations underway for 2021.



Project Assumptions

- EE service providers are generally not using a data-driven approach to inform their geographic growth or to identify strategic partnerships.
- These providers would engage with this data and are interested in forging strategic partnerships to scale impact if comprehensive public data and landscape analysis were available.
- The relationship between EE programs and equity (socio-economic and environmental risk) is critical for providers to understand and integrate into program strategies because environmental justice issues are pervasive, yet frequently overlooked.
- Data visualization and mapping are compelling tools for EE providers to reframe their perspective on their work, allowing them to see larger trends and more effectively advocate for public support and funding.
- Visualization and mapping tools hold value and application not only for EE program providers, but also for school districts, funders, and municipalities.

STAKEHOLDER VALUE		
STAKEHOLDER		**APPLICATION**
PRIMARY	EE PROGRAM PROVIDERS	• Better understand the programs and reach of other service providers; identify collaboration opportunities. • Use social-enviro data to inform programming adaptations and address accessibility and environmental justice. • Use data to illustrate areas of need and strengthen fundraising ability.
	SCHOOL DISTRICT LEADERSHIP	• Track which educational programs are active across the district. • Use social-enviro data to drive resources to highest-need schools. • Have a clear picture of what each program provider offers.
SECONDARY	TEACHERS	• Find educational programs and resources. • Explore what local environmental issues students could focus on.
	STUDENTS	• Use map to identify local enviro-issues to study and tackle. • Potentially collect and input new data to map, citizen-science style.
	FUNDERS	• Use map and data to inform areas of need and giving strategy. • Track footprint of current and potential grantees. • Use directory to better understand unique strengths of each program.
ANCILLARY	MUNICIPALITIES/ POLICYMAKERS	• Use map and data to inform areas of need and policy strategy. • Track progress to goal.

PROJECT GOALS

Overarching goals of the Gen:Thrive Project include:

- Conduct a systems diagnosis to identify conditions and leverage points in the EE movement, including insights and patterns related to geography, equity, and environmental vulnerability.
- Develop replicable processes and technologies to map environmental literacy programs, spurring broader participation and investment in local as well as national mapping initiatives.
- Identify opportunities to collaborate, share resources, and bundle products and services among K–12 EE providers.
- Use data visualization tools to improve communication strategies and appeal to broader audiences.

PROJECT ACTIVITIES, OUTPUTS, AND OUTCOMES

EcoRise is asking the Pisces Foundation to consider a second year of funding to support the three focus areas outlined below: 1) Building a Shared Technology Platform, 2) Strengthening Partnerships, and 3) Integrating within Schools. Pisces funding would be allocated to support the first two focus areas.

2021 GEN:THRIVE PROJECT DETAILS	
FOCUS AREA #1: Building a Shared Technology Platform **LONG-TERM GOAL:** Use data collection and reporting tools to track K–12 EE programs, identify equity and climate-resilience priorities, uncover opportunities for collaboration, and present a compelling need.	
Objectives	Continue advancing a landscape analysis project in Texas while collaborating with partners to share the technology and replicate the process in other states.

Activities	– Continue data collection and updates in Texas. – Collaborate with partners to collect and analyze data from other states, as well as build a database, dashboards, and reporting tools that accommodate their needs. – Build out maps for state partners that identify schools and climate, health, environmental, and demographic data layers. – Work with Planet Texas 2050 teams from UT Austin to explore future forecasting tools. – Work with data scientists to develop a coding system that effectively indicates level of school need.
Outputs	– Map that includes local data sets based on unique community profiles across Texas – Shared platform that is accessible to state partners – Expanded map and data sets for additional states – K–12 EE data analysis and directories for additional states – Preliminary "forecasting" function for Texas communities – Tool that identifies high-need schools and/or regions
Success Indicators	– Texas EE providers are widely represented in project. – Local and state-level stakeholders find the map and data to be valuable. – Gen:Thrive tools are adapted and used by national partners.
FOCUS AREA #2: Strengthening Partnerships **LONG-TERM GOAL:** Build a shared vision and alliances among K–12 EE program providers and government, school district, and business partners.	
Objectives	Identify opportunities to build capacity, collaborate, share resources, and expand programs among K–12 EE providers with the input and support of cross-sector partners.
Activities	– Identify and engage a 2021 Leadership Council across 6–7 regions in Texas. – Host regional convenings with EE providers in Texas. – Build city and state partnerships in Texas (e.g., with city sustainability offices). – Convene "EE network mapping" team to share work across different states. – Engage with national partners (EPA, nonprofits, associations).
Outputs	– Quarterly meetings with Leadership Council – At least 6 regional convenings held in Texas – Quarterly meetings with EE network-mapping team members across U.S.
Success Indicators	– Gen:Thrive reports, tools, and maps are utilized by local school districts and organizations at the municipal and regional level. – Network mapping team finds value in sharing strategies across states. – The Gen:Thrive initiative spurs new data-driven collaborations at the local, state, and national level.
FOCUS AREA #3: Integrating within Schools **LONG-TERM GOAL:** Use Gen:Thrive mapping to provide schools with resources and information to advance sustainability education and environmental justice at the classroom, campus, and district-level.	
Objectives	Develop and pilot new applications of Gen:Thrive with schools.
Activities	– Partner with school district to build a process and dashboard for mapping and reporting on EE with lens on equity, health, outdoor learning, and climate risks. – Develop lesson plans and activities that engage students in the Gen:Thrive map.
Outputs	– Comprehensive lesson plans for middle and high school level – Protype for school district reports
Success Indicators	– Utilization of lesson plans with positive teacher feedback – Adoption of school district reporting system that informs strategic planning

PROJECT TIMEFRAME	
2021	Key Activities
SPRING: Jan–May	**Technology Platform** – Build and refine survey, database, dashboards, and reporting tools that accommodate the needs of partners within Texas and in other states. – Build out local and state data sets for Texas map. – Work with state partners to add schools and climate, health, environmental, and demographic data layers to their maps. – Collaborate with state partners to collect and analyze EE program data. – Work with Planet Texas 2050 teams from UT Austin to explore future forecasting tools. – Work with data scientists to develop coding system that effectively indicates level of school need. **Strengthening Partnerships** – Identify formal Texas Leadership Council and convene bi-monthly. – Determine goals and roll out regional EE Partner Summits in Texas. – Organize and conduct 3–5 regional Partner Summits in Texas with engagement of 10–20 organizations per region. – Build city and state partnerships in Texas (e.g., with city sustainability offices). – Convene "learning community" among states conducting EE network mapping. – Explore engagement with national partners (EPA, nonprofits, associations). **School Integration** – Secure funding and district partner. – Scope project and prepare summer/fall launch. – Identify student learning opportunities and engagement related to Gen:Thrive map.
SUMMER: June–Aug.	**Technology Platform** – Improve and expand upon dashboards, map, and reporting tools for state partners. – Continue integration of new service provider data into map and reports. – Build out future forecasting reports with Planet Texas 2050. **Strengthening Partnerships** – Organize additional Texas Partner Summits with engagement of 10–20 providers per region. – Convene "professional learning community" among states conducting EE network mapping. **School Integration** – Prepare summer/fall launch with school district partner. – Build lesson plans and engagement strategies for GIS map and teachers/students.
FALL: Sept.–Dec.	**Technology Platform** – Conduct round of data collection and updates for Texas EE service providers. – Synthesize findings and share end-of-year report. – Refine mapping, reports, and usability for state partners. **Strengthening Partnerships** – Determine fall activities and outputs in Texas via regional Partner Summits. – Determine 2022 goals and work plan via Texas Leadership Council. – Convene "professional learning community" among states conducting EE network mapping. – Identify additional state partners and opportunities for impact in 2022. **School Integration** – Launch district pilot and gather data on school buildings, EE providers, and community data layers (e.g., equity, climate, health). – Develop district dashboard and tracking tool. – Pilot educational materials to engage classrooms with Gen:Thrive map

PROJECT ANALYSIS

Key Success Factors

Looking at the goals and intended activities for 2021, it will be essential for EcoRise to ensure our technology is working well for various audiences across Texas and in other states. As we further develop the Gen:Thrive platform and tools, securing the resources, bandwidth, and expertise needed to make our platform adaptive and customizable is essential so that we can respond to our expanding community and troubleshoot issues as they arise. Because our partners depend on our ability to provide reliable technology tools and nonbiased services, strong relationships built on comradery, trust, and transparency are essential. While the work we have conducted on this project so far has resulted in enormous support and buy-in for Gen:Thrive, it is critical that we continue fostering these relationships and maintaining a posture of listening as we seek to build solutions that are of true service to our common goals. By articulating our shared vision and values and being honest about our intentions, capacity, and commitment, we can create lasting, effective partnerships.

Main Challenges and Risks

Gen:Thrive is dependent on engagement and information sharing among hundreds (and soon thousands) of organizations. With this territory come expected challenges related to participant engagement and data accuracy. While we have had relatively high engagement levels in the project to date, maintaining this engagement has required enormous persistence, patience, and follow-though. In Texas, EcoRise identified and compensated regional leaders to organize and conduct outreach to their local EE service providers. The efforts of these leaders, which included hosting information and strategy sessions with local stakeholder groups, greatly bolstered participation levels. As we expand Gen:Thrive to additional states, local EE networks will lead all outreach and data collection efforts and EcoRise will exclusively support the technology platform (survey, database, user profiles, reporting tools, field analysis, etc.). Through the professional learning community, additional sharing of strategies and approaches will be cross-pollinated among EcoRise and leaders in other states.

Beyond the relational and technology challenges inherent to conducting massive community surveys, the unique challenge we face this year is the "wild card factor" of the COVID-19 pandemic. Our School Integration goals are particularly vulnerable to this risk. While we would like to organize a school district pilot next summer and build a hyper-local map, landscape analysis, and strategic report for our district partner, these activities are contingent on the stability and bandwidth of schools. For this reason, we will not be actively pursuing this initiative until we have more information in the spring.

Relatedly, survey outreach and participation of K–12 EE providers were challenged this year as the pandemic brought dramatic changes to the field. With reduced staff and budgets and program delivery reinventions, some providers refrained from participating due to lack of clarity on the future of their work. In response to this reality, we modified our survey to ask "which schools have access to your programs" rather than requesting a list of schools actively engaged in their programs. We may need to make additional modifications if conditions persist.

ABOUT ECORISE

Mission

EcoRise is a nonprofit social enterprise whose mission is to mobilize a new generation of leaders to design a sustainable future for all. We offer school-based programs that empowers students to tackle real-world challenges in their communities by teaching sustainability, design, and social innovation.

School Programming

EcoRise partners with a wide variety of K–12 schools throughout the country and prioritizes serving youth in historically underrepresented communities in both urban and rural regions. We work directly with K–12 educators to integrate our professionally published, bilingual, and standards-aligned programs directly into their existing courses and programs. Over the past six years, EcoRise has evolved from a local direct-service provider into a nationally recognized leader in sustainability education, serving over 1,800 schools; 4,500 educators; and 256,000 students in 49 U.S. states and in 49 other countries today. We provide schools with curriculum, teacher training and support, access to our online learning management system, and student project microgrants. Curricula include Sustainable Intelligence, Design Studio, Biomimicry and Science: Applying Nature's Strategies, Green Building Lessons for a Sustainable Future, and The Business of Social Good. We have also created lesson packages teachers can use to introduce their students to electric vehicles, water footprints, their green school as a teaching tool, and environmental justice. With our student microgrant program, students can identify ways to improve the environmental efficiency of their school campus and then apply for a microgrant to implement practical solutions that lead to an identified environmental benefit, such as a certain number of pounds of waste diverted from the local landfill or kilowatt hours of electricity saved.

The EcoRise Ambassador Program develops, empowers, and recognizes educators as community leaders and local champions of environmental education programming. The exemplary teachers in this program hone personal leadership, presentation, and outreach skills that will help them become more effective EE practitioners and advocates. Ambassadors receive a stipend and ongoing support from EcoRise staff to help them champion EE in their communities. We also provide a Problem-Based Learning (PBL) Academy for school districts that empowers administrators, bolsters internal support networks, and provides instructors with professional development and planning tools that allow them to design effective PBL experiences for their students. In addition, we have formed many rewarding partnerships over the years to develop innovative curricula and programs, to expand into new regions, and to provide students with valuable real-world experiences.

ORGANIZATIONAL EXPERIENCE AND COMPETENCY

Gen:Thrive's progress to date is a strong indicator of the project's continued promise as EcoRise has demonstrated an ability to work strategically, mobilize community engagement, and accomplish prior stated goals, objectives, and vision. In addition, the following are examples of key experiences that have helped us develop competencies for this project:

Surveying & Systems Analysis: EcoRise led a project on behalf of the Department of Environmental Education (DOEE) in Washington, DC, to identify all of the environmental education (EE) providers in the area; create an annotated directory of those providers; and summarize the strengths, challenges, and opportunities for improving the DOEE's K–12 programs with alignment to district standards.

Strategic Collaborations: One of our earliest formative collaborations was between EcoRise, the U.S. Green Building Council (USGBC) in DC, and Instituto Thomas Jefferson (ITJ) in Mexico City. We developed our core, K–12 bilingual program, Sustainable Intelligence (SI), in close partnership with ITJ educators. This partnership brought a global perspective to our work, allowed us to gain insights from exemplary educators, provided a testing ground for lessons, and allowed for the rapid translation of our materials into Spanish. While creating SI, we also helped inform the development of a global online learning platform USGBC was creating for K–12 schools. This platform, called Learning Lab, provides best-in-class lessons and resources that encourage sustainability literacy, and real-world action. SI was the first curriculum added to the platform and we helped inspire and recruit other partners. As a USGBC education partner, LEED-credentialed experts at the USGBC also reviewed our Green Building Lessons for a Sustainable Future curriculum to ensure the validity and accuracy of that course.

Advancing Equity + EE: EcoRise has forged partnerships with school districts, municipal offices, green building professionals and USGBC chapters, and the University of Texas School of Architecture to support an initiative that builds a high school, college, and career pathways that are designed to help drive diversity and inclusion within the field of sustainable design. The program combines our Green Building curriculum, LEED Prep credentialing program, paid internships for underrepresented students, UT School of Architecture mentors, and green career projects. After several years of piloting different phases of the program in different locations, we are now offering the entire program across the nation.

PROJECT CONTEXT

The Texas Gen:Thrive Project is currently in our second phase of development. We made rapid progress in Phase 1 conducting a landscape analysis of environmental education organizations in Texas and mapping alongside equity and climate data. The project attracted the interest of the Louisiana Department of Education, which hired us to replicate the EE survey and GIS map across Louisiana earlier this year. Additionally, the initiative has led to collaboration conversations with organizations and institutions across Texas and the United States who wish to expand upon the survey and mapping tool in a variety of ways. Highlights of the Gen:Thrive Project to date include:

- Over 200 service providers participated in surveys and data collection that capture information about environmental education programs.
- Built interactive ArcGIS maps of Texas and Louisiana that include locations of schools, EE programs, and equity and environmental data sets.
- Secured nearly $250,000 in philanthropic investment and earned income.
- Organized visioning session with 30 leaders from across the field at the Green School Conference in Portland, Oregon, last February.
- Conducted community outreach and regional strategy sessions across Texas with the help of Gen:Thrive collaborators.
- Garnered technical support from experts at UT Austin's Planet Texas, Tableau, ArcGIS, and Kumu.

PROJECT FUNDING

Investment from the Pisces Foundation would provide the essential funding needed to realize the third phase of activities for this project. While our 2020 funders have been very supported of Gen:Thrive, some have indicated a change in funding priorities and are allocating grant funds for COVID-19 health-focused efforts this upcoming year. For this reason, Pisces funding is critical to the continued progress of this initiative. Below you will find a list of funders, giving history, and prospective support.

FINANCIAL SUPPORT FOR GEN:THRIVE PROJECT

Phase One: 2019	Phase Two: 2020	Phase Three: 2021
Secured Cash • [redacted] $15K • Anonymous: $15K • Individual donor: $5K Secured In-Kind • [redacted] Donated licenses • [redacted] 20 hrs. pro-bono support	Secured Cash • Pisces Foundation: $50K • [redacted] $50K • [redacted] $15K • [redacted] $50K • [redacted] $49,950 Secured In-Kind • [redacted] technology support • [redacted] licenses	Pending and Prospective Grant Support • Pisces Foundation: $100K • [redacted] $20K • [redacted] $10–$20K • [redacted] $33K • [redacted] $40K • [redacted] TBD • [redacted] TBD Secured In-Kind • [redacted] technology support • [redacted] licenses

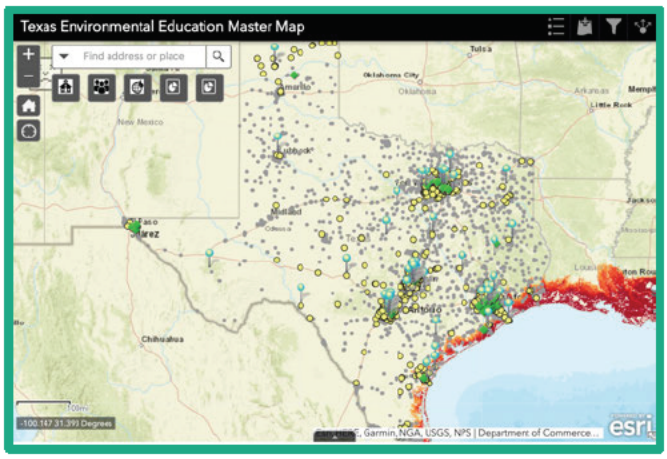
APPENDIX ONE: PROJECT COLLABORATORS

Key partners for Gen:Thrive include the following:

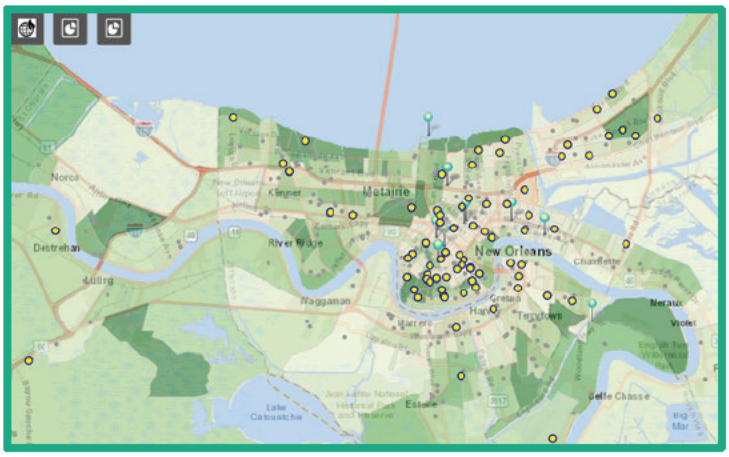
PROJECT COLLABORATORS		
PARTNERS	**REGION**	**ORGANIZATIONS**
Texas Outreach & Leadership	Austin	• City of Austin, Cities Connecting Children to Nature • Austin ISD, Environmental Stewardship Advisory Committee • City of Austin, Office of Sustainability • Austin Eco-Network
	Dallas/Fort Worth	• Dallas Arboretum • Metropolitan Area Science Supervisors • EarthX • City of Dallas, Office of Sustainability
	Houston	• CEC: Citizen's Environmental Coalition • Nature Conservancy • City of Houston, Mayor's Office of Education
	South Texas	• South Texas partners Include the following cities: Rio Grande Valley, Corpus Christi & Laredo • City of Edinburg, Edinburg Scenic Wetlands & Birding Center • Gulf of Mexico Alliance
	El Paso	• Insights El Paso • University of Texas El Paso (UTEP) • City of El Paso, Office of Sustainability & Resilience
	San Antonio	• William R. Sinkin Eco Centro, San Antonio College
	Statewide	• University of Texas: Planet Texas 2050, Texas Advanced Computing Center • U.S. Green Building Council (USGBC) • Texas Association for Environmental Education (TAEE) • Texas by Nature • Texas Children in Nature (TCiN) • Informal Science Educators Association (ISEA) • Keep Texas Beautiful • Texas A&M Forest Service • Texas Parks & Wildlife Department
State Collaborators	Louisiana	• Louisiana Department of Education, STEM Team • Louisiana Environmental Education Commission (LEEC)
	Missouri	• U.S. Green Building Council Missouri Chapter • Missouri Environmental Education Association (MEEA)
	Southeastern United States	• Southeastern Environmental Education Alliance (SEEA) • SEEA States include Kentucky, Alabama, Florida, Georgia, Tennessee, North Carolina, South Carolina, Mississippi
	Maine	• Maine Environmental Education Alliance (MEEA) • Maine Mathematics and Science Alliance (MMSA)
	Rhode Island	• Rhode Island Environmental Education Alliance (RIEEA)
	Pennsylvania	• Women for a Healthy Environment (WHE)
	California	• TreePeople • Ten Strands • California Environmental Literacy Initiative (CAELI)

APPENDIX TWO: EXAMPLES OF MAP & FIELDS TRENDS

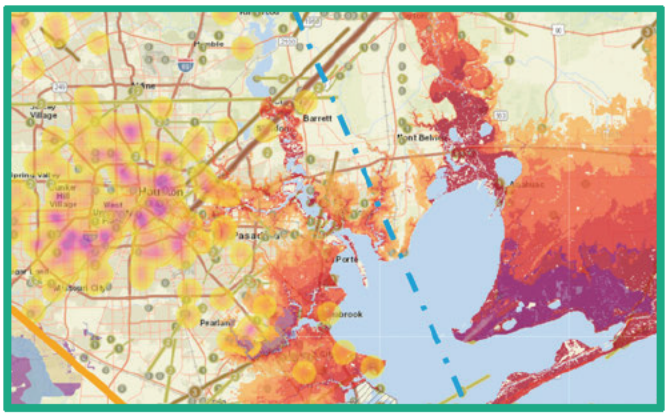
The following are several examples from the data visualization tools ArcGIS and Kumu that the Gen:Thrive project uses to analyze the landscape of environmental education in Texas and Lousiana.



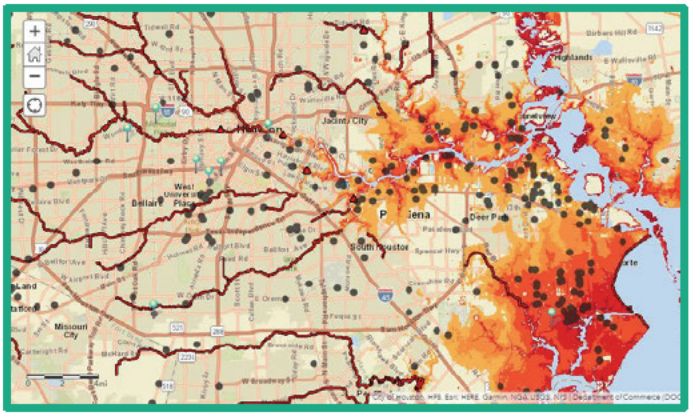
This Texas map shows schools, EE programs, service provider headquarters, LEED-certified school buildings, and flood-risk areas along the Gulf Coast.



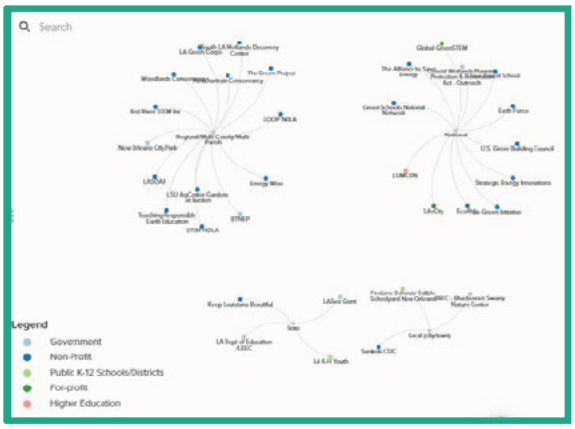
This New Orleans map illustrates the location of schools, EE programs, service provider headquarters, and median household income (light and dark green shaded areas).



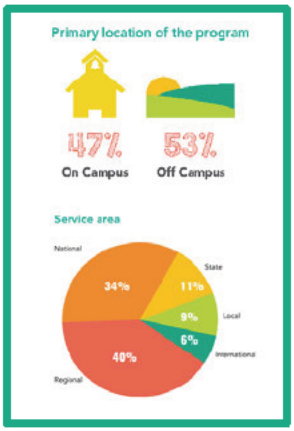
This Houston map illustrates schools, EE programs, and climate risk data such as storm surge, coastal flood exposure, and the historical record of all hurricane and tornado tracks.

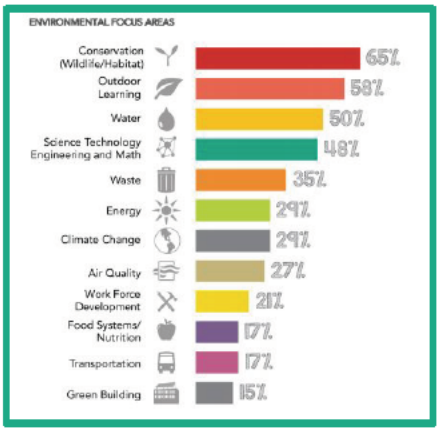


Looking at environmental pollutants, this Houston map shows where schools are located in relation to hazardous waste sites and polluted waterways.



Kumu is a network mapping tool that illustrates relationships between entities. This map shows EE providers in Louisiana connected by service area and color-coded by sector.





Both of these charts are examples of field-trend analyses in Louisiana, illustrating environmental focus areas, location of programs, and service area of providers.