

# Institutional and community resilience among institutions of higher education in metropolitan New Orleans

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## Overview

Hurricane Katrina and the failure of the federal levee system exposed profound vulnerabilities across the Greater New Orleans area, including among higher education institutions. Over the past two decades, however, universities, community colleges, and specialized research centers alike have all evolved, improving their internal resilience and contributing significantly to the resilience of surrounding communities.

Starting with the initial response to the 2005 disaster, higher education institutions in metropolitan New Orleans demonstrated remarkable resilience by rapidly resuming instruction, forming cross-institutional partnerships, and mobilizing support from local, state, and federal agencies, as well as alumni, corporations, foundations, and international sources. In the following years, universities further championed resilience through fostering academic programs and research centers and collaborating through consortia focused on emergency and disaster management, climate adaptation, infrastructure, and biosciences innovation. Yet, these higher educational institutions continue to face difficulties, particularly in the face of the currently challenging university funding landscape.

This report first describes the impacts of Hurricane Katrina and the levee failures on the higher education institutions themselves, then details the roles those institutions played in building recovery and resilience in communities across the New Orleans metropolitan area. We examine the challenges they faced



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and the strategic opportunities they discovered that were associated with improving community resilience. The report closes with recommendations for future efforts toward greater institutional and community resilience among these universities and colleges across the metropolitan area, including:

- Assessing the many initiatives that these universities, community colleges, and research centers have undertaken to promote resilience.
- Enhancing coordination across educational programs and consortia.
- Leveraging alumni and partnerships to deepen higher education institutions' long-term contributions to regional resilience.

More attention needs to be paid to the remarkable source of resilience capacities at these institutions of higher education in New Orleans, and to their impacts on regional resilience. They still have much more to contribute.

## The higher education institutions of metropolitan New Orleans

According to the National Center for Education Statistics, there are 30 postsecondary education institutions within the eight parishes of the New Orleans-Metairie metropolitan area.<sup>1</sup> These institutions offer a mix of education, including technical and vocational training, and programs for associate, bachelor's, master's, and doctoral degrees (see Map 1).

Among these postsecondary institutions, there are 11 major two- and four-year institutions (excluding seminaries).<sup>2</sup> They include: Delgado Community College, Dillard University, Louisiana State University Health Sciences Center-New Orleans, Loyola University New Orleans, Northshore Technical Community College (which was established/consolidated after Hurricane Katrina, in 2012),<sup>3</sup> Nunez Community College, Southern University at New Orleans, Tulane University, University of Holy Cross, the University of New Orleans, and Xavier University of Louisiana.

### MAP 1

## Major higher education institutions in metropolitan New Orleans

Eleven major colleges and universities within metropolitan New Orleans

Source: "Major universities" are defined as universities with a long-term presence in the metropolitan area and fall enrollment greater than 1,000 students, excluding seminaries, as measured by the National Center for Education Statistics. See U.S. Department of Education, National Center for Education Statistics, and Integrated Postsecondary Education Data System (IPEDS). 2000. "Total Fall Enrollment," available at <https://nces.ed.gov/ipeds/SummaryTables/report/201?templateId=2010&years=2023,2022,2021,2020,2019,2018,2017,2016,2015,2014&tt=aggregate&instType=1&sid=d-f0e2398-a443-4724-8f45-91a2dbccc545>.



Six of the colleges and universities are public, and five are private. Additionally, three of the universities—Dillard, Southern University at New Orleans, and Xavier—are historically Black colleges and universities (HBCUs).

To examine these higher education institutions and their contributions to the resilience of the metropolitan New Orleans community, it is first important to understand what we mean by “resilience.” Traditionally, resilience refers to a system’s ability to positively withstand shocks and stressors.<sup>4</sup>

This means that resilient systems should be able to cope with (absorb) the shock, adapt and adjust systems to anticipate and reduce risks, and transform capacities to enable communities to thrive in the face of risk.<sup>5</sup> As the next sections of this report will demonstrate, these are capabilities that are relatively well honed across New Orleans’ higher education landscape.

## Higher education institutions and key mechanisms for community resilience

Institutions of higher education are key entities in their communities, serving as a place for training, research, and development. As such, they play a significant role in the local resilience ecosystem due to their place-based economic, physical, and social capital. In this section of the report, we outline a framework for how the resilience and capacities of institutions and communities are intertwined.

One important impact is higher education’s role in regional economic development.<sup>6</sup> New Orleans’ universities, community colleges, and research centers contribute billions of dollars to the local economy each year through individual and institutional spending, employment, research, and local innovation.<sup>7</sup> Recent estimates from internal and stakeholder reviews show annual regional economic contributions of \$5.2 billion from Tulane, \$1.6 billion from LSU’s Health Sciences Center, nearly \$1 billion from the University of New Orleans, \$588.1 million from Delgado, \$251.1 million from

Xavier, \$94.5 million from the Southern University at New Orleans, and \$83 million from Dillard.<sup>8</sup> And recent research on the individual contributions of graduates from higher education institutions across the state suggests that each postsecondary graduate contributes an additional \$105,034 to the Louisiana economy.<sup>9</sup>

Beyond direct economic contributions, universities also contribute to metropolitan New Orleans’ resilience through other mechanisms.<sup>10</sup> Community resilience outcomes influenced by these institutions include economic and social resilience, risk management capacity, leadership development, technical and management capacity, and continuous research and innovation that improves programs and policies dedicated to reducing risk and improving resilience.

Universities and colleges, however, must also be resilient themselves to effectively contribute to community resilience. Understanding their role in mitigating and then overcoming disasters and other shocks and stressors is key (see Figure 1).

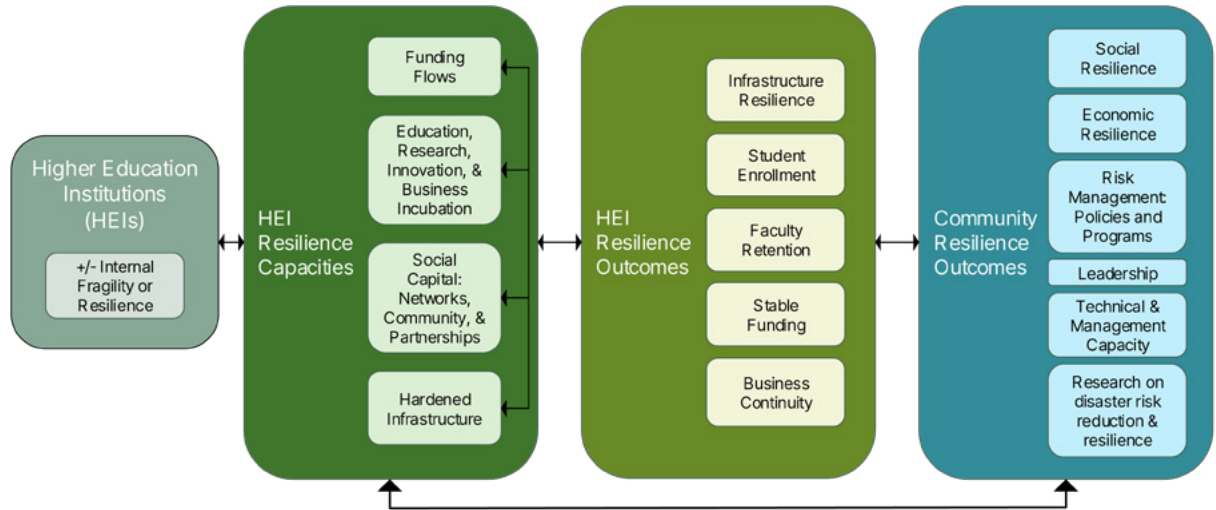
Key factors that enable higher education institutions to improve their resilience include funding availability; the ability to sustain education, research, innovation, and business incubation; strong social networks, community-building, and partnerships; and hardened infrastructure able to withstand environmental shocks. When applied, these key capacities strengthen themselves by ensuring continuity in infrastructure, enrollment, faculty retention, funding, and operations, while also enhancing the resilience of their surrounding communities.

The framework, detailed in Figure 1 above, emphasizes the numerous feedback loops connecting these capacities and outcomes, including the influence of community resilience on the resilience of higher education institutions.

FIGURE 1

## A framework for higher education's contributions to community resilience

Capacities and outcomes for improved community resilience



## The effects of Hurricane Katrina on metropolitan New Orleans' higher education institutions

Hurricane Katrina and the levee failures exposed major vulnerabilities and fragility among New Orleans colleges and universities. All major higher education institutions in the area were affected, though the extent of the damage varied significantly. Some universities located “Uptown” and on the West Bank of the Mississippi River—such as Tulane’s Main Campus, Loyola, and the University of Holy Cross (then named Our Lady of Holy Cross College)—sustained more minimal flooding damages.<sup>11</sup> But others experienced severe flooding. Dillard was submerged under eight feet of water, and Southern University at New Orleans experienced between four feet and 11 feet of flooding.<sup>12</sup>

Beyond physical damage, the collapse of critical infrastructure such as communications and electricity

severely hampered the initial emergency responses of these institutions.<sup>13</sup> In many cases, these colleges and universities were not prepared for the scope and length of these disruptions. Some of their computer servers were not backed up outside of campus, meaning that email systems and other internet resources were not available, making it difficult to contact faculty, staff, and students. Power interruptions led to the destruction of laboratory materials and experiments.

Ultimately, all existing major universities canceled fall semester courses at their New Orleans locations.<sup>14</sup> However, some colleges and universities—among them Delgado, Nunez, LSU’s Health Sciences Center, the Southern University of New Orleans, and the University of New Orleans—were able to host classes online and at alternate locations.<sup>15</sup> Otherwise, an unprecedented response by universities across the country hosted faculty and students, sometimes free of charge.<sup>16</sup>

Financial challenges caused by the storm’s disruptions were another major challenge for universities and

colleges. The combination of physical damage and lost tuition revenue from the canceled fall semester forced many universities to lay off faculty and staff.<sup>17</sup> Additionally, enrollment fell between the fall of 2004 and 2006. Nunez had the most significant drop in enrollment (55 percent), followed by Dillard (48 percent), Southern University at New Orleans (40 percent), the University of New Orleans (32 percent), Delgado (29 percent), Xavier (27 percent), Tulane (19 percent), Holy Cross (17 percent), and Loyola (15 percent).<sup>18</sup> LSU Health Sciences Center enrollment remained mostly unchanged (see Figures 2 and 3).

Other financial factors, such as the allocation of federal and state funding, also played into the recovery. To start, the federal funding allocated for postsecondary institutions was equally distributed between Louisiana and Mississippi universities, despite the fact that those in Louisiana suffered the majority of damages.<sup>19</sup> Similarly, smaller universities,

including the HBCUs—Dillard, Southern University at New Orleans, and Xavier—received a smaller portion of the state allocation of \$95 million in federal funds in 2005 for non-reconstruction-related support, including financial aid, salaries, and equipment, regardless of the level of impact of the hurricane and levee failures on university operations. This occurred because funding was based on a formula considering enrollment, revenue losses, and financial aid budgets.<sup>20</sup>

When it came to funding from the Federal Emergency Management Agency (FEMA), private universities found it particularly difficult to access support due to the immense amounts of paperwork required.<sup>21</sup> Additionally, while Tulane and Loyola had catastrophic insurance coverage and relatively larger endowments to cushion their recovery, the HBCUs did not.<sup>22</sup>

Moreover, the resilience of public higher education institutions was further compromised by cuts to the

FIGURE 2

## Student enrollment fell sharply after Hurricane Katrina among major public universities and colleges in New Orleans, with recovery varying by institution

Fall enrollment among major public New Orleans universities and colleges 2000 to 2023

Source: U.S. Department of Education, National Center for Education Statistics, and Integrated Postsecondary Education Data System (IPEDS). "Total Fall Enrollment," 2000–2023

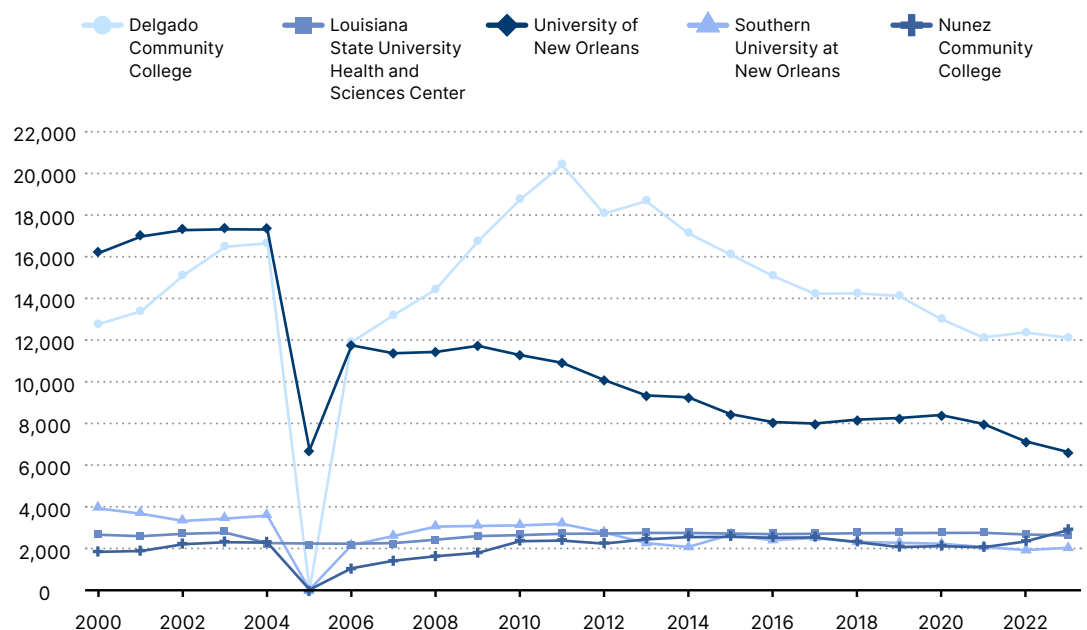


FIGURE 3

## Student enrollment collapsed after Hurricane Katrina among major private universities and colleges in New Orleans, and recovery varied by institution

Fall enrollment among major private New Orleans universities and colleges 2001 to 2023

Source: U.S. Department of Education, National Center for Education Statistics, and Integrated Postsecondary Education Data System (IPEDS). "Total Fall Enrollment," 2000–2023

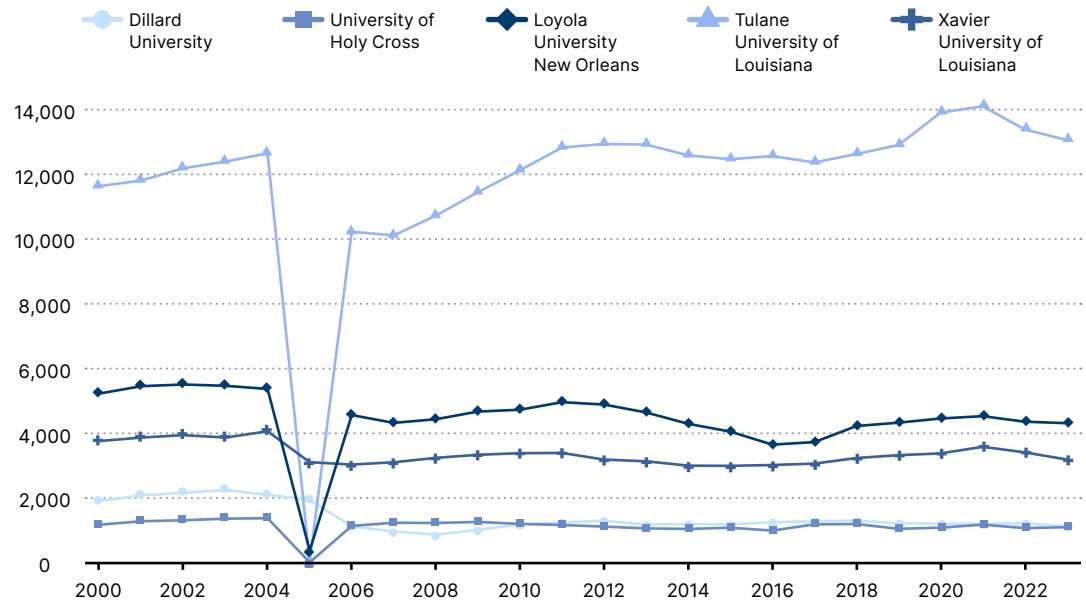
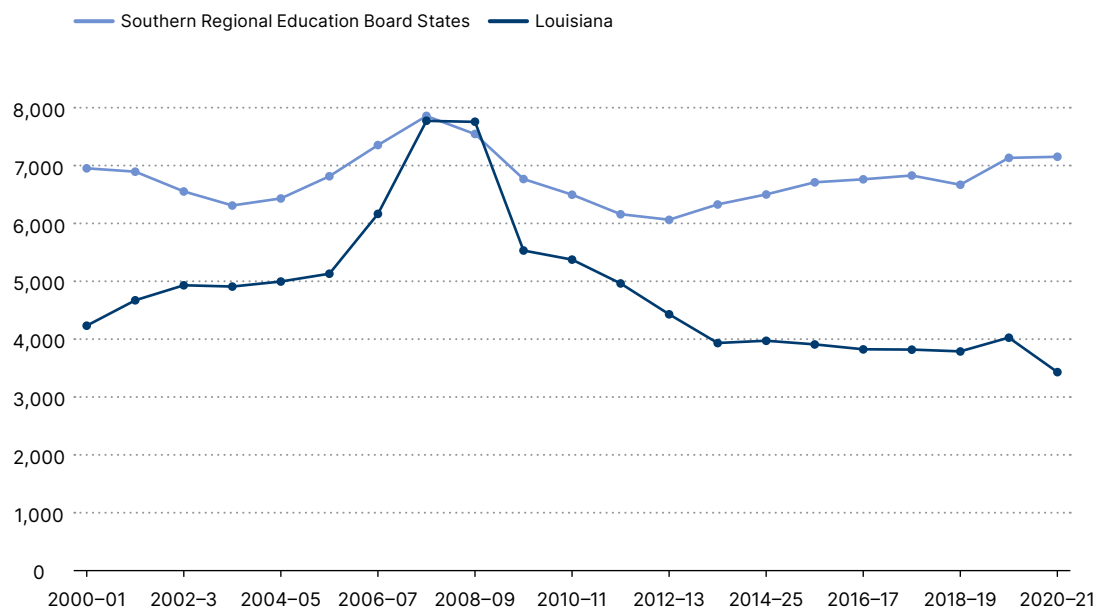


FIGURE 4

## State funding for higher education in Louisiana fell below other southern states after 2008

Louisiana appropriations for public four-year colleges and universities operations per full-time equivalent student, 2000 to 2021, compared to other southern states

Source: Southern Regional Education Board. "Funds for Educational and General Operations Per Full-Time-Equivalent Student at Public Four-Year Colleges and Universities," 2023, available at <https://www.sreb.org/post/funds-educational-and-general-operations-full-time-equivalent-student-public-four-year-colleges>



state's higher education budget.<sup>23</sup> Notable cuts began during a major disinvestment in higher education during the administration of Gov. Bobby Jindal starting in 2008.<sup>24</sup> And while other states, which experienced a concomitant decrease in funding related to the financial crisis of 2008, would later reinstate funding, Louisiana's higher education funding for operations continued to decline (see Figure 4).

At the University of New Orleans, for example, state funding declined from \$55.3 million in 2005 to \$44 million in 2011, and to \$30.5 million in 2025—a 44.7 percent decline.<sup>25</sup> This additional financial strain contributed to a slower recovery.

## How universities demonstrated internal resilience and augmented the greater recovery process

Despite these challenges, the city's colleges and universities exhibited remarkable resilience, starting with their commitment to return to campus in the 2006 spring term, bringing thousands of students, faculty, and staff back to New Orleans.<sup>26</sup> This was facilitated by university leadership, who came together to pursue the common goal of restarting campus activities.

The schools used many creative solutions to mobilize resources to be ready for the spring, including housing students and holding classes in cruise ships, hotels, and trailers provided by FEMA.<sup>27</sup> Four private universities—Dillard, Loyola, Tulane, and Xavier—formed a consortium that allowed students to take certain courses inter-operably at the tuition cost of their institution of enrollment.<sup>28</sup> This course-sharing consortium still exists today and allows students to take up to two courses in the spring and fall semesters at any of the participating schools, with university approval.

To varying degrees, the city's colleges and universities were able to mobilize funding from alumni, corporations, foundations, and international sources.<sup>29</sup> They also were able to use slowly disbursed FEMA funding to harden their own infrastructure, build new

structures to very high building code standards, and retrofit historical buildings as best as possible. Work to improve infrastructure is ongoing. For example, in 2022, Tulane partnered directly with ENFRA, an infrastructure solutions firm, to strengthen its on-campus electrical infrastructure by reducing greenhouse gas emissions and increasing its efficiency, resilience, and reliability.<sup>30</sup>

These colleges and universities and others around the nation also played a major role in the greater response to and recovery from Hurricane Katrina. A 2011 literature review documented the roles of 38 academic institutions in the city and across the country in supporting response and recovery efforts following the hurricane and the federal levee failures.<sup>31</sup> The most immediate contributions had to do with the provision of health and medical care. Additionally, they supported and provided communications services, response evaluation, command support, training, surveillance, and shelter/facilities.

In the immediate response, residents and faculty from the LSU Health Sciences Center and Tulane School of Medicine worked in Charity Hospital and Tulane's University Hospital to keep patients alive for days without electricity before evacuation.<sup>32</sup> Additionally, the sciences center's faculty and students cared for patients at a temporary staging area at LSU in Baton Rouge.

Tulane established outreach early in the recovery process by establishing a network of community health clinics.<sup>33</sup> In the area of command support, LSU students and faculty augmented the Louisiana Emergency Operations Center's capabilities by providing Geographic Information System support when no state employees were assigned to the task.<sup>34</sup> Other university facilities also played a part in the response. Largely undamaged, Our Lady of the Holy Cross served as a staging ground for fire departments, the U.S. Army, and other federal agencies.<sup>35</sup>

Additionally, the area's community colleges worked to supplement the workforce needed to rebuild and recover. The Louisiana Community and Technical College System—the coordinating body of the states' community and technical colleges, including

Delgado, Nunez, and Northshore Technical Community College—worked with companies, industries, and government to take a strategic approach to provide and train workers to help with recovery efforts and meet workforce needs.<sup>36</sup>

Throughout the response and recovery, university leadership was part of the brain trust for the recovery of the city and for supporting each other in the recovery process.<sup>37</sup> In many cases, individual faculty members initiated response and recovery activities such as monitoring population resettlement, supporting the city's planning efforts, and augmenting the capacity of local nonprofit organizations. The University of New Orleans urban planning faculty directly supported efforts to plan for rebuilding and redevelopment at the neighborhood, city, and state level.<sup>38</sup>

## The evolving role of colleges and universities in building institutional and community resilience by developing new educational programs and research

Efforts by metropolitan New Orleans' colleges and universities to engage with and strengthen the community started immediately after Hurricane Katrina, highlighted by Tulane's Center for Public Service, established in 2006 to facilitate community partnerships as the university's new service-learning component for all Tulane undergraduate students.<sup>39</sup> Dillard University's Office of Community and Church Relations, initially targeted at promoting homeownership in Gentilly, also adjusted its focus to greater community development after the hurricane and levee failures.<sup>40</sup>

Research and education programs on emergency management and resilience were created across many of the universities in response to Hurricane Katrina and subsequent disaster events (most notably the 2010

Deepwater Horizon oil spill). Tulane, for example, now has multiple disaster management and resilience-oriented programs, including a Master of Public Health in Disaster Management (2009) and a Master of Professional Studies in Homeland Security (2010) and Emergency Management (2019).<sup>41</sup> Additionally, in 2009, Tulane founded the Disaster Resilience Leadership Academy, an interdisciplinary academy with the goal of building effective leaders in the disaster resilience space.<sup>42</sup>

In 2012, the University of New Orleans started offering a minor in Disaster Management and Community Resilience and a Master of Public Administration with a focus on hazard policy.<sup>43</sup> And in 2024, Delgado began to offer a 2-year Homeland Security and Emergency Management Studies Program.<sup>44</sup> Other universities around the state, such as Louisiana State University, the Southern University system, and the University of Louisiana Lafayette, also contribute to training and research at the greater state and regional level.<sup>45</sup> These programs produce graduates who fill the leadership positions of important services, such as emergency management and community nonprofit organizations.

These and other institutions of higher learning also have developed several programs to reduce risks related to river flooding, hurricanes, sea level rise, and coastal erosion. Eight of the 11 major institutions have education and/or research initiatives addressing environmental and climate issues on the Gulf Coast.<sup>46</sup> Some of university research centers conducting this type of research are outlined below, and further consortia where universities conduct this type of research also are highlighted in the following section.

Louisiana State University and Tulane are home to the Coastal Sustainability Studio (2009) and the ByWater Institute for Climate Adaptation (2016), respectively, which conduct environmental research in the Mississippi River Delta.<sup>47</sup> The ByWater Institute grew out of the Center for Bioenvironmental Research, which played a role in the aftermath of Hurricane Katrina in developing relationships with neighborhood associations and other civic partners to support recovery processes and post-flood planning. This

led to a series of research investments from the federal National Science Foundation focused on post-flooding urban ecology and disease ecology. The ByWater Institute continues to work with students and community partners to monitor ecological changes related to changes in the regional water infrastructure system after Hurricane Katrina.

More recently, the institute has served as a coordinating entity for civic partners on improving urban water management strategies across a broad range of stakeholders, including for a 10-year assessment of the Greater New Orleans Urban Water Plan through a process entitled “Urban Water @ 10.”<sup>48</sup> Additionally, Tulane has recently developed an undergraduate minor in climate change science and practice across three schools of the university, slated to become an undergraduate major in 2028.<sup>49</sup>

The University of New Orleans is home to the Center for Hazards Assessment, Response, and Technology, or CHART, established in 2001 prior to Hurricane Katrina. After the storm hit, CHART conducted applied community research to evaluate the response and potential areas for risk reduction.<sup>50</sup>

Dillard in 2018 established a unique certificate program on water management, which trains students for positions in industry and government with the skills to address relevant local issues such as flooding and sinking land.<sup>51</sup> Dillard also established a Center for Sustainability in 2023 to promote sustainability and climate change knowledge in university activities, research, and the greater community.<sup>52</sup>

The evolving role of the city’s colleges and universities in building institutional and community resilience through the creation of new networks and partnerships

Efforts to build new networks and partnerships are especially important for building resilience at institutions of higher learning and in their surrounding communities, given that they can build a culture of continued collaboration and establish pre-existing linkages for when disasters do occur.<sup>53</sup> After Hurricane Katrina and then after the 2010 Deepwater Horizon oil

spill, New Orleans’ colleges and universities redoubled efforts to collaborate and network with their regional educational counterparts and other stakeholders via consortia to address regional vulnerabilities.

These consortia, often involving partnerships with industry and government, have advanced policy through research, fostered innovation, and built educational opportunities around key resilience themes, including coastal and environmental management, health sciences innovation, resilient energy, and infrastructure. These consortia were/are funded through a variety of sources, such as FEMA, the National Academies of Sciences, Engineering, and Medicine, and funds from the 2010 Deepwater Horizon oil spill settlement, among others (see Table 1).

One plan to boost the local economy aimed to revitalize the New Orleans biomedical district in the downtown and Mid-City areas of the city as a health care hub with the establishment of three new institutions: the New Orleans BioInnovation Center, the LSU Veterans Affairs University Hospital Complex, and the Louisiana Cancer Research Center.<sup>54</sup> This hub was realized progressively as funding became available, with some of the city’s colleges and universities as key stakeholders in the this new biomedical district ecology.<sup>55</sup>

A key collaborative effort was the New Orleans BioInnovation Center.<sup>56</sup> Established in 2012, the center serves as a nonprofit bioscience business incubator in collaboration with Tulane, Xavier, the University of New Orleans, and LSU Health Sciences Center. This center supports startups and companies with ideas for innovations in digital, environmental, and public health solutions. Since its establishment, the center has supported the creation of more than 225 companies and 650 high-paying jobs.<sup>57</sup>

Key to more recent efforts is the revitalization of the planning process for the long-dormant BioDistrict New Orleans, which seeks to grow the biosciences sector of the economy.<sup>58</sup> Initially established in 2005, this economic development district in the biomedical district did not begin to take off until 2022, when renewed efforts and support led to the district

TABLE 1

## Key metropolitan and regional consortiums involving New Orleans universities and colleges

Program	Delgado	Dillard	Holy Cross	Loyola	LSU HSC	North-shore TCC	Nunez	SUNO	Tulane	Xavier	UNO
New Orleans BioInnovation Center					X				X	X	X
Consortium for Resilient Gulf Communities									X	X	
Gulf Research Program/ Mississippi River Delta Transition Initiative Consortium		X							X	X	
Hubs for Energy Resilient Operations (HERO)		X*								X	
Greater New Orleans Infrastructure Partnership (GNOIP)	X					X	X				
Louisiana Universities Marine Consortium (LUMCON)	X	X	X	X	X	X	X	X	X	X	X
New Orleans Higher Education Consortium	X	X	X	X	X	X	X	X	X	X	X
Private University Course Sharing Consortium Agreement		X		X					X	X	

\*Note: Dillard was listed as a recipient of funds, not as a partner.

Source: New Orleans BioInnovation Center. n.d. "Partners." Accessed April 18, 2025, available at <https://neworleansbio.com/partners-louisiana-biotech-businesses-new-orleans-bioinnovation-center/>; MissDelta: Mississippi River Delta Transition Initiative. n.d. "Mississippi River Delta Transition Initiative." Accessed April 27, 2025, available at <https://www.missdelta.org/>; Courreges, Patrick. 2024. "Louisiana DENR Granted \$249 Million in Federal Energy Resilience Funding." State of Louisiana Department of Energy and Natural Resources (DENR), October 1. <https://www.dnr.louisiana.gov/news/louisiana-denr-granted-249-million-in-federal-energy-resilience-funding>; Hoormann, Rachel, and Matt Wolfe. 2024. "Regional Training Partnership Awarded \$5.75M by U.S. Department of Labor." GNO Inc., August 15, available at <https://gnoinc.org/news/regional-training-partnership-awarded-5-75m-by-u-s-department-of-labor/>; Louisiana Universities Marine Consortium. n.d. "Mission and Vision – LUMCON Website." Accessed April 28, 2025, available at <https://lumcon.edu/mission-and-vision/>; Hite, Kelly. 2024. "Thirteen Cheers For Higher Education in The Greater New Orleans Region - Biz New Orleans." Region. Biz New Orleans, October 16, available at <https://bizneworleans.com/thirteen-cheers-for-higher-education-in-the-greater-new-orleans-region/>; Tulane University Office of the University Registrar. 2025. "Consortium Registration," available at <https://registrar.tulane.edu/registration/consortium>

securing tax increment financing from the state and local government.<sup>59</sup>

These renewed efforts toward coordinating biosciences research and innovation within the district are complemented by: Tulane's efforts to redevelop the former Charity Hospital into a mixed-use space for research and learning; the 2023 announcement of a partnership between Xavier and nonprofit Ochsner Health to establish a joint College of Medicine; and the efforts of LSU, nonprofit LCMC Health, and other partners to pursue a National Cancer Institute designation.<sup>60</sup>

Two consortia/research groups arose from the settlement fines paid following the 2010 Deepwater Horizon Oil Spill. One is the Consortium for Resilient Gulf Communities, led by the Rand Corporation in collaboration with Tulane and Xavier, which facilitates educational training and research on key challenges, such as the mental and social effects of oil spills, hurricanes, and now COVID-19.<sup>61</sup>

The other is the National Academies of Sciences, Engineering, and Medicine's Gulf Research Program, which facilitates research and fellowships with multiple universities.<sup>62</sup> One recent consortium that arose from this program is the Mississippi River Delta Transition Initiative, which aims to evaluate future scenarios for the delta and create research-driven solutions in partnership with communities, organizations, and government.<sup>63</sup> Dillard, Tulane, and Xavier are involved in this initiative.

Other efforts place a greater focus on resilient infrastructure. Louisiana's state-led Hubs for Resilient Energy, or "HERO," was developed in 2023 to improve the resilience of the state's power grid through "optimizing, integrating, and distributing resilient energy resources throughout the state's electric grid system," which should improve future disaster response and recovery efforts.<sup>64</sup> Xavier and the University of Louisiana Lafayette are two key partners in this group, and Dillard also received \$1.3 million for energy resilience.<sup>65</sup>

At the community college level, the Greater New Orleans Infrastructure Partnership between Delgado, Nunez, Northshore Technical Community College, River Parishes Community College, and Greater New Orleans Inc. (the city's economic development agency), was established in 2024 to facilitate careers for underrepresented students in the area of infrastructure.<sup>66</sup>

Then there's the Louisiana Universities Marine Consortium, which conducts research, education, and outreach (at the higher education and K-12 level) related to marine and coastal issues, and is made up of all public and independent<sup>67</sup> universities in Louisiana.<sup>68</sup> Although this consortium was founded in 1979, in the wake of Hurricane Katrina it conducted research on the effects of the storm on the environment, and today it continues to monitor the impact of climate change and coastal erosion on the coast.<sup>69</sup>

Another contribution to regional resilience is the New Orleans Higher Education Consortium, established in 2021 in collaboration with Greater New Orleans Inc., to promote the region as a place for higher education, research, innovation, and job opportunities.<sup>70</sup> This consortium has the potential to serve as a future source of collaboration as it includes all of the major institutions in the New Orleans metropolitan area, in addition to two other community colleges in the region.

One final consortium important to the future resilience of the city in the face of new disasters is the course-sharing consortium among the private institutions discussed above. This collaboration could help fill gaps in course offerings if future disasters were to cause major interruptions for any of the members.<sup>71</sup>

This overview of initiatives is illustrative and not exhaustive. It demonstrates the progress that has been made toward building collaborations among universities, Metro New Orleans institutions, and communities.

## Twenty years later, the challenges still facing New Orleans' colleges and universities today

University institutional organizational structures and higher education academic incentives can constrain the creation, dynamics, and growth of interdisciplinary research and education programs. University faculty, for example, remain constrained by the imperative to publish papers, which hinders their ability to respond and engage in practice-oriented work.<sup>72</sup> Similarly, the internal organization of universities can lead to redundancies of efforts. At many universities, colleges, and research centers, educational programs are owned by relatively siloed schools. This leads to inefficiencies and causes confusion among community partners.

Community colleges' greater focus on vocational training and workforce development rather than research means that the constraints surrounding publications may not be as prevalent. As previously noted, after Hurricane Katrina, the Louisiana Community and Technical College System worked with industries and government to identify key workforce needs and provide training in those areas.<sup>73</sup>

While some of these higher education institutions in metropolitan New Orleans are relatively well-funded, the funding environment today at both the state and federal level is daunting. In fiscal year 2024, total Louisiana state education appropriations amounted to \$7,715 per full-time equivalent student for public universities—about 34 percent less than the national average.<sup>74</sup> While Louisiana higher education funding will remain “stable” for the upcoming 2026 fiscal year, cuts to research and funding at the federal level also pose a significant threat to the state's universities.<sup>75</sup>

There are currently uncertainties around federal funding of university indirect costs associated with government contracts/grants, a significant source of support for universities that funds the human

and physical infrastructure needed for research.<sup>76</sup> Additionally, more general cuts to federal research grants pause vital research, impact university funding, and vastly decrease universities' economic impact on the region.<sup>77</sup>

Recovery at many of the city's universities and colleges has been uneven. While recovery for some has been very robust, other universities have still not reached enrollment equivalent to levels seen prior to Hurricane Katrina. In fact, only three universities<sup>78</sup> (LSU Health Sciences Center, Nunez, and Tulane) had higher enrollment in fall 2023 than they did in fall 2004, though it is worth noting that Delgado also passed 2004 levels of enrollment in 2009, but has seen a decline in students since 2011.<sup>79</sup>

The University of New Orleans is the most severe example of enrollment decline. As of 2023, enrollment at the university stood at only 38 percent of the levels prior to Hurricane Katrina, though other factors such as management and low graduation rates (which predated 2005) also contributed to this issue.<sup>80</sup> The university is estimated to have about \$30 million of debt and has been forced to furlough numerous staff, though the state government is seeking to preserve its legacy by moving it into the LSU system to strengthen and preserve its focus “on the unique priorities of New Orleans and the Gulf Coast, from marine engineering to historic preservation and...Jazz.”<sup>81</sup>

Still, the example of the University of New Orleans also is indicative of how universities and colleges in the metropolitan area have adapted to changes in demographics and the increasingly risky environment by prioritizing and aligning their programs and research with community needs through increased investment in resilience thematic areas and community outreach programs. We close this report with a look at how these higher education institutions can build on what they've experienced and learned over the past 20 years.

## A look toward the future of higher education and resilience in New Orleans

Colleges and universities have always provided a source of resilience for metropolitan New Orleans, and their resilience and contributions to community resilience have improved greatly since Hurricane Katrina and then again after the 2010 Deepwater Horizon oil spill. Yet, much can still be done to deepen their resilience capacities and contribute even more to the metropolitan area's resilience.

The first thing these institutions need to do is take stock of their efforts to date in fostering and strengthening community resilience. More effort is needed to assess the impact of the many initiatives that the metropolitan area's colleges and universities have undertaken to improve resilience, such as community outreach, thematic research/education programs, and the collective work of consortia.

Evaluations of particular importance are the consortia programs around resilience themes that have emerged since Hurricane Katrina and the 2010 Deepwater Horizon oil spill. The functioning of these programs and their impacts on regional policymaking and practice should be evaluated as a means for cross-consortium learning, continuous quality improvement, and the birth of new networks around important resilience themes.

There also is a need to evaluate the broader impact of New Orleans' institutions of higher education on regional resilience. This might be a project of interest to the New Orleans Higher Education Consortium as an inter-institutional initiative. It might employ methods such as the Local Economy Wide Impact Evaluation, designed to evaluate the impact of projects and policies on local economies. Such an evaluation could be combined with analysis of secondary data and the application of qualitative evaluation methods such as outcome harvesting and most significant changes—methods of extracting key findings from interviews and focus group discussions.<sup>82</sup>

Within these institutions of higher learning themselves, greater efforts are needed to rationalize and harmonize research and educational programs aimed at risk reduction, disaster management, and resilience to ensure coherence, synergy, and maximum impact. This activity can also be done through a consortium effort to develop a framework for the assessment, but it will then require internal initiatives to assess programs with an eye toward their wider impact on metropolitan New Orleans' resilience—looking for opportunities for synergies within and across campuses.

Universities and colleges also are credible conveners of multistakeholder forums. Improved resilience across metropolitan New Orleans could benefit from an annual or biannual learning event centered around the impacts of higher education institutions on community resilience and perhaps even the development of a regional journal on this topic.

Finally, metropolitan area universities have a pool of vibrant alumni capable of contributing cognitive and financial capital toward regional resilience. Some of these colleges and universities have robust development offices, which could prioritize community-resilience-oriented programs for fundraising campaigns. Initiatives such as service days (already implemented by a number of regional higher education institutions) and alumni-funded service projects might be considered.

Institutions of higher education are critical components of metropolitan New Orleans' community resilience. The higher education community is an indispensable source of resilience that has improved its internal resilience capacities as well as the resilience capacities of its larger regional environment over the past 20 years. More attention is needed on this remarkable source of resilience capacities and its impacts on regional resilience.

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## About The Data Center

The Data Center, a project of Nonprofit Knowledge Works, is the most trusted resource for data about Southeast Louisiana. Founded in 1997, we provide fully independent research and analysis to offer a comprehensive look at issues that matter most to our region. With a mission of democratizing data, The Data Center has, and continues to be, an objective partner in bringing reliable, thoroughly researched data to conversations about building a more prosperous, inclusive, and sustainable region.

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