



THE MEADOWS CENTER FOR WATER AND THE ENVIRONMENT

# STRATEGIC PLAN 2017 - 2023



THE MEADOWS CENTER  
FOR WATER AND THE ENVIRONMENT

TEXAS STATE UNIVERSITY

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# WHY WE'RE HERE

## Mission

*Inspiring research, innovation, and leadership that ensures clean, abundant water for the environment and all humanity.*

## Vision

*A world where all people understand and embrace the value of water and environmental stewardship.*

## Philosophy

*To provide a unique platform and living laboratory at Texas State University that supports research, education, stewardship, and leadership for the benefit of Texas and the broader world.*



# GOALS AND INITIATIVES (2017-2023)

The Meadows Center for Water and the Environment (Meadows Center) fulfills its mission by integrating activities across four pillars of action in powerful ways. The four pillars include Research, Education, Stewardship, and Leadership, and they are described in Attachment 1.

The Meadows Center has identified five priority goals and key activities for the coming Texas State University strategic planning cycle (2017-2023). These goals are intended to bring strategic focus and attention to key areas that the Meadows Center believes are vital to ensure that the Meadows Center fulfills its mission and support the broader mission and goals of Texas State University. These goals and key activities include:

## **Goal 1: Strengthen The Meadows Center's research program and the infrastructure platform that supports Texas State's research community.**

Over the next six years, the Meadows Center will strive to play an important role in supporting Texas State University's progress in advancing nationally-recognized academic research (see Goal 3 of Texas State University's 2017-2023 University Plan). The Meadows Center will accomplish this by (1) further developing the Meadows Center's core research initiatives, and (2) improving the Meadows Center's ability to provide world-class infrastructure and resources that support the broader research community at Texas State University and beyond.

First, the Meadows Center will build on its current strengths by further developing core research initiatives in the following areas:

**Environmental Flows.** The Meadows Center supports a world-class research initiative focused on researching environmental and ecosystem needs for freshwater flows in river systems and the efficacy of strategies for ensuring freshwater flows that meet diverse environmental and human needs. The Meadows Center is also working with partners to develop and assess innovative, policy and market-based solutions for ensuring adequate environmental flows in river systems.

**Watershed Research for Planning and Management.** The Meadows Center conducts field and desktop research to provide recommendations, advice and technical assistance to local government institutions and communities across Texas related to planning and management of watersheds for people and the environment. The Meadows Center also conducts research worldwide on effective practices and policies that can support successful watershed planning and management.

**Interpretive and Experiential STEM Education.** With more than 33,000 K-12 students participating in interpretive and experiential learning programs at Spring Lake each year and hundreds more people participating in citizen-science "Stream Team" activities across Texas, the Meadows Center provides a living laboratory for researching the efficacy and impact of experiential educational programs and techniques.

**Water Conservation.** The Meadows Center is investigating municipal, regional, and statewide water conservation strategies and technologies to discover efficiencies and potential new approaches that support water stewardship and watershed management practices.

While the Meadows Center has developed robust research competencies and initiatives in the areas outlined above, there are important steps that the Meadows Center plans to take to strengthen these research initiatives in ways that are recognized by national research standards and that contribute to Texas State University's research goals. Key activities related to the effort to strengthen the Center's research initiatives are anticipated to include:

GOAL 1

**1.1** Organize the research activities directly supported by the Meadows Center under the research initiatives outlined above to help communicate the Meadows Center’s research focus and competencies. Maintain the research section of the Meadows Center website to include current descriptions of research activities and studies under these research initiatives.

**1.2** Work to ensure that the numerous research studies conducted by the Center, including research supported by government and foundation grants and contracts, result in research products that are submitted to peer-reviewed academic journals and other academically-recognized publications.

**1.3** Create an Office of Educational Research and Programs within the Meadows Center. Change the Director of Educational Programs position at the Meadows Center to be the Director of Educational Research and Programs. Fill the anticipated vacancy for this position with a candidate with a Ph.D. and experiential research expertise who can help direct educational research activities at the Center and who can build connections with the educational research community (including the College of Education, Department of Campus Recreation, and the National Center for Research in Geography Education).

**1.4** Fill the Meadows Endowed Chair for Water Policy position. The new hire for this position, supported by the Meadows Foundation endowment, would conduct and facilitate policy-relevant research in the research initiative areas identified above. This Chair would also play a key role in working with other units and faculty across Texas State University to identify and develop collaborative research opportunities and ways in which the Meadows Center can support the broader research community on campus. This Chair would also play an important role in maintaining relationships with key government and non-governmental institutions in Texas and nationally to enhance the ability of researchers at Texas State University and the Meadows Center to conduct research that is relevant to pressing policy and programmatic needs.

**1.5** Raise funds for and fill a new Endowed Chair or Professor for Water and Natural Resource Economics.

**1.6** Actively pursue government and other grants to support and expand research.

**1.7** Track and report data on research grants and expenditures associated with the Meadows Center’s research initiatives to the Texas State University Administration, including the Associate Vice President for Research and Federal Relations.

The Meadows Center will explore research opportunities in partnership the broader Texas State University academic community. Key activities related to the effort to explore new research partnerships are anticipated to include:

**1.1** Work in partnership with the Departments of Geography and Biology to expand collaborative research opportunities with faculty and students.

**1.2** Work in partnership with Texas State University’s Translational Health Initiative and health researchers to explore collaborative research and educational opportunities.

**1.3** Explore collaborative research opportunities with faculty and students in the College of Education, leveraging the interpretive and experiential education programs run by the Meadows Center.

In addition to the research conducted directly by endowed chairs and professors, faculty-affiliates, and staff at the Meadows Center, the Meadows Center seeks to expand and strengthen its support to the broader

research community at Texas State University and other academic institutions by providing researchers with access to a world-class platform for research—including access to programs, infrastructure, and resources. For example, the Meadows Center’s on-site and Stream Team educational and citizen-science programs provide a living laboratory for researchers to study and test effective techniques relevant to STEM and experiential education. The Meadows Center’s Watershed Planning Assistance Program, which provides technical assistance to communities for watershed planning, generates a rich body of data, information, and best practices on community watershed planning and management that is available to researchers focused on integrated watershed planning and management. The Meadows Center is also committed to making its research databases, facilities, and Spring Lake access accessible to researchers. Finally, the Meadows Center plans to play a more active role in fostering and supporting multi-disciplinary research opportunities among the Texas State University research community. Key activities related to the Meadows Center that support the broader Texas State University research community are anticipated to include:

**1.1** Create a centralized library of data sets maintained by the Meadows Center that are available to researchers.

**1.2** Continue to improve data collection and management activities associated with the San Marcos Observing System (SMOS), which collects monitoring data related to the natural systems in and around Spring Lake. Take steps to ensure that researchers at Texas State University and peer institutions are aware of the availability of SMOS monitoring data for research.

**1.3** Convene periodic meetings for faculty and graduate students interested in water resources and ecosystems to discuss collaborative research opportunities, as well as ideas for how the Meadows Center can support faculty and student research.

**1.4** Establish and host a seminar series on water and the environment to provide opportunities for faculty and students to present their research.

**1.5** Conduct regular “roadshow” meetings with key Colleges, Departments, and Centers across campus to highlight the research and educational resources and opportunities that can be supported by the Meadows Center. Use these sessions to get feedback on additional steps and activities that the Meadows Center can take to support research and education across campus.

**1.6** Use the Meadows Center website to highlight, profile and list research studies and publications relevant to water resources that are produced by faculty and students across campus.

**1.7** Continue to develop the Meadows Center book series as a platform for respected scholarly research and outreach on topics relevant to river systems and conservation leadership.

**1.8** Engage key governmental and non-governmental partners to help ensure that the Meadows Center is well-connected to important water policy and resource management institutions and processes in Texas and beyond to ensure that Texas State University research and expertise are connected where they can be meaningful and relevant.

**1.9** Explore opportunities and encourage principal investigators to staff Meadows Center research projects with graduate student researchers as an alternative to hiring paid staff.

# GOAL 1

## Goal 2: Implement the next phase of restoration, stewardship, and enhancement projects at Spring Lake, including development of a new Interpretive Research Center.

In July 2016, Texas State University approved the recommendations outlined in a January 2016 Feasibility Study<sup>1</sup> for a new phase of projects to continue the protection and management of the unique environmental and cultural resources at Spring Lake. These proposed projects include the construction of an Interpretive Research Center facility, which is included in the current draft of the 2017-2027 Campus Master Plan.<sup>2</sup> The recommendations also included provisions to enhance opportunities at the site for experiential education, applied research, and recreation, while improving connectivity to campus and the community. Over the next six years, the Meadows Center will work with the University to implement these projects and to pursue related activities to protect and enhance the long-term legacy of Spring Lake as an asset for the Meadows Center, Texas State University, the community and the public. Key activities related to this goal are anticipated to include:

- 2.1** Support the design and construction of a new Interpretive Research Center facility at the Spring Lake site. The Interpretive Research Center will provide the physical infrastructure to support world-class research on experiential education as well as on the aquatic, biological, and ecosystem aspects of the unique Spring Lake site. The new facility will also provide a state-of-the-art meeting and event space located in a compelling natural setting for use by the Texas State University community. The Meadows Center will work with the University to secure funding for the construction of the Interpretive Research Center facility and other site enhancements.
- 2.2** Design and construct a new dive facility to support underwater research in Spring Lake.
- 2.3** Install storage and waiting canopies to protect the fleet of glass-bottom boats.
- 2.4** Remove the remaining amusement park infrastructure, the peninsula bus turnaround, and the existing ticket kiosk and restrooms to support site restoration.
- 2.5** Improve parking facilities to accommodate visitors while protecting water quality in Spring Lake.
- 2.6** Restore and improve the outdoor areas and hillside trails around Spring Lake.
- 2.7** Improve pedestrian and transit accessibility to the site to enhance connectivity to campus and the university community, enhancing site access for students and faculty.
- 2.8** Encourage and support conservation and stewardship activities on upland properties that affect the water quality and ecological integrity of Spring Lake.
- 2.9** Continue to draw attention to the historical and global significance of Spring Lake.

<sup>1</sup> The Feasibility Study was commissioned by Texas State University with grant funding from the Hoblitzelle Foundation. Broadus Planning was engaged to conduct the Feasibility Study.

<sup>2</sup> See page 17 of the 2017-2027 Campus Master Plan (October 2016 Draft) at <http://masterplan.fss.txstate.edu/>.

### **Goal 3: Strengthen and expand the Meadows Center’s work on conservation leadership to address the grand challenges facing water resource stewardship in Texas and beyond in the coming decades.**

The Meadows Center is uniquely positioned to catalyze thoughtful dialogue and informed solutions to the grand challenges at the nexus of water, environment, and people in Texas and the broader world. The Meadows Center is widely respected by government, industry and civil society actors across Texas, the U.S., and abroad, and is capable of elevating Texas State’s “commitment to service and leadership for the public good” in visible ways. Rapid population growth, land development, climate change and other factors will intensify stresses on water and the environment over the next 50 years. The Meadows Center—through convenings, book series, research initiatives, and strategic communications of research on effective practices—will work to both lead and cultivate broader leadership on conservation. The Meadows Center will draw on its strong track record of conducting research that is relevant to important conservation decisions and policies, as well as its reputation as a respected convener. In pursuing this goal, the Meadows Center can both enhance the relevance and impact of research conducted at Texas State and foster educational opportunities for students to support and participate in these conservation leadership activities. Key activities related to this goal are anticipated to include:

**3.1** Explore collaborative research, education, and student employment opportunities with the Department of Political Science and the School of Journalism and Mass Communication related to the Meadows Center’s initiatives to foster communications on conservation leadership.

**3.2** Continue to support and build on the Water Grand Challenges initiative to create credible forums to raise, explore and advance key policy issues relevant to the long-term success of managing water resources in Texas.

**3.3** Expand work to support and research innovative approaches to enhancing environmental flows and integrated “headwaters to tidewaters” initiatives that combine land and water conservation along key river basins in Texas, working with philanthropic, NGO and government partners.

**3.4** Play a leadership role in building the capacity and coordination of diverse partners working to protect watersheds and water resources in Central Texas and the iconic Hill Country.

**3.5** Build a stronger network of experts, both within and external to Texas State University, who are connected with the Meadows Center and are active in coordinated conservation leadership activities. For example, the creation of an Advisory Council for the Meadows Center can help engage and coordinate experts from across Texas and the U.S. to both support the Meadows Center’s ability to fulfill its mission and efforts to amplify the voices of conservation leaders.

**3.6** Identify and support additional targeted opportunities to advance conservation leadership in Texas and the U.S.

**3.7** Continue to develop the conservation leadership book series and secure sustained funding for the river book series. Develop a new book series on private land conservation.

**3.8** Work with the Texas Tribune and other media partners to help disseminate research and information on water and the environment topics.

**3.9** Provide strategic advice to key organizations working to advance regional and state-wide collaboration on conservation.

# GOAL 3

## **Goal 4: Contribute to the learning and enrichment of Texas State University students.**

Over the past decade, the Meadows Center has become an important part of the overall student experience at Texas State University. Most Texas State students experience the majesty of Spring Lake on a boat tours during campus tours and student orientation. Some students interface with the Meadows Center and Spring Lake as they conduct research or participate in outdoor classroom sessions. More than 60 students each academic year gain valuable skills through work-study positions at the Meadows Center, including as interpretive boat tour leaders, interns, and research assistants. Over the next six years, the Meadows Center is committed to taking additional steps to enhance the experience and success of students at Texas State University. Key activities related to this goal are anticipated to include:

**4.1** Work with Texas State University colleges, departments, and faculty to identify opportunities for faculty to utilize the Spring Lake site, the planned Interpretive Research Center, and other Meadows Center facilities in ways that provide learning spaces and environments that foster creativity, enable collaboration, and encourage discovery among students. This initiative could be supported through the “roadshow” meetings envisioned under 1.10 above and would support initiative 2.4 in the Texas State University 2017-2023 Plan.

**4.2** Work with departments and faculty across campus to make them aware of research and work- study opportunities available through the Meadows Center. (see 1.11 above)

**4.3** Work with the University to inform students on enhanced pedestrian and transit accessibility to the Spring Lake site once the projects are completed. (see 2.7 above)

**4.4** Expand career training and mentorship support associated with Meadows Center student positions (including both paid and work-study positions).

**4.5** Work to facilitate expanded access to student internship opportunities at institutions in Texas, such as the Texas Commission on Environmental Quality and the Texas Parks and Wildlife Department, with which the Meadows Center maintains relationships.

**4.6** Work to help cultivate a stewardship ethic among Texas State University students, including steps to ensure responsible and safe recreation around Spring Lake and on rivers in San Marcos.

# GOAL 4

## **Goal 5: Strengthen and broaden the leadership and management capacity at the Meadows Center to ensure its long-term success.**

The Meadows Center has developed many successful programs and initiatives over the past decade, ranging from diverse educational programs at the Spring Lake site to research and citizen science initiatives across Texas and beyond. The Meadows Center recognizes the importance of making continual improvements to the processes and systems that manage and support these diverse programs. The Meadows Center leadership sees opportunities to further strengthen and improve these internal systems over the next few years. At the same time, the Meadows Center also recognizes the importance of cultivating leadership capacity more broadly within the Meadows Center to ensure that the long-term success of the Center is not beholden to a single individual. Key activities related to this goal are anticipated to include:

- 5.1** Continue to clarify and strengthen internal roles, responsibilities, processes, and systems to improve efficiencies, empower staff, and broaden management and leadership within the Center.
- 5.2** Consider the formation of an Advisory Council for the Meadows Center to help advise the Center on strategic direction and to ensure that the Center is supporting high-quality and relevant research.

# KEY ENABLING ACTIVITIES

To support these goals and the success of the broader programs and activities across the four pillars, the Meadows Center is committed to pursuing the following important enabling activities.

## **Enabling Activity 1: Sustainable Support for Administration and Operations**

Over the coming six years, the Meadows Center is interested to improve the consistency and sustainability of operational and administrative funding to support important Meadows Center programs and functions. Over the past several years, the Meadows Center has made significant progress in covering the operational costs of core programs—including the K-12 education program, the public boat tours and interpretive center, Operation SCUBA, the Stream Team, and the watershed planning technical assistance program—through a combination of fee-recovery, government contracts, and philanthropic support. While these programs play an important role in supporting Texas State University’s “commitment to service and leadership for the public good,” they also provide a strong and unique platform that supports the research and educational aspects of the mission of the Meadows Center and Texas State University. For example, the service activities supported under Operation SCUBA enable a productive research collaboration with the School of Social Work. The Meadows Center is committed to continuing its efforts to ensure reliable and sustainable funding for the operation of these programs in a manner that does not rely on direct university financial support.

Funding for administrative functions at the Meadows Center has proven to be more challenging over the past several years. These activities include fundraising, grant management, center-wide budgeting and fiscal management, personnel management, managing relations with the University Administration and units across campus, and management related to the Spring Lake Habitat Conservation Plan. These functions are currently supported by cobbling together funding from numerous grants and contracts, making it difficult to ensure predictable revenue flows to support basic center administrative activities. The Meadows Center understands that the University is not in a position to directly fund the administrative activities of centers in the way that university departments receive core funding to cover administrative functions. Over the next few years, however, the Meadows Center is interested to raise funds for a modest endowment to cover the costs of core administrative functions (estimated to be approximately \$250,000 to \$300,000 annually). The Meadows Center believes that securing reliable funding for core administrative activities will enable the Meadows Center to achieve the research and educational goals (Goals 1 and 4 in this plan) and to enhance the Meadows Center’s research platform and infrastructure that can support the broader research community (in a way similar to how computational and library resources can support researchers across academic units).

## **Enabling Activity 2: Strategic Communications**

The Meadows Center recognizes the importance of communications to fulfilling its mission and ensuring its educational, research, policy, stewardship, and leadership activities reach broad and diverse audiences to maximize their impact. To this end, the Meadows Center has developed a communications roadmap and invested in communications capacity. This expanded focus on communications ranges from website improvements to finding diverse techniques to reach interested audiences to the design of educational materials and interpretive center displays.

## **Enabling Activity 3: Meadows Center Advisory Council**

The Meadows Center sees a potential need and opportunity to develop a more formal mechanism to engage prominent experts and officials who are engaged in the deliberative and decision-making venues relevant to the

Meadows Center's research, educational, and leadership activities. The Meadows Center plans to consider the potential creation of an Advisory Council. Such an Advisory Council could help ensure that the work of the Meadows Center remains relevant to addressing important needs in Texas and beyond. The Advisory Council could also help advise and support the Meadows Center to ensure that it has vision, capacity, and resources to fulfill its mission, and support the broader mission of Texas State University, for long into the future.

#### **Enabling Activity 4: Recruitment and Development of People**

The Meadows Center has achieved great things because of the people who have been involved in establishing the Center as a reference for water-related research and education over the last 15 years. The future success of the Meadows Center depends on the ability of Meadows Center leadership to continue to attract, mentor, and retain high quality individuals who contribute meaningfully to the Meadows Center mission.

# ATTACHMENT 1:

## How We Fulfill Our Mission – The Meadows Center for Water and the Environment’s Four Pillars

The Meadows Center for Water and the Environment fulfills its mission by integrating activities across four pillars of action in powerful ways. Our work in each of these pillars begins at Spring Lake on the Texas State University campus – one of the largest artesian springs in the world – and ripples outward across Texas and beyond.

### Research: Conducting Solutions-Focused Research

- Conduct applied research to address real-world problems
- Advance science-based solutions to water challenges
- Increase understanding of complex water and natural systems
- Promote sustainable management of water
- Work with multi-disciplinary expertise across campus to catalyze research on water resources
- Utilize Spring Lake as a living laboratory for research
- Communicate research to inform decision-making and stewardship practices

Faculty, staff, and students at the Meadows Center for Water and the Environment conduct applied research to address real-world problems. The Meadows Center researchers provide multi-disciplinary expertise to advance science-based solutions for the most pressing water resource challenges facing Texas and the world beyond. The Meadows Center location on historic Spring Lake provides a living laboratory where researchers promote sustainable management of water systems and seek to increase the understanding of complex water and natural resource topics. The Meadows Center actively works to communicate research to wide audiences to inform decision-making and inspire stewardship practices.

### Education: Encouraging Life-Long Learning

- Connect children and families to nature
- Engage new stakeholders in water and environmental stewardship
- Disseminate knowledge of water and natural resources
- Demonstrate responsible recreation to encourage stewardship
- Provide hands-on educational opportunities to Texas State University students
- Publish books and curricula as trusted sources on water and environmental topics
- Cultivate and prepare the next generation of conservation leaders

The Meadows Center for Water and the Environment’s educational programs encourage life-long learning about the environment—and people’s relationship to the environment. The multitude of activities offered at Spring Lake, including recreational opportunities, connect children and their families to nature and engage new stakeholders in water and environmental stewardship. The Meadows Center provides hands-on opportunities for Texas State University students, inspiring future careers

and studies in natural resource related fields. The Meadows Center publishes numerous books and educational materials that serve as trusted sources of information on water and environmental topics. One of the Meadows Center's greatest responsibilities is preparing the next generation of conservation leaders.

### **Stewardship: Cultivating a Stewardship Ethic**

- Inspire protection and management of cultural and natural resources
- Manage Spring Lake and its significant habitat, species, and archaeology
- Strengthen Texas State University ties to the San Marcos community and beyond by connecting stewardship of water to quality of life
- Cultivate a stewardship ethic and practice

One of the greatest privileges of the Meadows Center for Water and the Environment is the stewardship and management of Spring Lake and its habitat, endangered species, and cultural resources. The Meadows Center is active in the San Marcos community and beyond and strives to strengthen those ties by connecting stewardship of water and natural resources to quality of life. The Meadows Center cultivates a stewardship ethic and practice through the community-driven management of Spring Lake as well as local watershed activities across Texas.

### **Leadership: Transforming Knowledge into Action**

- Support responsible natural resource and water policy in Texas
- Convene stakeholders to address critical water and natural resource challenges
- Share the Meadows Center culture of service with communities and organizations
- Serve in voluntary leadership roles in diverse contexts, such as on boards of directors, steering committees, watershed councils, and panels providing expert testimony
- Build capacity of local communities to protect and steward their water and natural resources

The Meadows Center for Water and the Environment is a leader in water and environment management and policy topics in Texas, the U.S. and internationally. The Meadows Center supports responsible natural resource and water policy in Texas and convenes stakeholders to address critical water and natural resource concerns and the grand challenges that we will face in the decades to come. Staff share the Meadows Center culture of service with communities and organizations and often serve in voluntary leadership roles in diverse contexts. The Meadows Center also lends its expertise to build the capacity of local communities so that they can protect and manage their own water and natural resources.

