



Northern Kentucky University
Board of Regents Materials

November 11, 2020

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AGENDA
Northern Kentucky University

Joint Finance and Policy Meeting
Video Teleconference – Wednesday, November 11, 2020 – 9:00 a.m.

9:00 a.m.

A. Joint Finance and Policy Committee:

1. Annual Enrollment Report (Scranage, Padgett, Stewart)
2. Annual Financial Report (Hales, Kerdolff)
3. Master Plan (Hales, Schuh, Zaidi, Long, Petersen)

Board of Regents Meeting
Video Teleconference – Wednesday, November 11, 2020 – 1:00 p.m.

1:00 p.m.

- Call to Order
- Roll Call
- Approval of September 9, 2020 Board Minutes
- Approval of October 8 and October 14, 2020 Board Minutes
- Public Participation
- Presidential Comments
- Joint Finance and Policy Committee Summary, Secretary of the Board of Regents
- Audit Committee Report, Secretary of the Board of Regents

1:20 p.m.

B. Presidential Reports:

1. Facilities Management Report (Hales)
2. Research/Grants/Contracts Report (July 1, 2020 – September 30, 2020) (Ott Rowlands)
3. Fundraising Report (July 1, 2020 – September 30, 2020) (Gentry)
4. Annual Financial Report (Hales)
5. Policies Report (Gates, Ott Rowlands)

1:40 p.m.

C. Presidential Recommendations:

1. *Academic Affairs Personnel Actions
2. *Non-Academic Personnel Actions
3. *Major Gifts Acceptance
4. *Naming Recommendations
5. *Easement Approval MOB Faren Drive
6. *Middletown Property Sale
7. *Hazard Mitigation Plan
8. *US 27
9. *Organizational Chart
10. Brighton Properties Ground Lease
11. Master Plan

2:00 p.m.

D. Executive Session

*Consent Agenda Items - (Items placed on the consent agenda are passed in one motion without discussion. Any Regent may request that an item be removed from the consent agenda for a separate motion by calling Wendy Peek in the Office of the President, 572-5172, by 2 p.m., Monday, November 9, 2020).

**Board of Regents Video Teleconference Meeting
Northern Kentucky University, Video Teleconference
September 9, 2020**

Regent W. Lee Scheben, Chair, called the video teleconference meeting of the Board of Regents to order at 1:00 pm, Wednesday, September 9, 2020.

Roll Call: Michael Baranowski, David Bauer, Richard Boehne, Normand Desmarais, Lauren Goodwin, Ashley Himes, Ken Perry, Dennis Repenning, W. Lee Scheben, Gregory Shumate, André Ward (all Regents joined the meeting by video teleconference).

Other Attendees: Ashish Vaidya, Wendy Peek, Bonita Brown, Ken Bothof, Joan Gates, Eric Gentry, Mike Hales, Valerie Hardcastle, Darryl Peal, Sue Ott Rowlands, Kim Scranage, Lori Southwood, Arnie Slaughter, Mary Paula Schuh, Syed Zaidi, Kevin Petersen, Elizabeth Long, Diana McGill, Matthew Albritton, Bethany Bowling, Brooke Buckley, William Herzog, Karen Miller, Aniya Arnold (all attendees joined the meeting by video teleconference).

Oath of Office:

Regent W. Lee Scheben performed the oath of office for the newly elected Regent: Ken Perry. The newly elected Regent swore to uphold all stipulations of the oath and faithfully execute, to the best of his/her ability, the duties of Regent of Northern Kentucky University according to law.

Approval of Minutes:

Regent Michael Baranowski seconded Regent André Ward's motion to approve the minutes of the May 13, 2020, May 18, 2020, July 14, 2020, July 15, 2020, August 7, 2020, and August 18, 2020 Board of Regents meetings. **(Regent Ken Perry abstained. Motion carried)**

Board of Regents Elections:

Regent Normand Desmarais seconded Regent Dennis Repenning's motion to approve Regent André Ward as Chairman to the Board of Regents for 2020-2021. **(Motion carried)**

Regent André Ward seconded Regent Richard Boehne's motion to approve Regent Normand Desmarais as Vice Chairman to the Board of Regents for 2020-2021. **(Motion carried)**

Regent Ashley Himes seconded Regent Richard Boehne's motion to approve Regent Gregory Shumate as Secretary to the Board of Regents for 2020-2021. **(Motion carried)**

Regent André Ward stated that he deeply appreciated the leadership of Regent W. Lee Scheben during the last two years. Regent Ward also expressed his thanks to Regent W. Lee Scheben.

Presidential Comments:

Thank you, Chair Scheben and members of the Board.

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And thank you to everyone who is joining this Board meeting in person and via live stream. We appreciate your participation.

I would like to welcome Regent Ken Perry as our newest Board member. Last week, Governor Andy Beshear appointed Mr. Perry to a six-year term to our Board. He lives in Bellevue and is the managing director and chairman of Ken Perry, Inc. He is active in the community and lives our ideal of career and community engagement. Regent Perry, welcome and thank you for joining us.

While Student Regent Lauren Goodwin has been in her role as our Student Government Association President for a few months now, I look forward to her serving on the Board as well. Her impact on the campus has been felt already in a variety of ways.

Opening — Return to Campus

I'll open my comments today by welcoming our students, faculty, and staff back to a very different fall semester. We are in week 4 of the semester and while we are still very much in the middle of this pandemic, it has been good to celebrate a return to our beautiful campus, even in a limited way.

Moving Forward

The plan for fall semester – NKU Moving Forward - has been a wide-ranging effort with engagement across the whole campus and several of our external partners.

Over six weeks, we transformed our classroom learning environments to support hybrid instruction. More than 120 classrooms received equipment upgrades required to deliver remote instruction. While this investment was driven by the COVID-19 response, we will be able to leverage these upgrades to stream and record classroom instruction well into the future.

Our intention in the spring was to have 45 percent of fall courses include a face-to-face component with prioritizing that experience for the Class of 2024. As the summer evolved, the mix of classes shifted more to online instruction due to a number of factors, including limited numbers of classrooms being available with enough seating to accommodate social distancing, and the number of faculty concerned about the risk of teaching in person during the fall semester because of age or other health factors.

Still, 68 percent of freshmen are participating in classes with a face-to-face component. The final breakdown of 33 percent of courses with a face-to-face component and 67 percent fully online is an exact reversal from fall 2019. Nonetheless, our faculty are making extraordinary efforts to engage and teach using synchronous approaches.

In addition, hundreds of loaner laptops, hotspots, monitors, webcams and voice amplifiers have been procured to enable a successful launch of our hybrid learning environment.

We also have online study rooms to allow students to participate in virtual classes on campus via a digital reservation system that is actively being used.

I am proud of how resilient and adaptable this community has been since the beginning of the COVID-19 pandemic. The Success by Design strategic framework and its focus on access,

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completion and career & community engagement has enabled us to live up to those ideals at every step.

Moving Forward Conversations

Over the past few weeks, we have engaged in virtual and interactive conversations about our path forward with different university constituents, including Go Norse Fund Donors, Chase College of Law stakeholders, the NKU Alumni Association, and emeriti faculty. We have shared the planning and progress of our Moving Forward plan.

We will continue these conversations as we adapt to the ever-changing landscape.

Healthy at NKU

As part of our Healthy@NKU efforts, we created a web and mobile app to digitally capture key COVID health screening information for faculty, staff and students. This system includes an extensive reporting structure for all department heads, athletics leadership and trainers, as well as university housing leadership.

As you heard earlier today, we have created a dashboard that provides timely and relevant information on regional pandemic statistics to help guide us in future decision making. Once again, thank you to all who had a hand in creating this important resource.

Additionally, we have adopted the Norse Nine, a set of principles that encourage proper health habits as we fight this pandemic. These principles include requiring facial coverings on campus — including outdoors. To help with this, all current faculty, staff and students are eligible to receive free facial coverings simply by showing their All Card.

Finally, our COVID-19 Preparedness Team, including representatives from Marketing and Communications, as well as Facilities Management, have produced and placed signage all over campus to spread awareness of our efforts and personal responsibilities.

Student Emergency Fund

We also continue to support students through the Student Emergency Fund, which to date, has raised more than \$133,000 and awarded nearly \$74,000 to students who continue to work to support themselves and their families while pursuing their degrees here.

We have assisted 248 students through this fund among 725 total applications. We have also referred more than 400 applications to the CARES Fund.

NKU CARES

Speaking of CARES funds, we have in place a system to automate the distribution of the Federal NKU CARES student grant. The system allows students to apply for funds and receive the same via direct deposit or check.

Through July 31, we have disbursed \$2.1 million of the \$4 million in funds received for the funding for direct student aid. The remaining \$1.9 million will be disbursed this Fall and into the Spring.

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NKU was received \$4 million in institutional Federal CARES funds to deal with COVID-related expenses, \$3.5 million of which has been reimbursed with the remaining to be reimbursed by the end of September.

Thank you to all involved in the Student Emergency Fund, CARES funds work and all the great work that has been done for our students in need.

Mental Health Initiative

Of course, we know that so much more needs to be done for students. Just a few weeks ago at Fall Convocation, I announced a Presidential Initiative for Student Mental Health aimed at enhancing the mental health and wellness of our learners. We are going to explore innovative ways to connect students with the help they need, providing early and ongoing support as they deal with the uncertainty these times present.

Co-chairs Dr. Christopher Lawrence, professor of counseling and director of the Clinical Mental Health Counseling Program and Dr. Nita Vaidya, for whom student wellness is a personal passion, will lead the Mental Health Advisory Group that includes faculty, staff, students, community volunteers, and subject-matter experts in various fields related to mental health.

Together, they will build awareness about the mental health resources available at NKU and assess gaps and unmet needs in the services offered to students. They will develop a three-year plan around areas of priority need. They will also work to build partnerships and external support for key initiatives directed at addressing the stressors our students face. To that end, we have begun conversations with St. Elizabeth Healthcare about possible opportunities.

Thank you to the Mental Health Advisory Group for your service to this important initiative.

Now here is an update regarding enrollment and our budget.

Budget & Enrollment Update

While national enrollment projections in the spring suggested sharp declines amid the pandemic, I am pleased to share that NKU is on target for a third consecutive year of enrollment growth, with nearly 15,700 students enrolled on the first day of classes.

Our graduate programs increased more than 17 percent while summer was up 13 percent for its highest enrollment in history. This overall enrollment growth follows NKU's continued increase in the number of degrees and credentials conferred with 3,068 last academic year, helping – in part – our 6-year undergraduate graduation rate to jump 10 percentage points over the past four years. In just the last year, the 2012 cohort had a graduation rate of 43.8 percent while the 2013 cohort had a graduation rate of 47.6 percent.

As of the first day of classes, our overall undergraduate enrollments are lower than last fall including the overall freshmen class. However, we will hit yet another major accomplishment this fall with first-to-second-year retention projecting to be at an institutional all-time high. As of our first census date, the fall-to-fall retention rate for the 2019 first-time, full-time, Bachelor-degree-seeking cohort is 74.3 percent, compared to 71.9 percent at this time last year. This would top NKU's previous retention high of 74.0 percent set in 2005.

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But despite these accomplishments, we still have work to do. As mentioned, COVID-19 did impact new student enrollment behavior patterns. To address this, Undergraduate Admissions has developed three Synergy Teams whose collective goal is to gather and deliver data for decision making, engage the campus community in recruitment opportunities both on and off campus, and create and ensure NKU is delivering engaging communication and marketing to undergraduate students, parents, and influencers utilizing best practices. These three teams: Recruitment Data/Analytics, Recruitment/Engagement Opportunities, and Communication/Marketing Strategies, include enrollment liaisons from across campus including faculty, staff, students and administration.

Regarding the budget, our preliminary projections for gross tuition for the fall show that we are tracking to be around \$1 million over budget due to higher accelerated online revenues. We are tracking revenues and expenses closely and will be sharing quarterly with each division.

Last week, State Budget Director John Hicks sent a letter informing state agencies, including postsecondary institutions, of the need to draft preliminary budget reduction plans reflecting an 8 percent reduction in our state appropriations. An 8 percent cut for NKU would be approximately \$4.2 million. We will note our contingency budget planning initiatives for the budget reduction plan submitted to Mr. Hicks.

Regarding the pension situation, as you heard this morning, we continue to work with our external consultants in analyzing the various financial options and their impacts on the institution and our employees. Over the next several months, we will also continue conversations with KERS and our legislators while communicating updates to employees and campus constituency groups such as the Staff Congress Pension Committee.

We will have a recommendation to the Board of Regents at the November meeting.

Finally, the Postsecondary Education Working Group has begun discussing whether the state's performance funding model is functioning as expected, to identify any unintended consequences of the model, and to recommend any adjustments. The working group began meeting in July and will continue to meet monthly throughout the end of the year or until the work is complete.

On September 18, we will have a campus conversation around financial sustainability in which we will discuss the higher education business model and the current status of our budget. I invite you all to join us. Details on how to participate will be coming soon.

We have a lot of great news regarding diversity, equity and inclusion this month.

Diversity, Equity and Inclusion

I'd like to start by thanking the Board for approving the new Title IX regulations last month during our special meeting.

The Inclusive Excellence Council is also finalizing our diversity, equity and inclusion goals for the three pillars of Access, Completion and Career & Community Engagement for review by the end of fall semester.

In the coming days, students, faculty and staff will be invited to participate in mandatory online training in sexual assault prevention for NKU students. The goal is to learn about everyone's

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responsibilities and expectations as we continue to build a respectful and healthy campus community, free of sexual harassment and assault.

Last month at Convocation, I mentioned two new DEI programs already in place for the Class of 2024 — The Common Read Program and Humans of Greater Cincinnati, an Honors seminar. I'm happy to report that both are off to impressive starts.

The Common Read Program will host two virtual webinars and panel discussions for all first-year students in the coming weeks. The first session on September 30 will focus on how the media influences our views on race in America. The second event will be held on October 28 and will discuss racial health disparities. Both sessions will include panelists from the Greater Cincinnati region.

As part of the Humans of Greater Cincinnati project, 53 incoming freshmen were shipped iPads at the end of summer, which they have used to take photographs and tell stories about their journey to NKU.

These photo essays have been shared on the Humans of Greater Cincinnati Instagram, Facebook, and web pages, and represent the vast diversity of experiences that NKU students faced in reaching our campus. The larger goal of this project is to have students use the iPads to connect their personal stories to the region by engaging in a series of social media storytelling projects that will eventually take them into the communities of Newport, Covington, and Over the Rhine next semester. By establishing these connections early in their academic careers, our goal is to have students more thoroughly relate their entire academic careers to the needs of Greater Cincinnati.

Both of these programs are extremely exciting for our students. And I have one more inspiring update on our DEI efforts in the form of a new endowed professorship in the College of Informatics.

STRAWS Endowed Professorship of Computer Science

Thanks to an incredibly generous gift from Dr. Carol Swarts, a cherished and longtime supporter of NKU, we have established the **STRAWS Endowed Professorship of Computer Science** — the first endowed faculty position awarded to a woman in the College of Informatics. Dr. Swarts wanted to highlight the university's commitment to building the visibility and prominence of women in science and technology career fields, something the College of Informatics has spent more than a decade working on.

Just last week, Dean Kirby announced Dr. Alina Campan as the inaugural STRAWS Professor of Computer Science. Dr. Campan's groundbreaking research on data mining and data privacy earned a Yahoo Research Best Paper award. She collaborates with faculty and students in Journalism, Computer Science and Statistics to understand the spreading of disinformation on social media.

Congratulations to Dr. Campan, to the College of Informatics and thank you to Dr. Swarts.

Collaborative for Economic Engagement

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We will celebrate the ribbon-cutting for another important partnership tomorrow with the City of Covington. The **Collaborative for Economic Engagement** will be a one-stop innovation hub for businesses and entrepreneurs to accelerate economic growth in the area.

Regional agencies and programs, along with NKU's experts in data analytics, health, tech, logistics and entrepreneurial innovation will provide the tools that entrepreneurs need to thrive. We hope that given the financial impact of the pandemic, the Collaborative for Economic Engagement will play an essential role in helping the local economy move from recovery into growth.

We also plan to expand the regional services into rural counties by developing an extension located on the NKU Grant County campus.

E-Sports Program at NKU

I am happy to announce another opportunity for our students. Back in February during the Homecoming Alumni Awards dinner I announced that NKU would be introducing a new sports program thanks to seed funding through the Success by Design 2020 Innovation Challenge. Well we are close to launching a varsity E-sports program at NKU and I am especially proud because the team was looking at next year for the launch.

Led by Honors College Dean, Dr. Jim Buss, we are in the process of submitting official paperwork to the National Association of Collegiate Esports to compete in Rocket League for the fall season.

Our first varsity team will include three players and one alternate, and a junior varsity team will include three more players. Thanks to the Innovation Challenge Grant and a NACE waiver, our newest competition team is ready to launch. Good luck this season to all involved.

We have a lot more good news to report from each of our divisions as well, so let's move to the latest good news from the Institute for Health Innovation.

Institute for Health Innovation

In collaboration with the College of Health and Human Services, the IHI has received a \$2.2 million Federal Health Resources & Services Administration (HRSA) grant to lead an innovative effort that will increase the number of paraprofessionals that serve children, adolescents, and transitional age youth whose parents have been impacted by Substance Use Disorder. This collaboration will lead to a specialized educational track and paid apprenticeship within the Human Services and Addiction degree program that will begin accepting students this spring.

The IHI has also initiated the Coronavirus Opportunity Grant Program recently in support of faculty-student collaborations that address key issues related to the pandemic and to foster innovative collaborations across disciplines. They have already awarded more than \$15,000 to support 15 participating faculty across 11 disciplines and more than 200 students.

Enrollment and Degree Management

NKU's TRiO Student Support Services' federally funded grant program has been renewed once again for five years until 2025. This annual award of more \$405,000 will continue to provide

ongoing, direct coordinated care and wrap-around services to 225 low-income, first-generation students and students with disabilities. This is the largest award for student support services in the Commonwealth and will enhance and broaden our team's innovative student support programming.

We have more good news to report from the Academic Affairs division, beginning with an exciting honor for Adult Learner Programs and Services.

Academic Affairs Updates

- Through the work of the adult learner's team, NKU has gained distinction as an Age Friendly University, making us the first institution in the Commonwealth to earn that honor. ALPS also received the Project Graduate Grant for \$25,000 to help eligible students with fees, stipends, and books. Congratulations to everyone involved.
- The Chase College of Law will launch a new Master of Legal Studies in Digital Law & Technology degree program in January and will work with Academic Partnerships to promote this opportunity to a global audience interested in the intersection of law, digital commerce and entrepreneurship.
- The Haile/US Bank College of Business recently signed an agreement for its MBA program with Apeejay Institute of Management & Engineering and the Appejay College of Fine Arts in India. The MBA has also added new tracks this fall in healthcare commercialization and law.
- In the College of Informatics, former *Northerner* editor Sam Rosenstiel and sports editor Sierra Newton won first place in the General News Reporting, Large School Division of the National Society of Professional Journalists Mark of Excellence Awards for 2019. NKU has had national finalists in prior years, but this is NKU's first national win. Sam and Sierra will receive their awards at the national conference this month. Congratulations to both of these talented journalists.
- The School of the Arts Visual Communication Design program was recently ranked No. 1 in Kentucky in *Animation Career Review's* sixth annual rankings for graphic design. Also, the Music Prep division won the Best of NKY in Music Instruction for 2020 by Northern Kentucky Magazine for the fourth consecutive year. Congratulations to all.
- College of Arts and Sciences, biology student Dylan Young was called up to the U.S. Army Reserves to help out at the Javits Center, a field hospital in New York City. Dylan served as a medic during the height of the COVID-19 pandemic in the city and found that he could utilize the medical Spanish knowledge he gained in his NKU course with Dr. Kajsa Larson to help patients, even reaching out to her for help while he was there. Dylan plans to continue in a career in medicine following his graduation.
- Finally, the first of nine planned murals on Newport's Ohio River floodwall now depicts the story of the Southgate Street School, where generations of African Americans were educated since the Civil War until the 1950s when public school desegregation was mandated by the U.S. Supreme Court.
- The mural project celebrates the city's 225th anniversary and was first imagined in service-learning classes at NKU. Recent graduates Gina Erardi and Gabrielle Siekman painted the mural, which can be seen on the eastern section of the floodwall, just east of the I-471 exit going toward Bellevue. The Scripps Howard Center for Civic Engagement spearheaded this project and provided financial support while SOTA was also key in this project's progress.

Provost Search

- The search for our new Provost is well underway. The position description has been finalized after considering feedback from multiple constituents and the position has been posted. The search firm Isaacson and Miller is vetting candidates and is expected to bring a slate of candidates to the search committee the week of September 14.

VP for Student Affairs Search

- The VP for Student Affairs search is also progressing well with virtual interviews occurring with the committee and myself in the next few weeks.
- The committee is excited by the quality and diversity of the pool and looks forward to meeting each candidate. The campus community will have the opportunity to interact with the finalists the week of September 28 and the first week of October.

AVP for Government Relations

- One last search to mention: The search for the new AVP for Economic Engagement and Government Relations is also going well. Several candidates have met with campus partners virtually over the last month. Finalists will meet with leadership over the next several weeks with a potential hire expected soon.

Let's continue with reports from other divisions.

Administration and Finance Update

The Administration and Finance division, in partnership with colleagues in Information Technology and across campus, has submitted its Payment Card Industry (PCI) Attestation to our processor, PNC Merchant Services. The PCI Data Security Standard is an information security standard for organizations that handle credit cards. PCI standards are administered by the Payment Card Industry Security Standards Council and the main purpose is to reduce the risk of card data loss. It provides protection for both merchants and cardholders. This is a tremendous accomplishment representing the concerted effort of many individuals including merchants, department heads, and executive leadership over the past seven-plus years.

Athletics

- As you learned this morning, our Norse student-athletes, coaches and staff are beginning to return to workouts and practice. Our fall student-athletes from men's soccer, women's soccer, volleyball and cross country are all eagerly awaiting news from the NCAA on what potential competition in the spring may look like. While we are all excited to see our Norse back in action, the addition of fall sports competing in the spring adds another level of preparation for the athletics department. Our leadership in athletics is already working to make spring competition a reality.
- The pause in competition has also allowed the athletics department to spend time with student-athletes, coaches and staff having conversations on social injustice and racial inequality. These conversations have been centered on how they can actively engage on campus in meaningful ways and make a positive impact.

Welcoming America Week

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I'd like to conclude my remarks by mentioning two community engagement initiative that representatives from NKU will be participating in over the next few weeks.

First, behind the leadership of our International Student Office, NKU will join the Northern Kentucky Chamber along with Cincinnati Compass, World Affairs Council, Refugee Connect and local nonprofits like Heartfelt Tidbits, The Welcome Project, The Center for Greater Neighborhoods and Kentucky African Women Association, to celebrate Welcoming America Week beginning September 12. This week of virtual events will highlight the contributions of immigrants and refugees to this region with a theme of "creating home together."

Through Welcoming Week, we hope to build stronger connections with our immigrant neighbors and affirm the importance of creating a welcoming and inclusive environment so that we all prosper. The Week will feature a panel discussion with some of our international students and one featuring some of our faculty.

At NKU, we like to say that you belong here. I'd like to encourage everyone — whether you're a Board member, student, faculty or staff member, or an alum of NKU, to participate in this virtual event throughout the week. You can participate through the Welcoming Week 2020 NKY and Cincinnati FaceBook page, by sharing photos while patronizing immigrant businesses, and use the hashtag #CreatingHomeTogether #GROWNKY and #WelcomingWeek to help spread awareness and encouragement.

And finally, Election Day is 55 days away and NKU is actively encouraging the community to vote.

The Scripps Howard Center, along with Enrollment & Degree Management and the New Student Orientation Office, worked this summer to send all incoming freshman a NKU VOTE imprinted face mask along with a reminder postcard with information about our #NKUVotes website, nku.edu/ivote.

An NKUVotes video with voter information was included in the new student Virtual Orientation program this year.

SGA will also encourage students to register to vote this semester.

And Regent Michael Baranowski's Election 2020 class this fall, an upper-level political science class includes a weekly podcast about this election. The podcast is available every Wednesday at [Politicsguys.com](https://www.politicsguys.com). The class was featured in an editorial in the Northern Kentucky Tribune.

Please note that the campus will be closed for Election Day on Nov. 3 with no classes so all in our community will have the time they need to engage in their civic duty to vote.

Chair Scheben and members of the Board that concludes my remarks for today's meeting

B. Presidential Reports:

1. Facilities Management Report (Interim Vice President of Administration & Finance/CFO Mike Hales).

- a. Master Plan
- b. Elevator Improvements (Lucas Administrative Center)
- c. New Residence Hall

- d. Norse Hall Exterior Repairs
- e. Fine Arts Floor Heaving Repairs
- f. Fine Arts Center Corbett Lobby Renovation
- g. Fine Arts Roof Restoration
- h. Student Union Ballroom AV/IT Upgrade
- i. Steely Library Improvements
- j. Fine Arts Passenger Elevator Replacement
- k. Mathematics Education Psychology Center West Elevator
- l. Nunn Hall Elevator Replacement
- m. Nunn Hall Return Fans
- n. Albright Health Center Façade Caulk & Seal
- o. Callahan Hall Water Heater Replacement
- p. Access Control Conversion
- q. Math Education Psychology Center/Administrative Center Bridge Parapet Repair
- r. Herrmann Science Center Plaza Replacement
- s. Switchgear Replacement – Three Buildings
- t. US 27 Development

2. Research, Grants, and Contracts Report (April 1, 2020 through June 30, 2020) (Provost and Executive Vice President Sue Ott Rowlands).

During the April 1, 2020 through June 30, 2020 time period 20 grants were awarded. The total amount of money awarded was \$6,781,731. For the fiscal year 2019-20 the cumulative total number of grants awarded is 77 totaling \$13,452,776.

3. Fundraising Report (July 1, 2020 through June 30, 2020) (Vice President of University Advancement Eric Gentry).

The Fundraising Report summarized fundraising resources committed from July 1, 2019 through June 30, 2020 totaling \$11,834,407 in support of the university.

4. Policies Report (Provost and Executive Vice President Sue Ott Rowlands and Vice President for Legal Affairs/General Counsel Joan Gates).

The Policies Report summarized all policies that were approved at the executive-level after proceeding through the campus vetting process. The President and other university administrators determined that approval of these policies by the Board of Regents was not needed per the criteria established in Presidential Recommendation C-7 of the January 2015 regular meeting.

Following policies were approved on this report.

Performance Expectations and Corrective Action
Real Estate Income & Cash Management
Service Animals
Transfer Credit Acceptance-Undergraduate
General Education Certification for Transfer Students with an A.S. or A.A. Degree
General Education Certification for Transfer Students who Completed the Ohio Transfer Module or the Indiana Statewide Transfer Education Core

C. Presidential Recommendations:

Consent Agenda Items: A motion was made by Regent André Ward and seconded by Regent Richard Boehne to approve the Presidential Recommendations as listed; C-1 through C-9.
(Motion carried)

1. Academic Affairs Personnel Actions:

1. Faculty Appointments:

Mr. Ali Balapour assistant professor in the Department of Business Informatics, College of Informatics, effective August 10, 2020; **Dr. Kimberly Dinsey-Read**, associate professor and director in the School of Nursing, College of Health and Human Services, effective July 01, 2020; **Ms. Kelly Fallon**, MSW field education director in the School of Social Work, College of Health and Human Services, effective June 29, 2020; **Dr. Christian Gamm**, director of online education, College of Health and Human Services, effective August 31, 2020; **Ms. Jasmine Hardy**, non-tenure track renewable lecturer and academic advisor in the College of Arts and Sciences, effective August 1, 2020; **Dr. Flore Jesuca**, lecturer in the School of Nursing, College of Health and Human Services, effective August 10, 2020; **Prof. Lawrence J. “Tobe” Liebert**, assistant professor and assistant director of library services in the Department of Law Library, Chase College of Law, effective August 1, 2020; **Dr. Awad Mussa**, assistant professor in the Department of Computer Science, College of Informatics, effective August 10, 2020; **Dr. Richard Pessagno**, lecturer in the School of Nursing, College of Health and Human Services, effective August 10, 2020; **Dr. Minshul Shin**, assistant professor in Engineering Technology in the Department of Physics, Geology, and Engineering Technology, College of Arts and Sciences, effective August 10, 2020; **Dr. Delores White**, assistant professor in the School of Nursing, College of Health and Human Services, effective August 10, 2020; **Dr. Justin White**, lecturer in the School of Nursing, College of Health and Human Services, effective August 10, 2020.

b. Transitions:

Dr. James Allen, from interim dean and associate professor to associate professor in the College of Education, effective July 1, 2020; **Dr. Holly Attar**, from lecturer to lecturer II in Music, in the School of the Arts, College of Arts and Sciences, effective August 10, 2020; **Dr. Linda Ault**, from associate professor to associate professor and interim director in the School of Social Work, College of Health and Human Services, effective May 15, 2020; **Ms. Katie Barton**, from lecturer to lecturer II in Music, in the School of the Arts, College of Arts and Sciences, effective August 10, 2020; **Ms. Nancy Bowers**, from lecturer to lecturer II in the Department of English, College of Arts and Sciences, effective August 10, 2020; **Ms. Trina Cossin**, from associate professor to associate professor and director in the School of Allied Health, College of Health and Human Services, effective July 01, 2020; **Dyane Foltz**, from lecturer/advisor to lecturer/advisor and assistant director in the Advising Center, College of Health and Human Services, effective July 01, 2020; **Dr. Kimberly Gelbwasser-Lazzeri**, from associate professor to associate professor and music program head in the School of the Arts, College of Arts and Sciences, effective August 10, 2020; **Dr. Julie Hart**, from associate professor to associate professor and director of undergraduate clinical education in the School

of Nursing, College of Health and Human Services, effective July 01, 2020; **Ms. Deborah Henry**, from lecturer II to senior lecturer in the Advising Center, College of Health and Human Services, effective July 01, 2020; **Ms. Carolyn Hollan**, from clinical professor and program director to clinical professor and interim clinical coordinator in the School of Allied Health, College of Health and Human Services, effective 8/10/2020; **Dr. Vanessa Hunn**, from associate professor and interim director in the School of Social Work to associate professor and associate dean, College of Health and Human Services, effective May 15, 2020; **Ms. Lisa Jameson**, from associate professor and program head to associate professor in Visual Arts in the School of the Arts, College of Arts and Sciences, effective August 10, 2020; **Dr. Winona Landis**, coordinator for Young Scholars Academy, Undergraduate Academic Affairs, Effective July 1, 2020. **Dr. Alar Lipping**, from professor and interim director to professor and director in the School of Kinesiology, Counseling and Rehabilitative Sciences, College of Health and Human Services, effective July 1, 2020; **Mr. Brad McCombs**, from associate professor and program head in Music, to associate professor and program head in Visual Arts, in the School of the Arts, College of Arts and Sciences, effective August 10, 2020; **Joy Melvin**, from lecturer and clinical education facilitator to lecturer in the School of Nursing, College of Health and Human Services, effective August 01, 2020; **Dr. William Terry Ray**, from non-tenure track renewable to non-tenure track temporary clinical director in the School of Nursing, College of Health and Human Services, effective July 1, 2020; **Dr. David Tataw**, from associate professor and interim director to associate professor in the School of Allied Health, College of Health and Human Services, effective August 10, 2020; **Dr. Patrick Schultheis**, from professor and chair to professor in the Department of Biological Sciences, College of Arts and Sciences, effective August 10, 2020; **Ms. Candice Van Loveren Geis**, from lecturer II to senior lecturer in Visual Arts, in the School of the Arts, College of Arts and Sciences, effective August 10, 2020; **David Wilkerson**, from lecturer to lecturer II in the School of Social Work, College of Health and Human Services, effective August 10, 2020; **Dr. Lynne Zajac**, from associate professor and interim director to associate professor in the School of Nursing, College of Health and Human Services, effective April 08, 2020.

c. Part-Time Tenure:

Dr. Robert Wallace, from professor to permanent part-time tenured professor in the Department of English, College of Arts & Sciences, effective August 10, 2020.

d. Departures:

Dr. Judi Godsey, assistant professor in the School of Nursing, College of Health and Human Services, effective 8/18/2020; **Dr. Qi Li**, professor in the Department of Computer Science, College of Informatics, effective May 15, 2020; **Dr. Lewatis McNeal**, clinical professor and associate dean, College of Health and Human Services, effective 6/30/2020; **Dr. Keshia Nelson**, part-time tenured associate professor in the School of Nursing, College of Health and Human Services, effective 5/31/2020; **Dr. Alexis Pulos**, associate professor in the Department of Communication, College of Informatics, effective May 15, 2020; **Dr. Mauricio Torres**, associate professor in the Department of Physics, Geology and Engineering Technology, College of Arts and Sciences, effective July 17, 2020; **Dr. Cameron Williams**, assistant professor in the Department of Sociology, Anthropology, and Philosophy, College of Arts and Sciences, effective July 15, 2020.

e. **Retirements:**

Mr. Scott Lang, renewable lecturer in Music, in the School of the Arts, College of Arts and Sciences effective July 31, 2020; **Ms. Threasa Wesley**, associate professor in the W. Frank Steely Library, effective August 31, 2020.

f. **Phased Retirement:**

Dr. John Metz, part-time tenured, associate professor in History and Geography, College of Arts and Sciences, beginning fall semester 2020 and terminating spring semester 2022.

g. **Temporary Faculty Appointments:**

Mr. Steven Castellano, Department of Biological Sciences, effective 2020-2021 Academic Year; **Dr. Sarah Ison**, Department of Biological Sciences, effective 2020-2021 Academic Year; **Dr. Warunya Panmanee**, Department of Biological Sciences, effective 2020-2021 Academic Year; **Dr. Marcus Eilers**, Department of Chemistry and Biochemistry, effective 2020-2021 Academic Year; **Ms. Kristina Bielewicz**, CINSAM, effective 2020-2021 Academic Year; **Mr. Rueben Bullard**, CINSAM, effective 2020-2021 Academic Year; **Ms. Amber Carter**, CINSAM, effective 2020-2021 Academic Year; **Ms. Kristi Brock**, Department of English, 2020-2021 Academic Year; **Ms. Lindsey Caldwell-Thomas**, Department of English, 2020-2021 Academic Year; **Ms. Megan Henson**, Department of English, 2020-2021 Academic Year; **Ms. Natalie Williams**, Department of English, 2020-2021 Academic Year; **Mr. Joseph Lombardi**, Department of History and Geography, 2020-2021 Academic Year; **Ms. Kathleen Quinn**, Department of History and Geography, 2020-2021 Academic Year; **Dr. Rachel Zlatkin**, Honors/Integrative Studies, 2020-2021 Academic Year; **Mr. Steven Watkins**, Integrative Studies, 2020-2021 Academic Year; **Ms. Chrystal Culbertson**, Department of Mathematics and Statistics, 2020-2021 Academic Year; **Ms. Barbara Phillips**, Department of Mathematics and Statistics, 2020-2021 Academic Year; **Mr. David Evans**, Department of Mathematics and Statistics, 2020-2021 Academic Year; **Ms. Laura Urbanski**, Department of Mathematics and Statistics, 2020-2021 Academic Year; **Dr. Joy Burdette**, Department of Music, 2020-2021 Academic Year; **Dr. Richard Van Dyke**, Department of Music, 2020-2021 Academic Year; **Dr. Cara Leanne Wood**, Department of Music, 2020-2021 Academic Year; **Mr. John Zappa**, Department of Music, 2020-2021 Academic Year; **Mr. Ashley Shepherd**, Department of Music, 2020-2021 Academic Year; **Dr. Louis Setzer**, Department of Music, 2020-2021 Academic Year; **Mr. Michael Culligan**, Department of Music, 2020-2021 Academic Year; **Nuwan Kumara**, Department of Physics, Geology and Engineering Technology, 2020-2021 Academic Year; **Dr. Peng Zhou**, Department of Physics, Geology and Engineering Technology, 2020-2021 Academic Year; **Mr. Roger Miller**, Department of Physics, Geology and Engineering Technology, 2020-2021 Academic Year; **Mr. Roy Hobbie**, Department of Physics, Geology and Engineering Technology, 2020-2021 Academic Year; **Dr. Souvik Sarkar**, Department of Physics, Geology and Engineering Technology, 2020-2021 Academic Year; **Dr. Saeed Azad**, Department of Physics, Geology and Engineering Technology, 2020-2021 Academic Year; **Ms. Rachel Thornton**, Department of Physics, Geology and Engineering Technology, 2020-2021 Academic Year; **Dr. Yong Xue**, Department of Physics, Geology and Engineering Technology, 2020-2021 Academic Year; **Mr. Jason Farkas**, Department of Political Science,

Criminal Justice and Org. Leadership, 2020-2021 Academic Year; **Dr. Gary Blahnik**, Department of Sociology, anthropology, and Philosophy, 2020-2021 Academic Year; **Dr. Robert Greenleaf Brice**, Department of Sociology, anthropology, and Philosophy, 2020-2021 Academic Year; **Dr. Nichole Grant**, Department of Sociology, anthropology, and Philosophy, 2020-2021 Academic Year; **Ms. Denise Knisely**, Department of Sociology, anthropology, and Philosophy, 2020-2021 Academic Year; **Dr. Michael Simonton**, Department of Sociology, anthropology, and Philosophy, 2020-2021 Academic Year; **Ms. Kristina Vise**, Department of Sociology, anthropology, and Philosophy, 2020-2021 Academic Year; **Mr. Charles Roetting**, Department of Theatre and Dance, 2020-2021 Academic Year; **Mr. Matt Overwine**, Department of Visual Arts, 2020-2021 Academic Year; **Mr. Earl Plowman**, Department of Visual Arts, 2020-2021 Academic Year; **Ms. Julia Sebastian**, Department of Visual Arts, 2020-2021 Academic Year; **Ms. Sandra Bazzani-Aronne**, Department of World Languages and Literatures, 2020-2021 Academic Year; **Dr. Iliana Rosales Figueroa**, Department of World Languages and Literatures, 2020-2021 Academic Year; **Dr. Alfred Greenfield**, Department of Accounting & Business Law, 2020-2021 Academic Year; **Mr. James Human**, Department of Accounting & Business Law, 2020-2021 Academic Year; **Mr. James Kirtley**, Department of Accounting & Business Law, 2020-2021 Academic Year; **Ms. Kimberly Roush**, Department of Marketing, Sports Business, & Construction Management, 2020-2021 Academic Year; **Mr. David Harrison**, Department of Management, 2020-2021 Academic Year; **Mr. Louis Manchise**, Department of Management, 2020-2021 Academic Year; **Dr. Stephen Roush**, Department of Management, 2020-2021 Academic Year; **Mr. Zachary Strobl**, Department of Management, 2020-2021 Academic Year; **Mr. Jeffrey Varrone**, Department of Management, 2020-2021 Academic Year; **Dr. Brian Kasson**, School of Nursing, 2020-2021 Fiscal Year; **Ms. Jennifer Hunter**, School of Nursing, 2020-2021 Academic Year; **Ms. Lynn Brown**, School of Nursing, 2020-2021 Academic Year; **Ms. Amber Thomas**, School of Nursing, 2020-2021 Academic Year; **Ms. Anita Phillips**, School of Nursing, 2020-2021 Academic Year; **Ms. Allison Schmidt**, School of Social Work, 2020-2021 Fiscal Year; **Dr. Rhyanne McDade**, School of KCRS, 2020-2021 Academic Year; **Mr. Keith Collins**, School of KCRS, 2020-2021 Academic Year; **Dr. Ashley Nicole Brooks-DeLa Torre**, School of KCRS, 2020-2021 Academic Year; **Ms. Carrie Hipple**, School of Allied Health, 2020-2021 Academic Year; **Dr. April Eddie**, Department of Teacher Education & School Leadership, 2020-2021 Academic Year; **Ms. Melissa Hess**, Department of Teacher Education & School Leadership, 2020-2021 Academic Year; **Mr. Anthony Burk**, Department of Business Informatics, 2020-2021 Academic Year; **Mr. Matthew Zachary Otey**, Department of Business Informatics, 2020-2021 Academic Year; **Dr. David R. Brandt**, Department of Communication, 2020-2021 Academic Year; **Mr. Aaron Zlatkin**, Department of Communication, 2020-2021 Academic Year; **Mr. John Musgrave**, Department of Computer Science, 2020-2021 Academic Year.

2. Non-Academic Personnel Actions:

The following categories of non-academic personnel actions which occurred between April 11, 2020 and August 7, 2020 received approval by the Board of Regents: Activations/Rehires; Reassignments, Reclassifications, Title/Status Changes, Promotions; Transfers; Contract/Temporary/Student to Regular & Regular to Contract; Departures; Retirements; Administrative/Executive.

3. Major Gifts Acceptance:

The Board of Regents accepted contributions totaling \$1,781,318 received by the NKU Foundation Inc. for the benefit of Northern Kentucky University during the period March 1, 2020 through July 31, 2020.

4. Naming Recommendations:

The Board of Regents approved the following naming action:

1. The naming of an endowed LIFT scholarship to support undergraduate students in the Honors College who demonstrate financial need as determined by the Free Application for Federal Student Aid (FAFSA) and/or are full-time, first-generation students. “Michael Francis Zalla Honors Scholarship”
2. The naming of an endowed scholarship to support students who are attending NKU but who are also employed by St. Elizabeth Healthcare. The scholarship will give preference to students who are pursuing a bachelor of science in nursing. “Eileen Harper Memorial Scholarship”
3. The naming of an endowed LIFT scholarship to support undergraduate students in the College of Education who are full-time, first-generation students, and have demonstrated financial need as determined by the Free Application for Federal Student Aid (FAFSA). “Schlotman LIFT Scholarship”
4. The naming of an endowed scholarship to support students who are active members of a sorority or fraternity and in their junior or senior academic year at NKU. “Christian Dichoso Memorial Scholarship”
5. The naming of an endowed LIFT scholarship to support students in the Haile/US Bank College of Business who demonstrate financial need as determined by the Free Application for Federal Student Aid (FAFSA) and are full-time, first-generation students. “Sean and Kimberly Donovan Business LIFT Scholarship”
6. The naming of an endowed LIFT scholarship to support students who demonstrate financial need as determined by the Free Application for Federal Student Aid (FAFSA) and are fulltime, first-generation students. Preference will be given to students who are underrepresented minorities. “Sean and Kimberly Donovan LIFT Scholarship”
7. The renaming of an endowed scholarship supporting students enrolled at Chase College of Law who demonstrate high academic promise, with a preference for students from Eastern Kentucky. “Frank Allen Fletcher, Circuit Judge, Endowed Scholarship” (previously “Frank Allen Fletcher Outstanding Student Advocate Award”)
8. The renaming of an endowed scholarship supporting the Chase College of Law’s Finish Line Fund, which assists students and graduates with expenses related to

preparation for the bar exam. “Timothy L. and Janice M. Timmel Endowed Finish Line Fund” (previously “Timothy L. and Janice M. Timmel Endowed Scholarship in Trial Practice)

9. The naming of a scholarship that will support undergraduate students at NKU. Preference will be given to a student-athlete competing as an official member of either the Men’s or Women’s Basketball team. “Keith and Lisa Daniels Endowed Athletic Scholarship”

5. Faculty Emeritus Status:

That Emeritus status for the following individuals received Board of Regents approval:

Adrienne Lane, professor in the School of Nursing, College of Health and Human Services, effective August 10, 2020; **Diane Gronefeld**, professor in the School of Allied Health, College of Health and Human Services, effective May 31, 2020; **Ms. Threasa Wesley**, associate professor in the W. Frank Steely Library, effective August 31, 2020.

6. Posthumous Degree – Davis:

The Board of Regents approved that Allyson (Ally) Davis receive a posthumous Bachelor of Fine Arts – Theatre Performance –Musical Theatre Track.

7. Posthumous Degree – Davis:

The Board of Regents approved that Kristina Dickman receive a posthumous Master of Science Degree in Nursing – Adult- Gerontology Nurse Practitioner concentration.

8. Faculty Handbook Amendment:

The Board of Regents approved the amendment to the Faculty Policies and Procedures Handbook, regarding Reappointment, Promotion, and Tenure (RPT).

9. Faculty Handbook Amendment:

The Board of Regents approved the amendment to the Faculty Policies and Procedures Handbook, regarding leadership of the W. Frank Steely Library for purposes of Reappointment, Promotion, and Tenure (RPT).

10. 2020 Series A General Receipts Resolution:

C10 was pulled from Consent agenda and presented to Board by Michael Hales to provide additional context and information.

Motion: A motion was made by Regent Gregory Shumate and seconded by Regent Normand Desmarais to approve Presidential Recommendation C-10. **(Motion carried)**

The Board of Regents adopted the Resolution which provides for the sale and issuance not to exceed \$10,000,000 in General Receipt Obligations for the purpose of (i) refunding outstanding Northern Kentucky University General Receipts Bonds, 2010 Series B, dated October 1, 2010; (ii) financing the costs associated with the renovation of student housing facilities and (iii) paying costs of issuance in connection with the Northern Kentucky University General Receipts Bonds, 2020 Series A.

D. Executive Session:

Regent Dennis Reppenning seconded Regent W. Lee Scheben's motion to enter into executive session pursuant to KRS 61.810(1) (c) and (f). **(Motion carried)**

At 2:22 p.m., Regent Normand Desmarais seconded Regent Gregory Shumate's motion to adjourn. **(Motion carried)**

Signature On File
Wendy J. Peek
Assistant to the Vice President/
Chief Strategy Officer

Signature On File
Bonita J. Brown
Vice President and Chief Strategy Officer
Secretary to the Board of Regents

I, Gregory Shumate, Secretary of the Board of Regents of Northern Kentucky University, certify that the foregoing is a true copy of the minutes of the meeting held on September 9, 2020, and that such matters are still in force and effect.

Signature On File
Gregory Shumate
Secretary of the Board of Regents

**Board of Regents Subcommittee Meeting
Northern Kentucky University
Video Teleconference
October 8, 2020 and October 14, 2020**

Regent Gregory Shumate, Secretary, called the special meeting of the Board of Regents subcommittee to order at 4:00 p.m., Thursday, October 8, 2020. Meeting was continued on October 14, 2020 at 3:30 pm.

Attendees: Normand Desmarais, Gregory Shumate, Bonita Brown, Joan Gates, Sara Kelley.

D. Executive Session:

Regent Normand Desmarais seconded Regent Gregory Shumate’s motion to enter into executive session pursuant to discuss student appeals. **(Motion carried)**

No other matters were discussed.

Regent Normand Desmarais seconded Regent Gregory Shumate’s motion to adjourn. **(Motion carried)**

I, Gregory Shumate, Secretary of the Board of Regents of Northern Kentucky University, certify that the foregoing is a true copy of the minutes of the special meetings held on October 8, 2020 and October 14, 2020, and that such matters are still in force and effect.

Signature On File

Bonita J. Brown
Vice President and Chief Strategy Officer
Secretary to the Board of Regents

Signature On File

Gregory Shumate
Secretary of the Board of Regents

FACILITIES MANAGEMENT REPORT

1. Master Plan

Ayers Saint Gross of Washington, D.C. is leading the update of the campus master plan. The Master Plan Steering Committee is overseeing a collaborative campus planning process focused on land use/site planning, space utilization and space needs, student life, community integration, transportation/parking, and infrastructure including utility planning. Built on consensus through engagement and collaboration, the Campus Master Plan will articulate the physical goals and aspirations of the University's mission aligned with the strategic plan.

The campus engagement phase of the Master Plan process began in November 2019. Phase 1 of the planning process included the quantitative and qualitative analysis of data to provide an accurate portrait of the University. The analysis included a campus-wide space needs assessment measuring the type of space required to support current needs as well as future objectives.

Using the analysis developed in Phase 1 as a foundation, the planning team worked with the campus community to develop Guiding Principles as well as a Conceptual Plan. The Guiding Principles state the University's philosophical goals, help build consensus, and guide decisions related to the development and implementation of the master plan. The Conceptual Plan translates the guiding principles into a shared vision for the spatial development of the University by illustrating the structure, layout, and relationships of planned open space, circulation, environmental systems, buildings, and focal points.

Master Plan – Guiding Principles:

- Support a more engaged university serving the Northern Kentucky region
- Create a place of academic excellence and innovation to support a diversity of learners
- Design a welcoming and desirable NKU experience
- Leverage campus assets to create value

The master plan team has used virtual technology to engage with the internal and external campus communities to develop and evaluate design scenarios for specific areas of the campus. The scenarios include renovation of existing facilities, new construction, relocation of departments, treatment of open space and entryways, pedestrian and vehicular circulation systems, parking, campus entry and arrival, signage and infrastructure. Planning includes athletic and recreation facilities and edge of campus land uses.

A Final Master Plan map is recommended to the Board for approval at the November 2020 meeting. Work on the master plan document will continue through the end of the year and will include all supporting documentation, a descriptive narrative and an Executive Summary.

For more information: <https://www.nku.edu/masterplan.html>

Master Plan - Continued

Consultant: Ayers Saint Gross

Estimated Scope: \$606,000

Fund Source: Net Position

Anticipated Completion: November 2020

2. New Residence Hall

Moody Nolan (MN) architects, of Columbus, Ohio and Lord Aeck Sargent (LAS) of Lexington, Kentucky and Atlanta, has designed a new 297-bed student residential facility. A significant part of LAS' higher education practice is the planning and design of student residential facilities. Messer Construction is serving as construction manager. The building is located on the front (south) section of Lot F. It will include 297 semi-suite style beds featuring two double-occupancy bedrooms sharing one private shower room, one private toilet room, and two sinks. The building will include ample communal gathering and study space to foster student engagement.

Construction began in April 2020. Structural steel is underway, and the two stair towers and the elevator shaft are complete. The building will operate with a geothermal HVAC system, and the geothermal wells are in the ground. While both the Campus Recreation Center (Albright Health Center addition) and the Health Innovation Center/Founders Hall project included geothermal wells, this residence hall will be the first NKU building to operate with only a geothermal system. The project is scheduled for completion by July 2021.

Architect of Record: Moody/Nolan

Student Life/Interior Design Consultant: Lord Aeck Sargent

Engineers: CMTA, THP, The Kleingers Group, Geotechnology, Inc.

Landscape Architect: Vivian Llambi & Associates

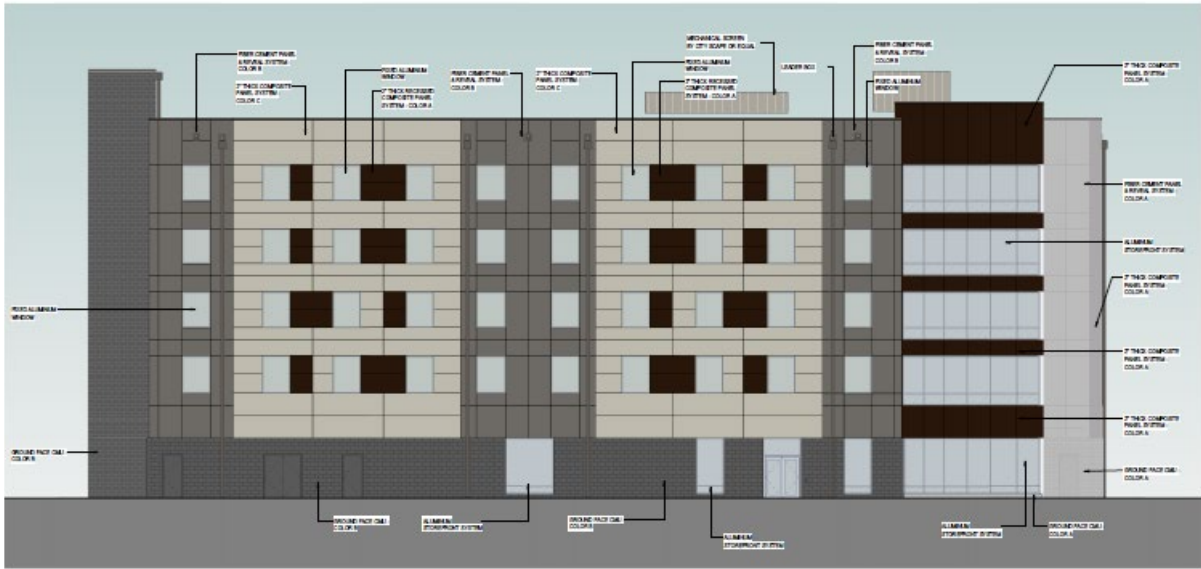
Construction Manager: Messer Construction

Scope: Approx. \$26.5M

Fund Source: NKU Bonds – Supported by Housing Revenue

Anticipated Completion: Summer 2021

New Residence Hall - Continued



North Elevation: New Lot F/Kenton Drive Entry



New Residence Hall, September 30, 2020

New Residence Hall – Continued



Finishing Concrete, 2nd Floor New Residence Hall, September 29, 2020

3. Norse Hall Exterior Repairs

THP, Limited, a structural engineering firm, designed repairs to the exterior of Norse Hall. Work focused on the stairs, landings, balcony railings and the soffits below the balconies. Construction began in June 2020 and was complete in September. This work has an estimated scope of \$950,000.

This project also included replacement of the last section of underground “Blue Max” piping at Norse Hall. This effort, which cost about \$450,000, included installation of needed underground storm water piping, improved access for water shut-offs, flooring replacement and drywall repairs, and restoration of units impacted by past blue-max piping failures. This project is complete.

Engineer: THP Limited

Contractor: Structural Systems Repair Group (Stairs) and Millay & Co. (Blue Max Piping)

Scope: \$1,400,000

Fund Source: NKU Bonds – Supported by Housing Bond Revenue

Anticipated Completion: September 2020

Norse Hall Exterior Repairs - Continued



Norse Hall Exterior Repairs



Norse Hall, New Stairs and Landings

4. Fine Arts Elevator Replacement

The mechanical equipment for the passenger elevator in the original section of Fine Arts is original to the building and in need of total replacement. Increasingly unreliable, modernization of this elevator is essential to ensure safe, continued operation. Otis was the low bidder. Because the freight elevator shares a shaft with the freight elevator, to ensure the safety of the workers that elevator will also be out of service throughout the construction period. Delivery and construction start times have not been determined. Otis has completed the site audit and project is in the submittal phase.

Engineer: Pedco E&A Services

Contractor: Otis

Scope: \$285,000

Fund Source: Deferred Maintenance Project Pool

Anticipated Completion: TBD

5. Nunn Hall Elevator Replacement

Nunn Hall has three elevators, and all are at the end of their useful life. The elevators have become increasingly unreliable and are often out of service. Modernization is essential to ensure safe, continued operation. Otis was the low bidder. One elevator will be out of service throughout the construction period. Otis has completed the site audit and project is in the submittal phase.

Engineer: Pedco E&A Services

Contractor: Otis

Scope: \$800,000

Fund Source: Deferred Maintenance Project Pool

Anticipated Completion: TBD

6. Nunn Hall Return Fans

The return fans in Nunn Hall, original to the building, have out lived their life expectancy. The repair cost for the obsolete parts is extremely high with long delivery times. The fans help regulate temperature and door function due to air pressure. This project is in the planning phase.

Engineer: TBD

Contractor: TBD

Scope: \$550,000

Fund Source: Deferred Maintenance Project Pool

Completion: TBD

7. Callahan Hall Water Heater Replacement

This project was on hold earlier this year but is now approved to proceed. The boilers and mixing valves feeding the hot water system in Callahan are in poor condition and are increasingly unreliable. Bids for this project opened in late October and construction work will follow.

Engineer: CMTA

Contractor: TBD

Scope: \$138,000

Fund Source: Housing Funds

Anticipated Completion: Winter 2020/2021

8. Callahan Hall Renovations

Callahan Hall, a 150,792 GSF residence hall is the East Residential Village, was built in 1962 and renovated in 2008. At that time, due to budget constraints, the renovation of the HVAC work was limited. We now need to replace the two-pipe hot and cold water HVAC distribution piping and, if budget permits, full replacement of the three-pipe domestic hot and cold-water piping. Note that in a few places the HVAC system is a three-pipe system.

The piping rises vertically through the building in mechanical closets and then extends horizontally above ceilings to each residential unit. This vertical and horizontal piping, including valves, is original to this 1962 building and is in poor condition. Problems include clogs, rust pitting, weeping/leaks, poor insulation, etc. Due to the significant amount of piping and the limited timeframe to do the work (between mid-May and late July), this work may need to be phased over two summers, 2021 and 2022.

This project is currently in the consultant selection phase.



Typical basement ceiling condition due to leaks and typical mechanical closet condition.

Engineer: TBD

Contractor: TBD

Scope: \$3,913,715.59

Fund Source: NKU Bonds – Supported by Housing Bond Revenue

Anticipated Completion: TBD

9. Access Control Conversion

A project is underway to convert the University's electronic card access locking system to a new standard. Transitioning from a proprietary access control system to a non-proprietary system will provide NKU the flexibility for a more competitive bidding process for maintaining the system (existing system is \$12 per reader; proposed system will be approximately \$5 per reader). The new system utilizes the NKU All Card. All work is now complete.

Contractor: Structured Access Control

Scope: \$315,000

Fund Source: \$115,000 from Deferred Maintenance Project Pool; \$200,000, cost avoidance due to lower maintenance fees – bridge funded from Net Position

Anticipated Completion: Fall 2020

10. Math Education Psychology Center/Administrative Center Bridge Parapet Repair

The concrete parapets (vertical railing pieces) on the bridge connecting the second floor of the Mathematics Education Psychology Center to the Administrative Center/University Center plaza is in need of repair. The project includes various concrete crack repairs, steel repair and application of a coating to the concrete. Repair to a plaza drain in the vicinity of this railing is also included. This project was on hold but approval to proceed has been received. This project bid in October and repair work will follow.

Engineer: THP Limited

Contractor: TBD

Scope: \$200,000

Fund Source: Deferred Maintenance Projects Pool

Anticipated Completion: Fall 2020

11. Herrmann Science Center Plaza Replacement

The concrete pavers in the circular Science plaza are deteriorated and have become a tripping hazard. Options for paving replacement and resolution of drainage issues are being investigated. The project is in the design phase.

Landscape Architect: RossTarrant

Contractor: TBD

Scope: \$100,000

Fund Source: Deferred Maintenance Project Pool

Anticipated Completion: Spring 2021

12. Switchgear Replacement – Three Buildings

Switchgear equipment distributes a building's incoming electric power to its internal electrical systems. The electrical high voltage switchgear in Landrum, Fine Arts and Nunn Hall all are located inside the buildings, making replacement a challenge. In all three cases, the units (original to the buildings) had reached the end of their useful lives, and risk of failure has become a significant concern. Failure would cause loss of power resulting in a building shutdown. Initially, the projects were managed separately, and three engineering firms were hired to prepare bid documents. In an attempt to leverage increased value, the three switchgear installations were bid to one contractor. The Mayers Electric Company is the contractor. Work will occur over the holiday break.

Engineers: KZF, RMF and KLH

Contractor: Mayers Electric Company

Scope: \$1,250,000

Fund Source: Deferred Maintenance Project Pool

Anticipated Completion: Holiday Break, 2020/2021

13. US 27 Development

Fairmount Properties continues due diligence and planning for the US 27 Development. The project will be a mixed-use development with a pedestrian-friendly, ground floor street presence. Phase One is a 65,000 square foot office building and associated parking garage on the north side of the Nunn Drive intersection for St. Elizabeth Healthcare and OrthoCincy.

Phase Two, on the south side of Nunn Drive, will be a mixed-use development of 30-38,000 square feet of full-service and casual restaurant and retail tenants; a 110-room hotel; 75-150 market rate apartments; parking; and, potentially, office space. Retail uses will result in a safe, active pedestrian experience complete with al fresco dining on patios, sidewalk amenities, public art installations and an urban environment that embraces the notion of a unique street experience.

The State TIF (Tax Increment Financing) application has been reviewed and a final award of \$14.2M was approved. State and local TIF funds will be used to help with the cost of infrastructure development on the Phase II site. OKI has approved an \$861,704 STP/SNK Transit infrastructure support grant for the project. Funds allocated through two federal programs, the Surface Transportation Block Grant program and the Transportation Alternatives program, will be spent on road, transit and pathway improvements benefitting the project. Fairmount will match the grant funds with \$369,302 in project funds.

With occupancy of the St. Elizabeth Medical Office Building at the end of April, Phase One is complete. Phase II Progress - South side of Nunn Drive:

- Fairmount continues to have discussions with potential hoteliers and retailers.
- Master Planning is underway to incorporate design for both sides of Nunn Drive, to ensure a look that is consistent with the objective of creating a new campus gateway.
- Ground Lease negotiations with Fairmount are ongoing.

OFFICE OF RESEARCH, GRANTS, AND CONTRACTS REPORT

The attached report lists the grants awarded, with the amount awarded for each grant, for NKU faculty and staff for July 1, 2020 through September 30, 2020, for Fiscal Year 2020-21:

- During the July 1, 2020 through September 30, 2020 time period, **22** grants were awarded. The total amount of money awarded was **\$3,818,134**.
- For the fiscal year 2020-21, the cumulative total number of grants awarded is **22** totaling **\$3,818,134**.

NKU Office of Research, Grants and Contracts
Grants Awarded Funding: July 01, 2020 - September 30, 2020
FY 2020-2021

<u>Category</u>	<u>Type</u>	<u>College/Administrative Office Department</u>	<u>Project Title</u>	<u>Sponsor</u>	<u>Sponsor Total</u>
<i>Administration & Finance</i>					
Institutional Support	New	Administration & Finance	Governor's Emergency Education Relief Fund (GEER - COVID)	Kentucky Council on Postsecondary Education	\$900,900
<i>College of Arts & Sciences</i>					
Public Service	Continuation	Mathematics & Statistics	KYOTE - Match 20-21	Private Funds	\$20,000
<i>College of Education</i>					
Student Support	New	Teacher Education	Supported Higher Education Project of Northern Kentucky Student Supports	University of Kentucky	\$65,000
<i>College of Health & Human Services</i>					
Applied Research	New	Nursing	Graduate Nursing Student Perceptions of Faculty Immediacy Behaviors and Caring in Accelerated Online Courses	Academic Partnerships	\$4,741
Public Service	Continuation	Social Work	Public Child Welfare Certification Program 20-21	Eastern Kentucky University - FFT	\$12,659
Public Service	Continuation	Social Work	University Training Consortium 20-21	Eastern Kentucky University - FFT	\$129,579
<i>Enrollment and Degree Management</i>					
Student Support	New	Student Support Services	Student Support Services Yr. 1 (New Cycle)	U.S. Department of Education	\$405,303
<i>Haile/U.S. Bank College of Business</i>					
Public Service	New	Center for Innovation & Entrepreneurship	RISE 2021	Blue North (State Flow Through)	\$70,000
Public Service	Continuation	Small Business Development Center	SBDC HB 145 State Funds 20-21	State of Kentucky	\$13,500
Public Service	Continuation	Small Business Development Center	SBDC Federal Funds 20-21	University of Kentucky Research Foundation - FFT	\$106,000
<i>Health Innovation Center</i>					
Instruction	New	Institute for Health Innovation	NKU Paraprofessionals Program for Supporting Opioid Impacted Families (Year 1)	Health Resources and Services Administration	\$442,079
Basic Research	New	Institute for Health Innovation	Section 1115 Substance Use Disorder Demonstration (Year 1)	KY Cabinet for Health & Family Services	\$378,458

<u>Category</u>	<u>Type</u>	<u>College/Administrative Office Department</u>	<u>Project Title</u>	<u>Sponsor</u>	<u>Sponsor Total</u>
<i>Information Technology</i>					
Public Service	Continuation	Infrastructure and Operations	Student Technology Leadership Program Showcase 20-21	Kentucky Department of Education	\$4,000
<i>Outreach Services</i>					
Student Support	Continuation	Upward Bound	Upward Bound 2020-2021 (Year 2)	U.S. Department of Education	\$383,723
<i>Student Affairs</i>					
Student Support	Continuation	Student Affairs	CCAMPIS Year 4	Department of Education-Office of Postsecondary Education	\$154,003
<i>Student Inclusiveness</i>					
Student Support	Continuation	Parents Attending College	KTAP Grant 20-21	KY Cabinet for Health & Family Services	\$145,739
<i>Vice Provost for Graduation Education, Research & Outreach</i>					
Public Service	Continuation	Kentucky Campus Compact	TASK VISTA 2020-2021	Corporation for National and Community Service	\$29,000
Public Service	Continuation	Kentucky Campus Compact	KHEAA Kentucky College Coaches 20-21	Higher Education Assistance Authority	\$458,450
Public Service	New	Kentucky Campus Compact	AmeriCorps ATC Sites 2021	Kentucky Department of Education - FFT	\$8,000
Public Service	New	Kentucky Campus Compact	AmeriCorps Host Sites 2021	Multiple CNCS Partners	\$56,000
Public Service	New	Scripps Howard Center for Civic Engagement	Learning by Giving Foundation Grant for Academic Year 2020-2021	Learning By Giving	\$10,000
Instruction	Continuation	Scripps Howard Center for Civic Engagement	Mayerson Student Philanthropy Project (Mayerson Foundation) 20-21	Manuel D. and Rhoda Mayerson Foundation	\$21,000
Total Number of Awards 07/01/2020 - 09/30/2020			= 22	Total Funds Awarded	\$3,818,134
Total Number of Awards FY 2020-21		<u>22</u>	Total Funds Awarded FY 2020-2021		<u>\$3,818,134</u>

FUNDRAISING RESOURCES

The following Fundraising Report summarizes fundraising resources committed from July 1, 2020 through September 30, 2020 totaling \$4,981,067 in support of the university.

The report includes:

1. Resources in support of the colleges, Academic Affairs and University Designated programs, Steely Library, Norse Athletics, Institute for Health Innovation/Health Innovation Center, and Student Affairs.
2. Resources for Fiscal Year 2021.

FY21 Fundraising Resources Through 9/30/20	
Designation	FY 2021 at 9/30/2020
Academic Affairs/Univ. Designated	\$256,622
Athletics	\$475,386
Chase College of Law	\$68,490
College of Arts & Sciences	\$2,618,293
College of Education	\$1,359
College of Health and Human Services	\$263,528
College of Informatics	\$1,025,030
Haile US Bank College of Business	\$208,619
Honors College	\$360
Institute for Health Innov./Health Innov Ctr.	\$15
Steely Library	\$1,804
Student Affairs	\$61,562
Total	\$4,981,067

**Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky**

Annual Financial Report

June 30, 2020



2019-2020 FINANCIAL REPORT

BOARD OF REGENTS

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Vice President Enrollment and Degree Management

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Co- Interim Chief Student Affairs Officer

Ms. Lori Southwood
Chief Human Resources Officer

Mr. Russell Kerdolff
Comptroller

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October 2, 2020

Northern Kentucky University Board of Regents
Highland Heights, KY 41099

Dear Members of the Board:

I am pleased to share the University's 2019-20 Annual Financial Report. The firm of BKD, LLP, has audited the attached statements and accompanying footnotes.

Like many universities in the nation, the University was negatively impacted by the pandemic this year. Fortunately, the University was able to offset some of the operating revenues that were lost due to the pandemic through a federal grant funded by the Higher Education Emergency Relief Fund (HEERF). Despite the adverse impact of the pandemic and the continued negative impact from the pension and other post-employment benefits (OPEB) reporting changes, the University continues to show solid operating performance as measured by cash flows. Excluding the impact of the pension and OPEB reporting changes, the University's unrestricted net position increased by a combined \$12.9 million for the years ended June 30, 2020, and 2019. At June 30, 2020, the University's unrestricted net position, excluding the pension and OPEB reporting changes, was \$102.9 million.

The University's accelerated online programs, particularly the graduate health professions programs, continued to show the dramatic growth in enrollment that the University was experiencing prior to the pandemic. The growth in the accelerated online programs was primarily responsible for an \$11.7 million and \$11.0 million increase in cash generated from tuition and fees for the year ended June 30, 2020, and 2019, respectively. Management is continuing its efforts to diversify revenue sources, contain costs, and redirect resources to core mission priorities. We are investing in new campus facilities, such as a new student residence hall, and investing in activities that support the three pillars of student success — increased access, higher levels of completion, and advancing opportunities for career and community engagement for all students.

Despite the impact of the worldwide pandemic on NKU, the campus community persevered and continued to move forward in its first year implementing the Success By Design strategic framework. After discussion and input from various constituents, we developed the First Five Initiatives which defined key focus areas for the campus. Campus-wide implementation teams were selected and generated projects to better support students. NKU set aside \$2 million for the framework — 1.5 million in a one-time Strategic Investment and Innovation Fund for projects under the First Five and \$500,000 for the Innovation Challenge in January when teams from across campus “unleashed” their ideas to support our learners. Innovation Challenge winners worked through the summer and many ideas were implemented this fall, including NKU’s brand new E-sports team and the All Rise scholarship program in the Chase College of Law designed to remove obstacles and pave a path to the legal profession for underserved individuals.

Additionally, we launched two crucial programs addressing the access pillar. The River City Promise program builds upon the Gateway2NKU dual admission program by eliminating financial barriers for students from Bellevue, Dayton, Holmes, Lloyd, Ludlow and Newport high schools, and the Young Scholars Academy gives high-achieving high-school students an early start by giving them a full-time collegiate experience and the opportunity to complete a baccalaureate degree at NKU with only two additional years of study. But what I am most proud of this year has been our steady and thoughtful response to COVID-19. From the moment we began the pivot to online instruction and remote operations in March, we kept our focus on supporting students, faculty, staff and the region. After months away from campus, we adopted a plan called Moving Forward that was consistent with our strategic framework and allowed us to resume on campus operations and some face-to-face and hybrid instruction for Fall 2020. The plan included Healthy@NKU, a partnership with St. Elizabeth Healthcare, Gravity Diagnostics, and the Northern Kentucky Health Department that allowed for testing for individuals with symptoms and contact-tracing for those who test positive. Moving Forward included guidance and consideration for faculty and staff to conduct university operations within the context of the pandemic.

As always, there is more work to be done and challenges to be faced. Yet, it is the character and resolve of the NKU community that inspires optimism as I look forward to another successful year.

Sincerely,



Ashish K. Vaidya, Ph.D.
President

Independent Auditor's Report

Board of Regents
Northern Kentucky University
Highland Heights, Kentucky

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities and discretely presented component unit of Northern Kentucky University (University), collectively a component unit of the Commonwealth of Kentucky, as of and for the years ended June 30, 2020 and 2019, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the discretely presented component unit of the University, as of June 30, 2020 and 2019, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, pension and other post-employment benefits information as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the University's basic financial statements. The letter from the president and the listing of the members of the Board of Regents and the University's administration are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

BKD, LLP

Cincinnati, Ohio
October 2, 2020

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Management's Discussion and Analysis
Years Ended June 30, 2020 and 2019

Northern Kentucky University's (the University) Management's Discussion and Analysis of its financial condition provides an overview of the financial performance of the University and its affiliated corporations for the years ended June 30, 2020 and 2019, with selected comparative information for the year ended June 30, 2018. This discussion has been prepared by management and should be read in conjunction with the accompanying financial statements and notes.

As a public comprehensive university located in a major metropolitan area, the University delivers innovative, student-centered education and engages in impactful scholarly and creative endeavors, all of which empower our graduates to have fulfilling careers and meaningful lives, while contributing to the economic, civic, and social vitality of the region.

Financial Highlights

The University's assets increased by \$23.2 million, or 4.3 percent, for the year ended June 30, 2020 and now total \$563.2 million. Current and noncurrent cash and cash equivalents increased by \$39.2 million for the year primarily due to cash generated from operations, including state appropriations and noncapital gifts and grants, and the issuance of bonds to fund the construction of a new residence hall and housing and parking facility renovations. At June 30, 2020, \$32.3 million of the bond proceeds from the 2019 Series A General Receipts bonds issued in November 2019 to fund capital construction projects were on deposit. The University's liabilities grew by \$50.1 million for the year as a result of a \$13.8 million growth in the University's net pension and other post-employment benefits (OPEB) liabilities and a \$31.1 million increase in long-term debt which resulted from the issuance of the General Receipts bonds. The University's net position totaled \$15.4 million and \$48.1 million at June 30, 2020 and 2019, respectively. For the years ended June 30, 2020 and 2019, the University recognized noncash expenses of \$0.4 million and \$1.3 million, respectively, in accordance with the OPEB reporting changes under GASB 75 and noncash expenses of \$18.9 million and \$22.4 million, respectively, in accordance with the pension reporting changes under GASB 68 and GASB 71 resulting in noncash expenses totaling \$43.0 million for the two year period. Excluding the impact of the pension and OPEB reporting changes, the University's unrestricted net position would have increased by \$1.6 million and \$11.3 million for the years ended June 30, 2020 and 2019, respectively.

The University's operating and nonoperating revenues totaled \$239.6 million for the year ended June 30, 2020, an increase of \$7.5 million compared to 2019. Operating revenues increased by \$7.5 million for the year ended June 30, 2020, including a \$12.5 million increase in net tuition resulting from the combined impact of an increase in tuition and fee rate increases and a significant increase in the University's online graduate program enrollment. The pandemic that occurred in the later part of fiscal year 2020, had a significant impact on the University's operating revenues. Revenues generated by the University's arena, Center for Environmental Restoration, campus recreation center, auxiliary operations and other campus activities were negatively impacted by the pandemic resulting in declines in sales and services of educational departments revenues, and other education and general revenues. The pandemic resulted in the closure of the University's housing, food service and parking auxiliary operations during the spring and summer semesters resulting in the issuance of over \$2.5 million in student refunds related to the spring semester and the loss of summer semester revenues. Overall auxiliary enterprises revenues declined by \$3.3 million for the year. The pandemic also contributed to a \$1.7 million decline in investment earnings on the University's endowment and non-endowment investments.

Fortunately, the University was able to offset some of the operating revenues that were lost due to the pandemic through a federal grant funded by the Higher Education Emergency Relief Fund (HEERF). The University's grant award totaled \$8.0 million, of which 50 percent of the funds must be used to provide direct emergency aid to students and 50 percent provides funds to recover foregone revenue and cover costs associated with changes in the delivering instruction due to the coronavirus. For the year ended June 30, 2020, the University disbursed \$1.5 million of the HEERF grant to students and recognized \$1.5 million in institutional HEERF grant revenues, which contributed to a \$2.3 million increase in federal nonoperating grants. Operating and nonoperating expenses increased by \$16.2 million, or 6.3 percent, to a total of \$272.6 million for the year ended June 30, 2020 due to a \$13.1 million increase in instruction expenses and a \$3.6 million increase in student financial aid expenses.

The University's state-funded endowments totaled \$12.5 million as of June 30, 2020. These funds, along with the private endowed gifts donated to benefit the University, are managed by Northern Kentucky University Foundation, Inc. (Foundation) and totaled \$100.5 million at June 30, 2020. For the five-year period that ended June 30, 2020, the endowment funds managed by the Foundation have grown from \$95.1 million to \$100.5 million. The growth in the endowment funds have resulted in significant increases in the annual endowment spending allocations available to support the University's mission. For fiscal years 2020 and 2019, the endowment spending allocations, including support for endowed faculty positions and student scholarships, totaled \$4.5 million and \$4.3 million, respectively.

Using the Financial Statements

The University's financial report includes three financial statements: the statement of net position; the statement of revenues, expenses and changes in net position and the statement of cash flows. These financial statements and accompanying footnotes are prepared in accordance with GASB principles, which establish standards for external financial reporting for public colleges and universities and require that financial statements be presented on a comprehensive, entity-wide basis to focus on the University as a whole.

The University is a component unit of the Commonwealth of Kentucky. The financial statements of the University include the University and its blended component unit, the Northern Kentucky University Research Foundation, Inc. (Research Foundation). Financial statements for the University's discretely presented component unit, Northern Kentucky University Foundation, Inc., have also been included in accordance with GASB pronouncements. Financial statements presented for the Foundation consist of the consolidated statement of financial position and the consolidated statement of activities. These statements for Northern Kentucky University Foundation, Inc. (NKUF) are prepared in accordance with Financial Accounting Standards Board (FASB) pronouncements.

Statement of Net Position

The statement of net position reflects the financial position of the University as of June 30, 2020, with comparative information as of June 30, 2019, and includes all assets, deferred outflows and inflows of resources, liabilities and net position. It is prepared under the accrual basis of accounting, whereby revenues and assets are recognized when the service is provided and expenses and liabilities are recognized when others provide the service, regardless of when cash is exchanged. Net position, consisting of the net amount of the assets, deferred outflows of resources, liabilities, and deferred inflows of resources, is one indicator of the current financial condition of the University. Assets, liabilities, deferred inflows and outflows of resources are generally measured using current values. A major exception is capital assets, which are stated at historical cost, less accumulated depreciation.

A summarized comparison of the University's assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position at June 30, 2020, 2019 and 2018 follows:

Condensed Statements of Net Position (in thousands)

	<u>2020</u>	<u>2019</u>	<u>2018</u>
ASSETS			
Current assets	\$ 135,029	\$ 125,202	\$ 118,758
Capital assets, net	366,619	381,014	388,690
Noncurrent assets	<u>61,519</u>	<u>33,797</u>	<u>32,269</u>
Total assets	<u>563,167</u>	<u>540,013</u>	<u>539,717</u>
DEFERRED OUTFLOWS OF RESOURCES	<u>40,010</u>	<u>43,545</u>	<u>70,980</u>
LIABILITIES			
Current liabilities	43,658	38,375	39,765
Noncurrent liabilities	<u>528,281</u>	<u>483,483</u>	<u>493,918</u>
Total liabilities	<u>571,939</u>	<u>521,858</u>	<u>533,683</u>
DEFERRED INFLOWS OF RESOURCES	<u>15,834</u>	<u>13,622</u>	<u>12,104</u>
NET POSITION			
Net investment in capital assets	261,818	278,002	280,404
Restricted			
Nonexpendable	7,616	7,616	7,616
Expendable	4,255	2,981	5,076
Unrestricted	<u>(258,285)</u>	<u>(240,521)</u>	<u>(228,186)</u>
Total net position	<u>\$ 15,404</u>	<u>\$ 48,078</u>	<u>\$ 64,910</u>

Assets

The University's assets increased by \$23.2 million, or 4.3 percent, for the year ended June 30, 2020 and now total \$563.2 million. Current assets increased by \$9.8 million for the year ended June 30, 2020. Noncurrent assets increased by \$13.3 million for the year ended June 30, 2020 due to a \$29.3 million increase in noncurrent cash and cash equivalents, including \$32.3 million in unspent bond proceeds from the 2019 Series A General Receipts bonds issued in November 2019 to fund capital construction projects. This increase was partially offset by a \$14.4 million decrease in net capital assets and a \$1.3 million decrease in investments.

Net capital assets decreased by \$14.4 million for the year ended June 30, 2020 and decreased by \$7.7 million the prior year, resulting in a combined decrease of \$22.1 million, or 5.7 percent, since June 30, 2018. This two-year decrease is the net result of an \$20.5 million increase in capitalized construction project costs, land improvements, equipment and other capital assets, less \$42.6 million in depreciation. Net capital assets totaled \$366.6 million, or 65.1 percent of total assets as of June 30, 2020.

Deferred Outflows of Resources

Deferred outflows of resources totaled \$40.0 million and \$43.5 million as of June 30, 2020 and 2019, respectively. Deferred outflows of resources related to the University's defined benefit pension and OPEB plans, totaled \$37.5 million and \$40.6 million as of June 30, 2020 and 2019, respectively. The deferred outflows of resources that represent the unamortized difference between the reacquisition price and the net carrying amount of refunded debt totaled \$2.5 million and \$2.9 million at June 30, 2020 and 2019, respectively.

Liabilities

The University's liabilities increased by \$50.1 million, or 9.6 percent, for the year ended June 30, 2020. The \$5.3 million increase in current liabilities resulted from a \$2.0 million growth in accounts payable and accrued liabilities and a \$3.7 million increase in unearned revenue that was driven by a \$1.5 million growth in unearned summer tuition and fee revenues and a \$2.5 million increase in unearned grant revenue. Noncurrent liabilities grew by \$44.8 million for the year as a result of a \$13.8 million growth in the University's net pension and OPEB liabilities and a \$31.1 million increase in long-term debt, which resulted from the issuance of General Receipts Bonds in the amount of \$37.9 million on November 12, 2019. Bonds, notes and capital leases payable, net of discounts and premiums, totaled \$139.9 million and \$108.4 million at June 30, 2020 and 2019, respectively.

At June 30, 2020, the University's proportionate share of the nonhazardous and hazardous net pension and OPEB liabilities totaled \$383.6 million, which represents a \$8.3 million increase since June 30, 2018. For the years ended June 30, 2020 and 2019, the University's net liability related to the post employment health insurance coverage decreased by \$2.6 million and \$5.0 million, respectively, resulting in a net liability of \$51.8 million at June 30, 2020. The University's net pension liability increased by \$16.4 million in 2020 and decreased by \$0.5 million in 2019 resulting in a combined increase of \$15.9 million since June 30, 2018. The net pension liability totaled \$331.8 million at June 30, 2020.

Deferred Inflows of Resources

The University's deferred inflows of resources totaled \$15.8 million and \$13.6 million as of June 30, 2020 and 2019, respectively. Deferred inflows of resources related to the University's defined benefit pension plan totaled \$15.0 million and \$12.6 million as of June 30, 2020 and 2019, respectively.

Net Position

Net position represents the difference between the University's total of assets and deferred outflows of resources and the total of liabilities and deferred inflows of resources. The University's net position totaled \$15.4 million and \$48.1 million at June 30, 2020 and 2019, respectively. For the years ended June 30, 2020 and 2019, the University recognized noncash expenses of \$0.4 million and \$1.3 million, respectively, in accordance with the OPEB reporting changes under GASB 75 and noncash expenses of \$18.9 million and \$22.4 million, respectively, in accordance with the pension reporting changes under GASB 68 and GASB 71 resulting in noncash expenses totaling \$43.0 million for the two year period. Excluding the impact of the pension and OPEB reporting changes, the University's unrestricted net position would have increased by \$1.6 million and \$11.3 million for the years ended June 30, 2020 and 2019, respectively.

Net invested in capital assets totaled \$261.8 million and \$278.0 million at June 30, 2020 and 2019, respectively. The \$18.6 million decrease in net invested in capital assets since June 30, 2018 resulted primarily from depreciation expenses totaling \$42.6 million which were partially offset by \$20.5 million in capitalized assets during the two year period. At June 30, 2020, the University's restricted nonexpendable net position remained unchanged at \$7.6 million. The nonexpendable funds consist of endowments funded through the Commonwealth's Regional University Excellence Trust Fund.

Statement of Revenues, Expenses and Changes in Net Position

The statement of revenues, expenses and changes in net position presents the revenues earned and expenses incurred during the year. Activities are reported as either operating or nonoperating. GASB requires state appropriations and nonexchange grants and contracts to be classified as nonoperating revenues. Accordingly, the University will generate an operating loss prior to the addition of nonoperating revenues.

This statement is prepared on the accrual basis of accounting whereby revenues and assets are recognized when the service is provided and expenses and liabilities are recognized when others provide the service, regardless of when cash is exchanged.

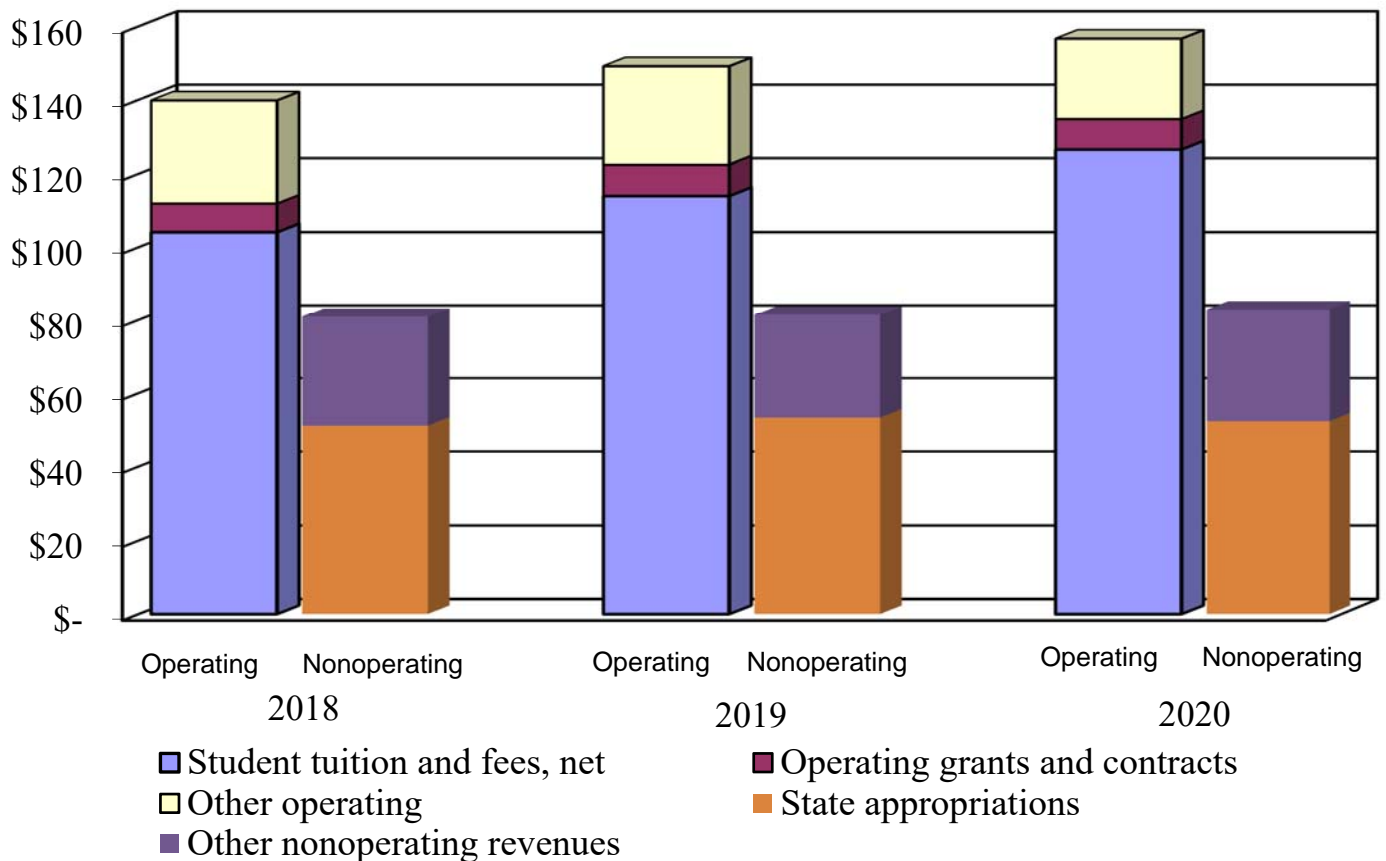
The utilization of long-lived assets, referred to as capital assets, is reflected in the financial statements as depreciation, which amortizes the cost of an asset over its expected useful life. A summarized comparison of the University's revenues, expenses and changes in net position for years ended June 30, 2020, 2019 and 2018 follows:

Condensed Statements of Revenues, Expenses and Changes in Net Position (in thousands)

	<u>2020</u>	<u>2019</u>	<u>2018</u>
OPERATING REVENUES			
Student tuition and fees, net	\$ 126,477	\$ 113,949	\$ 104,079
Grants and contracts	8,286	8,484	7,818
Sales and services of educational departments	3,543	4,286	4,745
Auxiliary enterprises	11,410	14,746	14,951
Other operating revenues	6,907	7,674	8,206
Total operating revenues	<u>156,623</u>	<u>149,139</u>	<u>139,799</u>
OPERATING EXPENSES			
Educational and general	240,161	221,189	227,073
Depreciation	16,995	18,231	16,521
Auxiliary enterprises (including depreciation)	10,992	11,660	12,097
Other expenses	122	70	279
Total operating expenses	<u>268,270</u>	<u>251,150</u>	<u>255,970</u>
Net loss from operations	<u>(111,647)</u>	<u>(102,011)</u>	<u>(116,171)</u>
NONOPERATING REVENUES (EXPENSES)			
State appropriations	52,300	53,315	51,105
Gifts, grants and contracts	29,109	26,436	27,313
Investment income (loss)	1,513	3,210	2,500
Interest on capital asset-related debt	(4,353)	(3,787)	(4,063)
Other nonoperating revenues (expenses)	43	(1,529)	1,432
Net nonoperating revenues	<u>78,612</u>	<u>77,645</u>	<u>78,287</u>
Income (loss) before other revenues, expenses, gains or losses	<u>(33,035)</u>	<u>(24,366)</u>	<u>(37,884)</u>
Capital appropriations	-	-	41,155
Capital grants and gifts	361	7,534	3,189
Total other revenues	<u>361</u>	<u>7,534</u>	<u>44,344</u>
Increase (decrease) in net position	<u>(32,674)</u>	<u>(16,832)</u>	<u>6,460</u>
Net position-beginning of year, as previously reported	48,078	64,910	105,514
Cumulative effect of change in accounting principle	-	-	(47,064)
Net position-beginning of year, as restated	<u>48,078</u>	<u>64,910</u>	<u>58,450</u>
Net position-end of year	<u>\$ 15,404</u>	<u>\$ 48,078</u>	<u>\$ 64,910</u>

Operating and Nonoperating Revenues

The following chart illustrates the University's revenues by source (both operating and nonoperating), which were used to fund its operating activities for fiscal years 2018, 2019 and 2020. Significant recurring sources of revenues, including state appropriations and nonexchange grants and contracts, are considered nonoperating revenues as defined by GASB. These revenues support operating expenses; therefore, they are included in the graph of revenues by source (presented in millions).



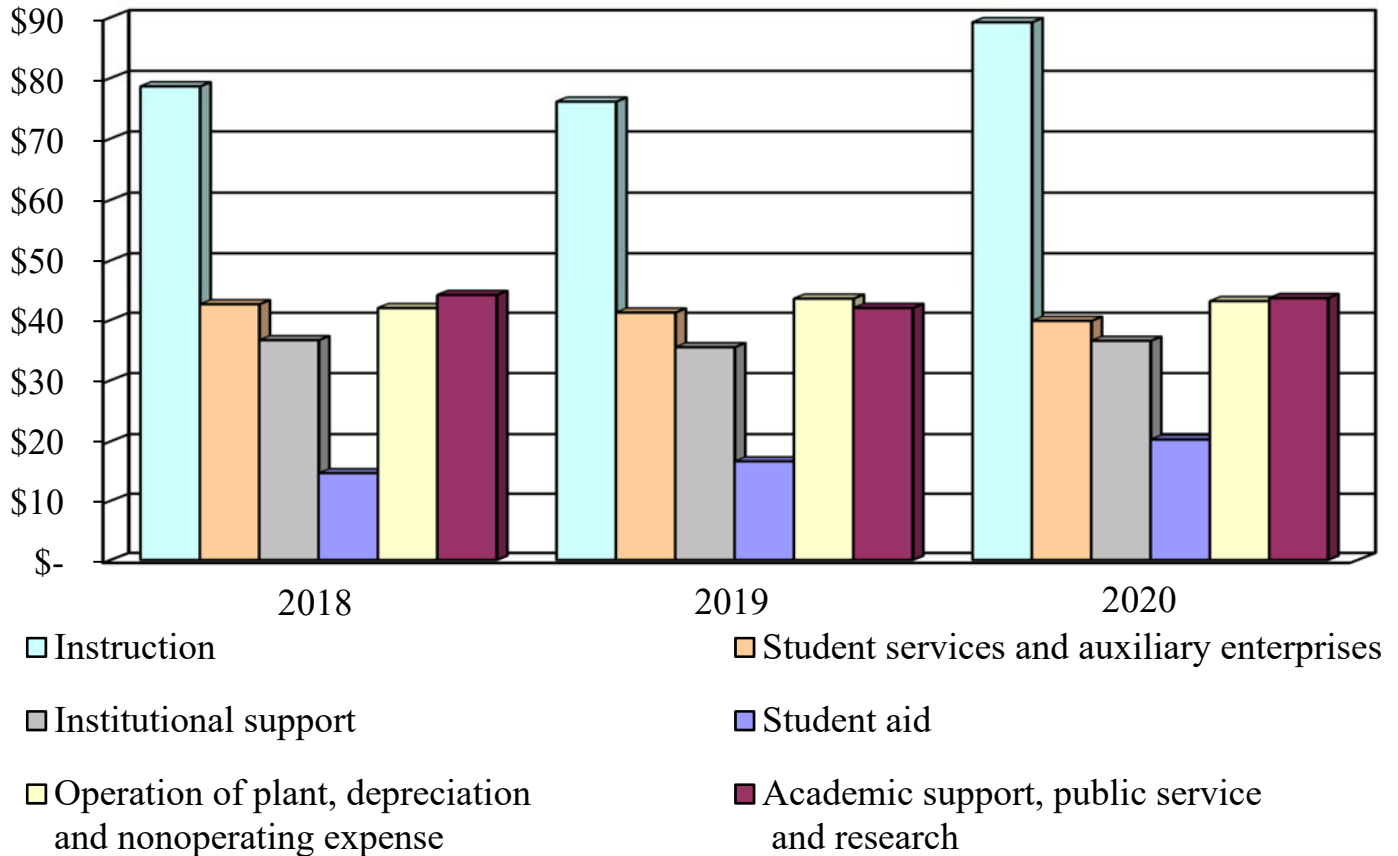
The University's operating and nonoperating revenues totaled \$239.6 million for the year ended June 30, 2020, an increase of \$7.5 million compared to 2019. Operating revenues totaled \$156.6 million, or 65.5 percent of revenues, while nonoperating revenues totaled \$83.0 million, or 34.5 percent of revenues, for the year. The most significant sources of revenue for the University are net student tuition and fees (52.8 percent) and state appropriations (21.8 percent).

Operating revenues increased by \$7.5 million for the year ended June 30, 2020, including a \$12.5 million increase in net tuition resulting from the combined impact of an increase in graduate enrollment and tuition and fee rate increases. Nongovernmental grants and contracts decreased by \$0.3 million due to a decrease in operating grants received from the Northern Kentucky University Foundation. Revenues generated by the Center for Environmental Restoration and campus recreation center were negatively impacted by the pandemic resulting in revenue declines of \$0.5 million and \$0.2 million, respectively, which contributed to a \$0.7 million decline in sales and services of educational departments revenues. The pandemic caused the cancellation of events at the University's arena, a reduction in student service fees and a decline in student orientation fees resulting in a \$0.8 million decrease in other operating revenue. The pandemic resulted in the closure of the University's housing, food service and parking auxiliary operations during the spring and summer semesters resulting in the issuance of over \$2.5 million in student refunds related to the spring semester and the loss of summer semester revenues. Overall auxiliary enterprises revenues declined by \$3.3 million for the year.

Fortunately, the University was able to offset some of the operating revenues that were lost due to the pandemic through a federal grant funded by the Higher Education Emergency Relief Fund (HEERF). The University's grant award totaled \$8.0 million, of which 50 percent of the funds must be used to provide direct emergency aid to students and 50 percent provides funds to recover foregone revenue and cover costs associated with changes in the delivering instruction due to the coronavirus. For the year ended June 30, 2020, the University disbursed \$1.5 million of the HEERF grant to students and recognized \$1.5 million in institutional HEERF grant revenues, which contributed to a \$2.3 million increase in federal nonoperating grants. The pandemic also contributed to a \$1.7 million decline in investment earnings on the University's endowment and non-endowment investments. State appropriations decreased by \$1.0 million in fiscal year 2020 and increased by \$2.2 million in 2019, resulting in a combined \$1.2 million increase the two year period. Total nonoperating revenues remained unchanged at \$83.0 million for the year ended June 30, 2020.

Operating and Nonoperating Expenses

The following chart illustrates the University's expenses by function (both operating and nonoperating) for fiscal years 2018, 2019 and 2020 (presented in millions).



Operating and nonoperating expenses increased by \$16.2 million, or 6.3 percent, to a total of \$272.6 million for the year ended June 30, 2020. Instruction expenses increased by \$13.1 million primarily due to a \$5.1 million increase in faculty salaries and a \$7.1 million increase in contract expenses related to the University's accelerated online courses. Public service expenses decreased for the year by \$0.7 million for the year resulting, in part, from a \$0.4 million decrease in the Center for Environmental Restoration expenses and a \$0.3 million decrease in student travel expenses related primarily to the cancellation of study abroad trips due to the pandemic. Libraries expenses increased by \$0.2 million due, in part, to the University's investment in technology upgrades for the Steely Library. Academic support expenses grew by \$1.8 million primarily due to a \$1.3 million increase in salaries and wages. A \$0.8 million decrease in student services expenses resulted primarily from a \$0.7 million decrease in pension and OPEB expenses and a reduction in renovation project expenses. Institutional support expenses grew by \$1.1 million due to a \$1.2 million increase in operating expenses and a \$0.5 million increase in salary and wages which were partially offset by a \$0.7 decrease in pension and OPEB related expenses. Operation and maintenance of plant increased by \$0.3 million due to a \$1.3 million increase in project expenses, including an energy savings project and a master plan update project, which was partially offset by a \$1.0 million decline in salary and benefits, including a \$0.8 million decrease in pension and OPEB expenses, and a \$0.4 decline in general institutional utility expenses. Education and general depreciation expense declined by \$1.2 million for the year due to a \$1.3 million reduction in depreciation expenses related to the University's enterprise resource planning (ERP) student system, which was fully depreciated as of June 30, 2019.

Tuition and fee scholarship allowances and housing scholarship allowances increased by \$0.3 million and student aid expenses increased by \$3.6 million primarily due to an increase in institutionally funded scholarships, including a \$2.0 million increase in scholarships related to the University's online programs, which have grown significantly and an increase in scholarships for non-resident students. State funded financial aid program expenses increased by \$0.3 million while federal financial aid program expenses decreased by \$0.7 million for the year, including a \$0.7 million decline in Pell grant expenses. The \$1.5 million in emergency student aid disbursed through the HEERF program also contributed to the increase in financial aid expenses for the year.

For the years ended June 30, 2020, 2019 and 2018, cash and noncash pension and OPEB expenses totaled \$36.9 million, \$41.0 million and \$49.3 million, respectively. This \$12.4 million decrease in pension and OPEB expenses combined with a \$25.0 million net increase in nonpension and OPEB related expenses, resulted in a \$12.6 million combined increase in operating and nonoperating expenses for fiscal years 2020 and 2019.

Statement of Cash Flows

Another important factor to consider when evaluating financial viability is the University's ability to meet financial obligations as they become due. The statement of cash flows presents information related to cash inflows and outflows, summarized by operating, noncapital financing, capital and related financing, and investing activities. A comparative summary of the University's statements of cash flows for the years ended June 30, 2020, 2019 and 2018 follows:

Condensed Statements of Cash Flows (in thousands)

	<u>2020</u>	<u>2019</u>	<u>2018</u>
Net cash provided (used) by:			
Operating activities	\$ (69,674)	\$ (54,687)	\$ (64,233)
Noncapital financing activities	83,287	79,410	77,724
Capital and related financing activities	22,689	(15,044)	(5,038)
Investing activities	<u>2,856</u>	<u>2,744</u>	<u>1,894</u>
Net increase (decrease) in cash and cash equivalents	39,158	12,423	10,347
Cash and cash equivalents, beginning of year	<u>128,065</u>	<u>115,642</u>	<u>105,295</u>
Cash and cash equivalents, end of year	<u>\$ 167,223</u>	<u>\$ 128,065</u>	<u>\$ 115,642</u>

The University's cash and cash equivalents increased by \$39.2 million in 2020. Major sources of funds generated by operating activities in 2019 included student tuition and fees (\$125.4 million), grants and contracts (\$8.5 million) and auxiliary enterprises (\$11.5 million). The largest cash payments for operating activities were for salaries and benefits (\$155.3 million), vendor payments (\$49.8 million) and student financial aid (\$20.8 million). Net cash used by operating activities increased by \$15.0 million for the year primarily due to increases in payments for salaries and benefits (\$10.8 million), payments for student financial aid (\$3.1 million) and payments to suppliers (\$8.4 million). A \$7.1 million increase in payments for contracted services related to the University's accelerated online programs contributed to the increase in payments to suppliers. The \$22.3 million increase in operating activities payments was partially offset by a \$7.3 million net increase in cash receipts from operating activities, resulting from an increase in tuition and fees receipts (\$11.7 million) driven by enrollment increases in the accelerated online programs, and an increase in grants and contacts (\$0.6 million) receipts. These increases were partially offset by decreases in auxiliary enterprise receipts (\$3.1 million), sales and services of educational departments receipts (\$1.3 million) and other operating receipts (\$0.7 million).

Net cash provided by noncapital financing activities increased by \$3.9 million for the year ended June 30, 2020 resulting primarily from an increase of \$4.6 million in receipts from federal and state grants, which was partially offset by a \$1.0 million decline in state appropriations. The \$22.7 million of cash provided by capital and related financing activities for the year was driven by the receipt of \$39.9 million in bond proceeds from the issuance of the General Receipts 2019 Series A bonds in November 2019. Purchases of capital assets totaling \$8.0 million were funded by bond proceeds, capital grants and gifts, and institutional funds. The University's principal and interest payments totaled \$12.1 million and \$12.0 million for fiscal years 2020 and 2019, respectively.

Capital Asset and Debt Administration

Capital Assets

As of June 30, 2020, capital assets, net of accumulated depreciation, totaled \$366.6 million, or 65.1 percent of total assets. Capital assets as of June 30, 2020, 2019 and 2018, and significant changes in capital assets during the years ended June 30, 2019 and 2020 are as follows (in thousands):

	Balance June 30, 2018	Net Additions (Deletions)	Balance June 30, 2019	Net Additions (Deletions)	Balance June 30, 2020
Land	\$ 9,629	\$ -	\$ 9,629	\$ (232)	\$ 9,397
Land Improvements	42,082	608	42,690	11	42,701
Buildings	531,166	7,365	538,531	(2,513)	536,018
Equipment	77,662	623	78,285	1,463	79,748
Library Books	15,001	(1,449)	13,552	(3,959)	9,593
Construction in Process	4,096	1,215	5,311	(1,546)	3,765
Accumulated Depreciation	(290,946)	(16,038)	(306,984)	(7,619)	(314,603)
	<u>\$ 388,690</u>	<u>\$ (7,676)</u>	<u>\$ 381,014</u>	<u>\$ (14,395)</u>	<u>\$ 366,619</u>

Net capital assets decreased by \$14.4 million for the year ended June 30, 2020 and decreased by \$7.7 million the prior year, resulting in a combined decrease of \$22.1 million, or 5.7 percent, since June 30, 2018. This two-year decrease is the net result of an \$20.5 million increase in capitalized construction project costs, land improvements, equipment and other capital assets, less \$42.6 million in depreciation. At June 30, 2020, the University had several major projects underway, including a new student residence hall.

Debt

The following is a summary of the University's outstanding capital debt summarized by trust indenture and type as of June 30, 2020, 2019 and 2018 (in thousands):

	<u>2020</u>	<u>2019</u>	<u>2018</u>
General Receipts Bonds, net of discounts and premiums	\$ 135,916	\$ 103,899	\$ 111,891
Housing and Dining System Revenue Bonds	205	405	600
Notes payable and municipal lease obligations	3,744	4,090	275
	<u>\$ 139,865</u>	<u>\$ 108,394</u>	<u>\$ 112,766</u>

Debt increased by \$31.5 million for the year ended June 30, 2020 resulting from principal payments of \$7.8 million on bonds, notes and capital lease obligations, a \$1.4 million growth in net discounts and premiums and the issuance of \$37.9 million of General Receipts 2019 Series A bonds. On November 12, 2019, the University issued General Receipts 2019 Series A bonds with a par amount of \$37.9 million and a net interest cost of 2.92 percent to fund the construction of a new student residence hall and the renovation of existing housing and parking facilities.

The University's current bond ratings assigned by Moody's Investors Service (A1 stable) and Standard and Poors (A negative) to the University's General Receipts bonds reflect the University's solid financial position despite the continued funding challenges related to the KERS pension and OPEB plans.

ECONOMIC FACTORS IMPACTING FUTURE PERIODS

The University continues to move forward in its first year implementing our Success By Design strategic framework focused on advancing student success aligned with the needs of the region. Progress in year one includes creating the First Five Initiatives for implementation. These initiatives will help achieve the goals of increasing access, achieving higher levels of completion and advance opportunities for career and community engagement. The University's vision continues to be a student-ready and regionally engaged university that empowers diverse learners for economic and social mobility.

The enacted budget for 2020-21 (House Bill 352) appropriated \$15.0 million for the Postsecondary Education Performance Fund. These funds are being distributed among institutions according to provisions of Kentucky Revised Statute 164.092, which established the performance funding model that allocates funding based on student success, course completion and operational support. For fiscal year 2021, the University was allocated \$1.0 million from the Performance Fund based on its performance metrics which exceeded the sector average in five of the eleven sectors. The University's state appropriations, including the performance funding allotment, for fiscal year 2021 total \$52.2 million.

In recognition of the disruption and financial uncertainties caused by the COVID-19 pandemic, the University's management decided to freeze undergraduate tuition rates for fiscal year 2021 at the 2020 levels, with the exception of a few increases and decreases in specific program rates driven by market and other factors. Management also decided to waive certain fees, such as additional fees normally assessed on online classes. Finally, management developed a contingency budget plan to prepare for the potential impacts of the pandemic on the fiscal year 2021 budget.

Many of the national enrollment forecasts issued in spring 2020 were projecting sharp declines in fall 2020 enrollment due to the impact of the pandemic. The University is bucking the national trend and on target for a third consecutive year of enrollment growth, with nearly 15,700 students enrolled on the first day of fall classes. This continued growth in enrollment is being fueled by the continued increase in enrollment in the University's accelerated online programs, particularly graduate online programs, and an increase in undergraduate retention rates.

During the 2019 Special Session, the Kentucky General Assembly passed House Bill 1, which provides several options for quasi-governmental employers, including state universities, participating in the KERS. Under HB1, employers may elect to cease participation in the defined benefit plan for nonhazardous employees. The employers who cease participation are required to offer the impacted employees an alternative defined contribution retirement program. During the 2020 regular session, the General Assembly passed House Bill 352, which froze the University's combined pension and OPEB contributions rates for fiscal year 2021 at 49.5 percent.

Under Senate Bill 249, which was passed in the 2020 regular session, the University has until January 1, 2021 to choose one of the following options:

- Remain in the KERS defined benefit plan with no changes and be subject to future contribution rate increases;
- Exit KERS, but elect to keep all Tier 1 and Tier 2 employees in the system. Tier 3 employees and all new employees would participate in the University's defined contribution plan. The University's liability for the Tier 1 and 2 employees would include the unfunded liability as of the cessation date and the estimated normal cost for future service;
- Exit KERS, freeze all KERS pension accounts and move all Tier 1, 2, and 3 employees to a University defined contribution plan. All new employees would participate in the University's defined contribution plan. The University's liability for the Tier 1 and 2 employees would include the unfunded liability as of the cessation date.

If the University elects to exit the system, Senate Bill 249 provides the University the option of paying a lump sum payment on the cessation date or paying annual installment payments, including interest, to KERS until the liability is retired.

Unfortunately, as the Commonwealth and the University continue to face significant budget challenges related to funding the state pension systems, the revenue outlook for the Commonwealth of Kentucky has changed dramatically due to the pandemic according to the 2020 annual edition of Commonwealth of Kentucky Quarterly Economic & Revenue Report. The reports indicate fiscal year 2020 receipts contained a fourth quarter decline, which would have been more profound without the significant federal relief to individuals and business. From March through July 2020, Kentucky received over \$14 billion in payments from the federal government to individuals and businesses. The vast majority of those payment programs have expired. Fortunately, the strong growth in receipts for the first nine months of the fiscal year were enough to offset the fourth quarter decline, resulting in a 1.5 percent growth for the year and a \$177.5 million general fund surplus. The state deposited \$162.5 million of this surplus into the state's Budget Reserve Trust Fund, known as the "rainy day fund", raising the total balance in the fund to \$465.7 million as of June 30, 2020. Given the uncertainty of economic forecasts with the continued impacts of pandemic, the report shows a general fund revenue shortfall for fiscal year 2020-21 ranging from \$242 to \$504 million. Given the uncertainty of economic forecasts and with no current plans to provide additional federal relief funding, the state has asked all state entities, including universities, to draft budget contingency plans in the event that a state budget reduction may be necessary to balance the fiscal year 2021 state budget.

Management is continuing its efforts to diversify revenue sources, contain costs and redirect resources to core mission priorities. The University is working with a partner to develop property at the University's main entrance. Phase one of the development was completed in the spring with the opening of the St. Elizabeth Medical Office building. The building is occupied by St. Elizabeth Healthcare and OrthoCincy. Phase two of the development is expected to include a hotel, approximately 30,000 to 40,000 square feet of retail tenants and restaurants, up to 150 market-rate apartments, parking and potentially, office space. The development will energize the entrance to the University, providing for more amenities for students and better integration with the community. The ground leases for the phases one and two of the development will provide a revenue stream to the University for many years into the future.

In summary, while the impact of the new pension reporting requirements on the University's unrestricted net position is significant, the University continues to show solid operating performance as measured by cash flows. The strategies that drive success by design across the three pillars of access, completion and career and community engagement are as relevant as ever. These strategies are designed to increase enrollment, support students from diverse backgrounds, increase student retention rates, maintain academic quality, deepen regional engagement and increase net tuition revenue. The continued growth in funds provided through endowments, gifts, and other sources of revenues will be essential as the University strives to meet the needs of our students. The University launched a multi-year fundraising campaign in the spring of 2019 with a public goal of \$75 million.

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Statements of Net Position
As of June 30, 2020 and 2019
(in thousands)

	<u>2020</u>	<u>2019</u>
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 120,086	\$ 110,229
Notes, loans and accounts receivable, net	11,672	11,728
Other current assets	3,271	3,245
Total current assets	<u>135,029</u>	<u>125,202</u>
Noncurrent Assets		
Cash and cash equivalents	47,137	17,836
Investments	12,697	14,040
Notes, loans and accounts receivable, net	1,399	1,670
Capital assets, net	366,619	381,014
Other noncurrent assets	286	251
Total noncurrent assets	<u>428,138</u>	<u>414,811</u>
Total assets	<u>563,167</u>	<u>540,013</u>
DEFERRED OUTFLOWS OF RESOURCES		
Bond refunding loss	2,550	2,910
Pension and OPEB	37,460	40,635
Total deferred outflows of resources	<u>40,010</u>	<u>43,545</u>
LIABILITIES		
Current Liabilities		
Accounts payable and accrued liabilities	21,382	19,417
Unearned revenue	12,873	9,183
Long-term debt-current portion	8,795	8,416
Other long-term liabilities-current portion	608	1,359
Total current liabilities	<u>43,658</u>	<u>38,375</u>
Noncurrent Liabilities		
Deposits	11,559	11,285
Long-term debt	131,070	99,978
Other long-term liabilities	2,004	2,354
Net pension and OPEB liability	383,648	369,866
Total noncurrent liabilities	<u>528,281</u>	<u>483,483</u>
Total liabilities	<u>571,939</u>	<u>521,858</u>
DEFERRED INFLOWS OF RESOURCES		
Service agreements	803	978
Pension and OPEB	15,031	12,644
Total deferred inflows of resources	<u>15,834</u>	<u>13,622</u>
NET POSITION		
Net investment in capital assets	261,818	278,002
Restricted		
Nonexpendable	7,616	7,616
Expendable	4,255	2,981
Unrestricted	(258,285)	(240,521)
Total net position	<u>\$ 15,404</u>	<u>\$ 48,078</u>

See accompanying notes to the financial statements

Northern Kentucky University Foundation, Inc.
Consolidated Statements of Financial Position
As of June 30, 2020 and 2019
(in thousands)

	2020	2019
ASSETS		
Cash and cash equivalents	\$ 9,007	\$ 9,355
Loans and accounts receivable, net	452	191
Contributions receivable, net	6,545	3,012
Prepaid expenses and deferred charges	130	42
Investments	106,234	108,503
Land and land improvements	563	548
Accumulated depreciation	(208)	(208)
Total assets	\$ 122,723	\$ 121,443
 LIABILITIES AND NET ASSETS		
Accounts payable	\$ 395	\$ 405
Deferred revenue	674	163
Notes payable	2,000	-
Funds held in trust for Northern Kentucky University	12,487	13,446
Total liabilities	15,556	14,014
 NET ASSETS		
Without donor restrictions		
For current operations	1,751	1,596
Amounts functioning as endowment funds	2,571	2,687
Invested in land and land improvements	355	340
Total without donor restrictions	4,677	4,623
With donor restrictions		
Unexpended funds received for restricted purposes	10,098	9,468
Contributions receivable	6,545	3,012
Loan funds	408	214
Endowment funds	85,439	90,112
Total with donor restrictions	102,490	102,806
Total net assets	107,167	107,429
Total liabilities and net assets	\$ 122,723	\$ 121,443

See accompanying notes to the financial statements

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Statements of Revenues, Expenses and Changes in Net Position
For the Years Ended June 30, 2020 and 2019
(in thousands)

	2020	2019
OPERATING REVENUES		
Student tuition and fees (net of scholarship allowances of \$44,690 in 2020 and \$44,007 in 2019)	126,477	\$ 113,949
Federal grants and contracts	2,411	2,396
State and local grants and contracts	2,961	2,905
Nongovernmental grants and contracts	2,914	3,183
Sales and services of educational departments	3,543	4,286
Auxiliary enterprises		
Housing and food service (net of scholarship allowances of \$1,008 in 2020 and \$1,381 in 2019)	8,462	10,931
Other auxiliaries	2,948	3,815
Other operating revenues	6,907	7,674
Total operating revenues	156,623	149,139
OPERATING EXPENSES		
Educational and general		
Instruction	89,201	76,092
Research	2,339	2,003
Public service	11,061	11,735
Libraries	5,560	5,410
Academic support	24,646	22,822
Student services	28,722	29,486
Institutional support	36,536	35,471
Operation and maintenance of plant	21,800	21,504
Depreciation	16,995	18,231
Student aid	20,296	16,666
Auxiliary enterprises		
Housing and food service	6,018	6,620
Other auxiliaries	1,271	1,378
Auxiliary depreciation	3,703	3,662
Other expenses	122	70
Total operating expenses	268,270	251,150
Net income (loss) from operations	(111,647)	(102,011)
NONOPERATING REVENUES (EXPENSES)		
State appropriations	52,300	53,315
Federal grants and contracts	17,526	15,202
State and local grants and contracts	11,524	11,197
Private gifts and grants	59	37
Investment income (loss)	1,513	3,210
Interest on capital asset-related debt	(4,353)	(3,787)
Other nonoperating revenues (expenses)	43	(1,529)
Net nonoperating revenues	78,612	77,645
Income (loss) before other revenues, expenses, gains or	(33,035)	(24,366)
Capital grants and gifts	361	7,534
Total other revenues	361	7,534
Increase (decrease) in net position	(32,674)	(16,832)
NET POSITION-BEGINNING OF YEAR	48,078	64,910
NET POSITION-END OF YEAR	\$ 15,404	\$ 48,078

See accompanying notes to the financial statements

Northern Kentucky University Foundation, Inc.
Consolidated Statements of Activities
For the Year Ended June 30, 2020
(in thousands)

	Without Donor Restrictions	With Donor Restrictions	Total
REVENUES, GAINS AND OTHER SUPPORT			
Gifts and bequests	\$ 1	\$ 8,887	\$ 8,888
State grants	-	539	539
Rental income	131	-	131
Investment return	18	(2,957)	(2,939)
Other revenue	122	563	685
Total revenues and gains	<u>272</u>	<u>7,032</u>	<u>7,304</u>
Net assets released from restrictions	7,338	(7,338)	-
Total revenues, gains and other support	<u>7,610</u>	<u>(306)</u>	<u>7,304</u>
EXPENSES AND LOSSES			
Program expenses			
Instruction	765	-	765
Research	66	-	66
Public service	735	-	735
Libraries	10	-	10
Academic support	1,038	-	1,038
Student services	592	-	592
Institutional support	932	-	932
University facilities and equipment acquisition	150	-	150
Student financial aid	2,557	-	2,557
Other program expenses and losses	-	10	10
Total program expenses	<u>6,845</u>	<u>10</u>	<u>6,855</u>
Support expenses			
Management and general	503	-	503
Fund raising support	204	-	204
Rental property	4	-	4
Total support expenses	<u>711</u>	<u>-</u>	<u>711</u>
Total expenses and losses	<u>7,556</u>	<u>10</u>	<u>7,566</u>
Increase (decrease) in net assets	54	(316)	(262)
Net assets-beginning of year	4,623	102,806	107,429
Net assets-end of year	<u>\$ 4,677</u>	<u>\$ 102,490</u>	<u>\$ 107,167</u>

See accompanying notes to the financial statements

Northern Kentucky University Foundation, Inc.
Consolidated Statements of Activities
For the Year Ended June 30, 2019
(in thousands)

	Without Donor Restrictions	With Donor Restrictions	Total
REVENUES, GAINS AND OTHER SUPPORT			
Gifts and bequests	\$ -	\$ 5,014	\$ 5,014
State grants	-	669	669
Rental income	131	-	131
Investment return	295	3,566	3,861
Other revenue	117	421	538
Total revenues and gains	<u>543</u>	<u>9,670</u>	<u>10,213</u>
Net assets released from restrictions	<u>12,675</u>	<u>(12,675)</u>	<u>-</u>
Total revenues, gains and other support	<u>13,218</u>	<u>(3,005)</u>	<u>10,213</u>
EXPENSES AND LOSSES			
Program expenses			
Instruction	957	-	957
Research	60	-	60
Public service	882	-	882
Libraries	23	-	23
Academic support	904	-	904
Student services	931	-	931
Institutional support	1,141	-	1,141
University facilities and equipment acquisition	5,296	-	5,296
Student financial aid	1,925	-	1,925
Other program expenses and losses	-	122	122
Total program expenses	<u>12,119</u>	<u>122</u>	<u>12,241</u>
Support expenses			
Management and general	476	-	476
Fund raising support	281	-	281
Rental property	17	-	17
Total support expenses	<u>774</u>	<u>-</u>	<u>774</u>
Total expenses and losses	<u>12,893</u>	<u>122</u>	<u>13,015</u>
Increase (decrease) in net assets	325	(3,127)	(2,802)
Net assets-beginning of year	4,298	105,933	110,231
Net assets-end of year	<u>\$ 4,623</u>	<u>\$ 102,806</u>	<u>\$ 107,429</u>

See accompanying notes to the financial statements

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Statements of Cash Flows
For the Years Ended June 30, 2020 and 2019
(in thousands)

	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES		
Tuition and fees	\$ 125,433	\$ 113,684
Grants and contracts	8,510	7,945
Payments to suppliers	(49,769)	(41,340)
Payments for salaries and benefits	(155,317)	(144,545)
Payments for student financial aid	(20,770)	(17,680)
Loans issued to students	(55)	(86)
Collection of loans to students	169	221
Auxiliary enterprise receipts:		
Housing operations	8,484	10,763
Other auxiliaries	3,028	3,815
Sales and service of educational departments	3,615	4,874
Other receipts (payments)	6,998	7,662
Net cash used by operating activities	(69,674)	(54,687)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
State appropriations	52,300	53,315
Gifts and grants for other than capital purposes	31,111	26,550
Agency and loan program receipts	105,419	92,036
Agency and loan program disbursements	(105,543)	(92,436)
Other nonoperating receipts (payments)	-	(55)
Net cash provided by noncapital financing activities	83,287	79,410
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Proceeds from capital debt and leases	39,936	4,088
Capital appropriations	-	4,447
Capital grants, gifts, and advances received	476	9,829
Proceeds from sale of capital assets	2,963	-
Purchases of capital assets	(7,959)	(21,434)
Principal paid on capital debt and leases	(7,751)	(7,803)
Interest paid on capital debt and leases	(4,358)	(4,171)
Bond issuance costs	(618)	-
Net cash provided (used) by capital and related financing activities	22,689	(15,044)
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from sales and maturities of investments	826	147
Purchase of investments	(267)	(594)
Interest on investments	2,297	3,191
Net cash provided (used) by investing activities	2,856	2,744
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	39,158	12,423
Cash and cash equivalents-beginning of year	128,065	115,642
Cash and cash equivalents-end of year	\$ 167,223	\$ 128,065

See accompanying notes to the financial statements

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Statements of Cash Flows
For the Years Ended June 30, 2020 and 2019
(in thousands)

	2020	2019
RECONCILIATION OF NET OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES:		
Net loss from operations	\$ (111,647)	\$ (102,011)
Adjustments to reconcile operating loss to net cash used by operating activities:		
Depreciation expense	20,698	21,893
Deferred inflows of resources	2,212	1,518
Deferred outflows of resources	3,175	27,068
Changes in assets and liabilities:		
Receivables, net	511	(1,664)
Other assets	(62)	(642)
Accounts payable, accrued liabilities and deposits	1,139	61
Unearned revenue	1,456	3,758
Pension and OPEB	13,782	(5,503)
Long-term liabilities	(938)	835
Net cash used by operating activities	\$ (69,674)	\$ (54,687)
 SUPPLEMENTAL CASH FLOWS INFORMATION		
Gifts of capital assets	\$ 41	\$ 397
Capital asset acquisitions in accounts payable	3,048	2,220
Unrealized gains and losses on investments	1,018	109

See accompanying notes to the financial statements

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Notes to the Financial Statements
For the Years Ended June 30, 2020 and 2019

Note 1 – Organization and Summary of Significant Accounting Policies

a. Reporting Entity

Northern Kentucky University (the University) is a component unit of the Commonwealth of Kentucky (Commonwealth) and is included in the general-purpose financial statements of the Commonwealth. The financial statements of the University include the operations of the Northern Kentucky University Research Foundation (Research Foundation), which is a legally separate, tax-exempt organization supporting the University. In accordance with Governmental Accounting Standards Board (GASB) Statement No. 61, the Research Foundation is reported as a blended component unit of the University and condensed financial information is provided in Note 13.

The Northern Kentucky University Foundation, Inc. (the Foundation) is a legally separate, tax-exempt organization supporting the University. The Foundation acts primarily as a fund-raising organization to supplement the resources that are available to the University in support of its programs. The Foundation's Board of Directors is self-perpetuating and consists of graduates and friends of the University. Although the University does not control the timing or amount of receipts from the Foundation, the majority of resources the Foundation holds and invests are restricted to the activities of the University by the donors. Because these restricted resources held by the Foundation can only be used by, or for the benefit of, the University, the Foundation is considered a component unit of the University and is discretely presented in the University's financial statements.

The accompanying financial statements do not include the financial position or operating results of the Chase College Foundation, Inc. This foundation is a separately incorporated not-for-profit entity organized for the purpose of promoting the educational mission of the University's Salmon P. Chase College of Law. Although this entity benefits the University's Salmon P. Chase College of Law, it is governed by an independent Board of Directors and is not controlled by the University.

b. Basis of Presentation

The accompanying financial statements of the University have been prepared in accordance with accounting principles generally accepted in the United States of America as prescribed by the GASB. In accordance with GASB Statement No. 35, *Basic Financial Statements – and Management's Discussion and Analysis – for Public Colleges and Universities* (GASB 35) and subsequent standards issued by GASB, the University has elected to report as an entity engaged in business-type activities (BTA). BTAs are those activities that are financed in whole or part by fees charged to external parties for goods and services. GASB 35 establishes standards for external financial reporting for public colleges and universities and requires that resources be classified for accounting and reporting purposes into the following net position categories:

- **Net investment in capital assets:** Capital assets, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those assets.
- **Restricted:**
 - Nonexpendable* – Net position subject to externally imposed stipulations that they be maintained permanently by the University.
 - Expendable* – Net position whose use by the University is subject to externally imposed stipulations that can be fulfilled by actions of the University pursuant to those stipulations or that expire by the passage of time. Expendable net position consists primarily of amounts for specified capital construction projects.
- **Unrestricted:** Net position whose use by the University is not subject to externally imposed stipulations. Unrestricted net position may be designated for specific purposes by action of management or the Board of Regents or may otherwise be limited by contractual agreements with outside parties.

The financial statement presentation required by GASB is intended to provide a comprehensive, entity-wide perspective of the University's assets, deferred outflows of resources, liabilities, deferred inflows of resources, net position, revenues, expenses, changes in net position and cash flows.

c. Accrual Basis

The financial statements have been prepared on the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned and expenses are recorded when an obligation has been incurred.

d. Cash and Cash Equivalents

Cash and cash equivalents include all readily available sources of cash such as petty cash, demand deposits, certificates of deposit and temporary investments in marketable debt securities with original maturities less than three months. Funds held by the Commonwealth of Kentucky are also considered cash equivalents.

e. Notes, Loans and Accounts Receivable

This classification consists of tuition and fee charges to students, charges for auxiliary enterprise services provided to students, faculty and staff, loans to students and amounts due from sponsors for reimbursement of expenses made pursuant to contracts and grants. Accounts receivable are recorded net of estimated uncollectible amounts based upon a review of outstanding receivables, historical collection information and existing economic conditions.

f. Capital Assets

Capital assets are stated at cost at date of acquisition or, in the case of gifts, at fair market value at date of gift. Equipment with a unit cost of \$5,000 or more and having an estimated useful life of greater than one year is capitalized. Renovations to buildings, infrastructure and land improvements that significantly increase the value or extend the useful life of the structure are capitalized. Routine repairs and maintenance are charged to operating expense in the year in which the expense is incurred.

Depreciation of capital assets is computed on a straight-line basis over the estimated useful lives of the respective assets, generally 40 years for land improvements, 10 – 40 years for buildings and fixed equipment, 10 years for library books and 3 – 10 years for equipment. The University capitalizes, but does not depreciate, works of art and historical treasures that are held for exhibition, education, research and public service.

The University evaluates capital and lease assets for impairment whenever events or circumstances indicate a significant, unexpected decline in the service utility of a capital and lease asset has occurred. If a capital or lease asset is tested for impairment and the magnitude of the decline in service utility is significant and unexpected, an impairment loss would be recorded. No impairment losses were recognized during the years ended June 30, 2020 or 2019.

g. Compensated absences

University policies permit employees to accumulate vacation and sick leave benefits that may be realized as paid time off or, in limited circumstances, as a cash payment. Expense and the related liability are recognized as vacation benefits are earned whether the employee is expected to realize the benefit as time off or in cash. Sick leave benefits are recognized as expense when the time off occurs and no liability is accrued for such benefits employees have earned but not yet realized except for employees currently eligible to retire from the Kentucky Employers Retirement System (KERS). A liability is accrued equal to the estimated amount to be paid to KERS for sick leave converted to time worked at retirement. Compensated absence liabilities are computed using the regular pay rates in effect at the statement of net position date plus an additional amount for compensation-related payments such as social security and Medicare taxes computed using rates in effect at that date.

h. Investments

Investments in equity and debt securities are carried at fair value. Fair value is determined using quoted market prices. Investment income consists of interest and dividend income, realized gains and losses and the net change for the year in the fair value of investments carried at fair value.

i. Unearned Revenue

Unearned revenue includes amounts received for tuition and other student fees prior to the end of the fiscal year but related to the subsequent accounting period. Unearned revenue also includes amounts received from grants and contracts sponsors that have not yet been earned. Unearned revenue is recognized as services are rendered.

j. Deposits

Noncurrent deposits consist primarily of deposits held in a wetland restoration fund pursuant to a memorandum of agreement with a federal agency.

k. Cost-Sharing Defined Benefit Pension Plan

The University participates in a cost-sharing multiple-employer defined benefit pension plan Kentucky Retirement Systems, (KRS). For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Plan and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

l. Cost-Sharing Defined Benefit Other Postemployment Benefit Plan

The University participates in a cost-sharing multiple-employer defined benefit other postemployment benefit plan, KRS, (the OPEB Plan). For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the OPEB Plan and additions to/deduction from the OPEB Plan's fiduciary net position have been determined on the same basis as they are reported by the OPEB Plan. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

m. Deferred Outflows and Inflows of Resources

A deferred outflow of resources is a loss in net position by the University that is applicable to a future reporting period. Deferred outflows of resources are reported in the statement of net position, but are not recognized in the financial statements as expense until the related period. Deferred outflows of resources include \$2,550,000 and \$2,910,000 of losses on bond refunding for the years ended June 30, 2020 and 2019, respectively. The remaining balance of deferred outflows for years ended June 30, 2020 and 2019 consist of the KERS pension and OPEB related unamortized balances.

A deferred inflow of resources is a gain in net position by the University that is applicable to a future reporting period. Deferred inflows of resources are reported in the statement of net position but are not recognized in the financial statements as revenue until the related period. The agreement between the University and the University's food service providers resulted in a deferred inflow of resources of \$803,000 and \$978,000 at June 30, 2020 and 2019, respectively. The deferred inflows of resources related to this agreement are recognized evenly over the life of the contract. The remaining deferred inflows of resources for the years ended June 30, 2020 and 2019 consist of the KERS pension and OPEB related unamortized balances.

See Notes 7 and 8 for details of pension and OPEB related deferred outflows of resources and deferred inflows of resources.

n. Scholarship Allowances

Student tuition and fee revenues and other student related revenues are reported net of scholarship allowances in the statement of revenues, expenses and changes in net position. Scholarship allowances are the differences between the stated charge for services provided by the University, and the amounts that are paid by the students or third parties making payments on a student's behalf. To the extent that revenues from such programs are used to satisfy tuition and fees, and other student charges, the University has recorded a scholarship allowance.

o. Income Taxes

The University is an agency and instrumentality of the Commonwealth, pursuant to Kentucky Revised Statutes sections 164.290 through 164.475. Accordingly, the University is generally exempt from federal income taxes as an organization described in Section 115 of the Internal Revenue Code of 1986, as amended. The Research Foundation has received a determination from the Internal Revenue Service granting exemption from federal income taxation pursuant to the provisions of Internal Revenue Code section 501(c)(3).

p. Restricted Asset Spending Policy

The University's policy states that restrictions on assets cannot be fulfilled by the expenditure of unrestricted funds for similar purposes. The determination on whether restricted or unrestricted funds are expended for a particular purpose is made on a case-by-case basis. Restricted funds remain restricted until spent for the intended purpose.

q. Operating Activities

The University defines operating activities, as reported on the statement of revenues, expenses and changes in net position, as those that generally result from exchange transactions, such as payments received for providing goods and services and payments made for services and goods received. Nearly all of the University's expenses are from exchange transactions. Certain significant revenues relied upon for operations, such as state appropriations, gifts, and investment income, are recorded as nonoperating revenues, in accordance with GASB 35. In accordance with GASB Statement No. 24, *Accounting and Financial Reporting for Certain Grants and Other Financial Assistance* and related GASB implementation guidance, Pell Grants, College Access Program (CAP) Grants and Kentucky Educational Excellence Scholarship (KEES) are considered nonexchange transactions and are recorded as nonoperating revenues in the accompanying financial statements.

r. CARES Act

The *Coronavirus Aid, Relief, and Economic Security (CARES)* Act was signed into law by President Trump on March 27, 2020. The CARES Act included direct payments to institutions of higher education through the Higher Education Emergency Relief Fund (HEERF). The University's grant award totaled \$8.0 million, of which 50 percent of the funds must be used to provide direct emergency aid to students and 50 percent provides funds to recover foregone revenue and cover costs associated with changes in delivering instruction due to the coronavirus. For the year ended June 30, 2020, the University distributed and recognized \$1.5 million of the HEERF grant to students; and, therefore, recognized \$1.5 million in the institutional HEERF grant funds. An additional \$2.2 million in institutional expenses have been incurred and recorded as deferred revenue until such time as an equal amount of student funds are expended.

s. Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and deferred inflows and outflows of resources and disclosure of contingent assets and liabilities at the date of the financial statements. Estimates also affect the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

t. Component Unit Disclosure

The accompanying financial statements of the Foundation have been prepared in accordance with accounting principles generally accepted in the United States of America as prescribed by the Financial Accounting Standards Board. As such, certain revenue recognition criteria and presentation features are different from GASB revenue recognition criteria and presentation features.

Complete financial statements for the Foundation can be obtained from the Northern Kentucky University Foundation, Inc. at Lucas Administrative Center Room 820, Nunn Drive, Highland Heights, KY 41099.

u. Related Party Transactions

During the years ended June 30, 2020 and 2019, the Foundation made payments on behalf of the University of \$331,000 and \$327,000, respectively, for salaries, benefits, and other administrative costs for University staff that directly support the Foundation's operations. These payments are made by agreement between the Foundation and University. Approximately \$0 and \$4,000 as of June 30, 2020 and June 30, 2019 respectively, was owed to the University for such costs.

In support of University programs, the Foundation incurred program expenses of \$6,855,000 and \$12,175,000 for 2020 and 2019, respectively, which consisted of payments on behalf of the University of \$4,858,000 and \$4,570,000, for 2020 and 2019, respectively; and amounts transferred to the University for restricted purposes of \$1,997,000 and \$7,605,000 for 2020 and 2019, respectively.

During the year ended June 30, 2020, Northern Kentucky University sold 20.24 acres of land to the Foundation for approximately \$2,968,000 and recognized a gain on the transaction of approximately \$2,736,000.

v. Change in Accounting Principle

During fiscal year 2020, the University adopted GASB Statement No. 89 *Accounting for Interest Cost Incurred before the end of a Construction Period*. The Statement requires interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred rather than included in the historical cost of a capital asset.

w. Recent Accounting Pronouncements

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities*, effective for the University's fiscal year ending June 30, 2021. This statement establishes criteria to identify and report fiduciary activities in the University's financial statements. In general, if the University controls the activities and the beneficiaries of fiduciary funds, then the activity should be included in the Fiduciary section of the financial statements. Business-type activities are required to include custodial funds as assets with an offset to a liability in their statement of net position, and report additions and deductions in the statement of cash flows. This statement also establishes requirements for reporting fiduciary activities of component units. A fiduciary fund component unit, should be reported in the primary government's fiduciary funds. The University is currently evaluating the effects of this statement on its financial statements.

In June 2017, the GASB approved Statement No. 87, *Leases*. The objective of this Statement is to improve the accounting and financial reporting for leases by governments. This Statement requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. In May 2020, the GASB issued Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*, that postponed the effective date of this pronouncement. The provisions of this statement are now effective for reporting periods beginning after June 15, 2021. The University is currently evaluating the effects of this statement on its financial statements.

In May 2020, the GASB approved Statement No. 96, *Subscription-based Information Technology Arrangements*. The statement provides guidance on the accounting and financial reporting for subscription-based information technology arrangements (SBITAs). A SBITA results in an intangible asset and corresponding subscription liability. The statement also provides the capitalization criteria for outlays other than subscription payments including implementation costs of a SBITA. The provisions of this statement are effective for reporting periods beginning after June 15, 2022. The University is currently evaluating the effects of this statement on its financial statements.

x. Reclassifications and Revisions

Certain items have been reclassified in the Statement of Cash Flows for the year ended June 30, 2019 in order to conform to classifications used for the year ended June 30, 2020. One such reclassification to the Statement of Cash Flows for the year ended June 30, 2019 was made to correct an immaterial error. This correction increased payments to suppliers and decreased purchases of capital assets by approximately \$836,000 respectively. Additionally, the Statement of Cash Flows for the year ended June 30, 2019 incorrectly reported \$2,653,000 in capital assets acquired through debt as Supplemental Cash Flows Information. Accordingly, this information has been revised in the Statement of Cash Flows for the year ended June 30, 2020. These reclassifications and revisions had no effect on total net position or the change in net position.

Note 2 – Cash, Cash Equivalents and Investments

At June 30, 2020, petty cash funds totaled \$57,000 and the carrying amount of the deposits was \$167,166,000 with a corresponding total bank balance of \$170,694,000. Of the bank balance, \$37,350,000 was covered by federal depository insurance, or collateralized with securities held by the pledging bank, or bank's agents, in the University's name and \$133,344,000 was held and invested by the Commonwealth. These deposits were covered by federal depository insurance or by collateral held by the Commonwealth in the Commonwealth's name.

Investments

The investments which the University may purchase are limited by the Commonwealth's law and the University's bond resolutions to the following (1) securities or obligations which are fully guaranteed by the U.S. Government or agencies of the U.S. Government as to principal and interest; (2) certificates of deposit or time deposits of banks, trust companies or national banking associations which are insured by the Federal Deposit Insurance Corporation; and (3) mutual funds investing solely in U.S. securities.

Custodial credit risk: Custodial credit risk for deposits is the risk that in the event of a bank failure, a government's deposits or collateral securities may not be returned to it. The University currently uses commercial banks and the Commonwealth as its depositories. Deposits with commercial banks are substantially covered by federal depository insurance or collateral held by the bank in the University's name. At the Commonwealth, the University's accounts are pooled with other agencies of the Commonwealth. These Commonwealth-pooled deposits are substantially covered by federal depository insurance or by collateral held by the Commonwealth in the Commonwealth's name. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of investment or collateral securities that are in the possession of an outside party.

The following schedule reports the fair values of the University's investments at June 30, 2020 and 2019 (in thousands):

	<u>2020</u>	<u>2019</u>
Treasury bills	\$ 210	\$ 594
Restricted assets held by the Foundation	12,487	13,446
Total investments	<u>\$ 12,697</u>	<u>\$ 14,040</u>

University investments held by the Foundation represent the University's Regional University Excellence Trust Fund endowments which are invested in an investment pool managed by the Foundation. See Note 14 (c) for the required GASB fair value disclosures for the University's investments that are included in the Foundation's investment pool. University assets in the Foundation's investment pool at June 30, 2020 and 2019 are invested as follows:

	<u>2020</u>	<u>2019</u>
Type of Investment:		
Fixed income funds	21%	15%
Domestic equity funds	34%	35%
International equity funds	13%	14%
Emerging markets	8%	9%
Private equity	6%	6%
Natural resources	10%	13%
Other	8%	8%
Total Investments	<u>100%</u>	<u>100%</u>

Interest Rate Risk: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. As stated in the University's investment policy, the bond resolution governs the investment of bond reserves. The bond resolution limits the investment maturities by the lesser of the remaining life of the bond issue or ten years. Certificates of deposit can have a maturity of not more than two years from the date of issue.

Credit Risk: Credit risk is the risk that the issuer or other counterparty to an investment will not fulfill its obligations. The University's investment policy requires investments to be in compliance with state statute. University investments that are managed by the Foundation are governed by the Foundation's investment policy. This policy contains several provisions which are intended to limit credit risk, including a requirement that fixed income portfolios maintain a weighted-average credit rating of at least AA (Standard and Poor's) and have no more than 10 percent of the portfolio in below investment grade bonds.

Concentration of Credit Risk: Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single user. The University debt service reserves are invested by the bond trustees in accordance with the governing bond resolutions. There are no specific limits on the maximum amount of investment securities held in bond debt service reserve funds that may be invested in one issuer. However, such investments are limited to interest-bearing direct obligations of the U.S. government or obligations fully guaranteed by the U.S. government.

Foreign Currency Risk: This risk relates to adverse effects on the fair value of an investment from changes in exchange rates. The University had no investments denominated in foreign currency at June 30, 2020 or June 30, 2019.

Note 3 – Notes, Loans and Accounts Receivable

Notes, loans and accounts receivable as of June 30, 2020 and 2019 are as follows (in thousands):

	<u>2020</u>		
	<u>Gross</u>		<u>Net Receivable</u>
	<u>Receivable</u>	<u>Allowance</u>	
Student loans	\$ 1,051	\$ (378)	\$ 673
Student accounts receivable	13,350	(4,959)	8,391
Reimbursement receivable grants and contracts	1,588	-	1,588
NKU Foundation receivable	234	-	234
Other	2,912	(727)	2,185
Total	<u>\$ 19,135</u>	<u>\$ (6,064)</u>	<u>\$ 13,071</u>
Current portion			\$ 11,672
Noncurrent portion			1,399
Total			<u>\$ 13,071</u>

	2019		
	Gross		
	Receivable	Allowance	Net Receivable
Student loans	\$ 1,317	\$ (486)	\$ 831
Student accounts receivable	13,012	(4,439)	8,573
Reimbursement receivable grants and contracts	1,244	-	1,244
NKU Foundation receivable	245	-	245
Other	3,388	(883)	2,505
Total	<u>\$ 19,206</u>	<u>\$ (5,808)</u>	<u>\$ 13,398</u>
Current portion			\$ 11,728
Noncurrent portion			1,670
Total			<u>\$ 13,398</u>

Note 4 – Capital Assets, net

Capital assets for the years ended June 30, 2020 and 2019 are summarized as follows (in thousands):

	7/1/2019			6/30/2020
	Beginning	Additions	Reductions	Ending
	Balance			Balance
Cost:				
Land	\$ 9,629	\$ -	\$ 232	\$ 9,397
Land improvements	42,690	85	74	42,701
Buildings	538,531	7,644	10,157	536,018
Equipment	78,285	2,221	758	79,748
Library books	13,552	331	4,290	9,593
Construction in process	5,311	-	1,546	3,765
	<u>687,998</u>	<u>10,281</u>	<u>17,057</u>	<u>681,222</u>
Accumulated Depreciation:				
Land improvements	10,946	1,171	44	12,073
Buildings	218,778	16,108	8,035	226,851
Equipment	65,653	2,980	710	67,923
Library books	11,607	439	4,290	7,756
	<u>306,984</u>	<u>20,698</u>	<u>13,079</u>	<u>314,603</u>
Capital assets, net	<u>\$ 381,014</u>	<u>\$ (10,417)</u>	<u>\$ 3,978</u>	<u>\$ 366,619</u>

	7/1/2018 Beginning Balance	Additions	Reductions	6/30/2019 Ending Balance
Cost:				
Land	\$ 9,629	\$ -	\$ -	\$ 9,629
Land improvements	42,082	1,542	934	42,690
Buildings	531,166	10,073	2,708	538,531
Equipment	77,662	2,770	2,147	78,285
Library books	15,001	208	1,657	13,552
Construction in process	4,096	1,215	-	5,311
	<u>679,636</u>	<u>15,808</u>	<u>7,446</u>	<u>687,998</u>
Accumulated Depreciation:				
Land improvements	10,045	1,183	282	10,946
Buildings	204,513	16,100	1,835	218,778
Equipment	63,627	4,108	2,082	65,653
Library books	12,761	502	1,656	11,607
	<u>290,946</u>	<u>21,893</u>	<u>5,855</u>	<u>306,984</u>
Capital assets, net	<u>\$ 388,690</u>	<u>\$ (6,085)</u>	<u>\$ 1,591</u>	<u>\$ 381,014</u>

The estimated cost to complete construction under contract at June 30, 2020 was approximately \$23,158,000.

As of June 30, 2020 and 2019, the net book value of equipment acquired through capital leases included in the above schedules totaled \$3,084,000 and \$2,653,000, respectively.

Note 5 – Accounts Payable and Accrued Liabilities

Accounts payable and accrued liabilities as of June 30, 2020 and 2019 are as follows (in thousands):

	2020	2019
Payable to vendors and contractors	\$ 10,127	\$ 8,820
Accrued expenses, primarily payroll and vacation leave	6,643	5,986
Employee withholdings and deposits payable to third parties	3,468	3,258
Self-insured health liability	1,144	1,353
Total	<u>\$ 21,382</u>	<u>\$ 19,417</u>

Note 6 – Long-Term Liabilities

The changes in long-term liabilities for the years ended June 30, 2020 and 2019 are summarized as follows (in thousands):

	Balance			Balance June 30, 2020	Current Portion	Noncurrent Portion
	July 1, 2019	Additions	Reductions			
Housing and Dining Revenue Bonds	\$ 405	\$ -	\$ 200	\$ 205	\$ 205	\$ -
General Receipts Bonds (net of premiums)	103,899	39,936	7,919	135,916	8,233	127,683
Total bonds	104,304	39,936	8,119	136,121	8,438	127,683
Notes and leases payable	4,090	-	346	3,744	357	3,387
Total debt	108,394	39,936	8,465	139,865	8,795	131,070
Deferred compensation	112	-	35	77	39	38
Federal portion of loan programs	1,083	3	331	755	-	755
Unearned revenue	9,558	12,894	9,308	13,144	12,873	271
KERS-sick leave	720	446	122	1,044	104	940
Other	350	-	175	175	175	-
Total other long-term liabilities	11,823	13,343	9,971	15,195	13,191	2,004
Deposits	12,358	2,031	2,540	11,849	290	11,559
Net pension and OPEB liability	369,866	16,456	2,674	383,648	-	383,648
Total long-term liabilities	\$ 502,441	\$ 71,766	\$ 23,650	\$ 550,557	\$ 22,276	\$ 528,281

	Balance			Balance June 30, 2019	Current Portion	Noncurrent Portion
	July 1, 2018	Additions	Reductions			
Housing and Dining Revenue Bonds	\$ 600	\$ -	\$ 195	\$ 405	\$ 200	\$ 205
General Receipts Bonds (net of discounts and premiums)	111,891	-	7,992	103,899	7,870	96,029
Total bonds	112,491	-	8,187	104,304	8,070	96,234
Notes and leases payable	275	4,088	273	4,090	346	3,744
Total debt	112,766	4,088	8,460	108,394	8,416	99,978
Deferred compensation	145	-	33	112	39	73
Federal portion of loan programs	1,071	14	2	1,083	-	1,083
Unearned revenue	5,473	9,558	5,473	9,558	9,183	375
KERS-sick leave	763	144	187	720	72	648
Other	525	-	175	350	175	175
Total other long-term liabilities	7,977	9,716	5,870	11,823	9,469	2,354
Deposits	12,062	2,644	2,348	12,358	1,073	11,285
Net pension and OPEB liability	375,369	108	5,611	369,866	-	369,866
Total long-term liabilities	\$ 508,174	\$ 16,556	\$ 22,289	\$ 502,441	\$ 18,958	\$ 483,483

a. Bonds

The gross revenues of the Housing and Dining system operations are pledged for the retirement of the Housing and Dining System Revenue Bonds. The \$208,000 reserve requirement for the Housing and Dining issue was fully funded as of June 30, 2020. The \$348,000 required housing repair and replacement fund was fully funded as of June 30, 2020.

The outstanding obligation as of June 30, 2020 and 2019 for the Northern Kentucky University General Receipts Bonds are reported net of premiums totaling \$8,206,000 and \$6,854,000, respectively. General Receipts Bonds are collateralized by the operating and nonoperating income of the University excluding income which as a condition of the receipt is not available for payment of debt service charges.

On November 12, 2019, Northern Kentucky University General Receipts Bonds were issued in the amount of \$37,870,000 and a net interest cost of 2.92 percent. The majority of the proceeds are being used to renovate existing housing facilities and construct a new student residence hall. A portion of the proceeds were used to renovate parking facilities. The interest expense during construction is being funded with bond proceeds.

The total bonds payable as of June 30 are as follows (in thousands):

	<u>2020</u>	<u>2019</u>
Housing and Dining System Revenue bonds payable		
Series B, dated November 1, 1980, with an interest rate of 3.00%. Final principal payment date November 1, 2020.	\$ 205	\$ 405
Total Housing and Dining System Revenue bonds payable	<u>205</u>	<u>405</u>
General Receipts bonds payable		
Series A 2010, dated June 29, 2010, with interest rates from 2.00% to 3.50%. Final principal payment date September 1, 2020.	250	490
Series B 2010, dated October 21, 2010, with interest rates from 2.00% to 3.75%. Final principal payment date September 1, 2027.	6,900	7,635
Series A 2011, dated August 4, 2011, with interest rates from 2.00% to 4.00%. Final principal payment date September 1, 2030.	6,290	6,750
Series A 2013, dated February 26, 2013, with an interest rate of 2.00%. Final principal payment date September 1, 2022.	1,605	2,120
Series A 2014, dated January 7, 2014, with interest rates from 2.00% to 5.00%. Final principal payment date September 1, 2033.	37,560	39,385
Series A 2016, dated May 17, 2016, with interest rates from 2.00% to 5.00%. Final principal payment date September 1, 2027.	23,230	25,640
Series A 2016, dated August 25, 2016, with interest rates from 2.00% to 4.00%. Final principal payment date September 1, 2028.	14,005	15,025
Series A 2019, dated November 12, 2019, with interest rates from 3.00% to 5.00%. Final principal payment date September 1, 2044.	37,870	-
Total General Receipts bonds payable	<u>127,710</u>	<u>97,045</u>
Plus: Net premiums	8,206	6,854
Total bonds payable	<u>\$ 136,121</u>	<u>\$ 104,304</u>

Principal maturities and interest on bonds for the next five years and in subsequent five-year periods are as follows (in thousands):

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2021	\$ 7,690	\$ 4,878	\$ 12,568
2022	8,490	4,556	13,046
2023	8,900	4,196	13,096
2024	8,735	3,809	12,544
2025	9,600	3,399	12,999
2026 - 2030	43,140	11,162	54,302
2031 - 2035	21,840	4,855	26,695
2036 - 2040	9,030	2,267	11,297
2041 - 2045	10,490	805	11,295
Subtotal	127,915	39,927	167,842
Plus: Net premiums	8,206	-	8,206
Total	<u>\$ 136,121</u>	<u>\$ 39,927</u>	<u>\$ 176,048</u>

b. Leases

In January 2019, the University entered into a capital lease obligation, in the amount of \$4,088,000, with an interest rate of 2.81 percent, for an energy management project. The lease will be paid with guaranteed energy savings.

In May 2018, the University entered into a capital lease obligation through a third-party financial institution, in the amount of \$275,000, with an interest rate of 4.43 percent. This obligation was used to fund computer equipment.

Lease obligations as of June 30 are as follows (in thousands):

	<u>2020</u>	<u>2019</u>
Capital lease payables		
Capital equipment lease, dated May 1, 2018, with an interest rate of 4.43%. Final principal payment date May 1, 2022.	\$ 112	\$ 165
Energy management lease, dated January 24, 2019, with an interest rate of 2.81%. Final principal payment date November 24, 2030.	3,632	3,925
Total capital lease payable	<u>\$ 3,744</u>	<u>\$ 4,090</u>

Future minimum lease payments for the next five years and in subsequent five-year periods are as follows (in thousands):

<u>Fiscal Year</u>	<u>Present Value of Future Minimum Lease Payments</u>	<u>Interest Portion</u>	<u>Total</u>
2021	\$ 357	\$ 105	\$ 462
2022	368	94	462
2023	319	83	402
2024	328	74	402
2025	338	64	402
2026 - 2030	1,836	173	2,009
2031 - 2035	198	3	201
Total	<u>\$ 3,744</u>	<u>\$ 596</u>	<u>\$ 4,340</u>

Note 7 – Pension Plans and Accrued Compensated Absences

Employees of the University are covered by one of the following plans:

a. Defined Contribution Plan

A Teachers Insurance and Annuity Association - College Retirement Equities Fund (TIAA CREF) sponsored plan, adopted by the Board of Regents in July 1970, is available upon completion of ninety days of service, to all regular full-time members of the faculty, administrative officers and others who have educational related duties. The TIAA CREF retirement plan is a defined contribution, money purchase retirement plan. The employees contribute 5 percent of their base salary to the plan, and the University contributes 10 percent. All payments are vested immediately and the contracts with the providers are owned by the individual employees. The employee is entitled to various payment options upon retirement. Benefit payments at retirement depend on the total contributions with interest deposited into the employee's account. Retirement benefits can begin upon retirement or termination of employment with the University. Covered payroll totaled \$52,067,000 and \$47,022,000 for the years ended June 30, 2020 and 2019, respectively. The University's contribution totaled \$5,207,000 and \$4,702,000 for the years ended June 30, 2020 and 2019, respectively.

b. Defined Benefit Plan

Plan Description - All regular employees not participating in the above plan are required to participate in either the Nonhazardous or Hazardous cost-sharing multiple employer defined benefit pension plan, both of which are under the Kentucky Employees Retirement System (KERS), that is administered by the Board of Trustees of the Kentucky Retirement Systems (KRS). The defined benefit plans provide for retirement, disability and death benefits. Participants have a fully vested interest after the completion of 60 months of service, 12 of which are current service. KERS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to Kentucky Retirement Systems, Perimeter Park West, 1260 Louisville Road, Frankfort, Kentucky, 40601-6124 or by calling (502) 696-8800.

Kentucky Employees' Retirement System
Governance KRS 61.510 through KRS 61.705
Cost Sharing Multiple Employer Defined Benefit

	Tier 1 Participation Prior to 9/1/2008	Tier 2 Participation 9/1/2008 through 12/31/2013	Tier 3 Participation on or after 1/1/2014
Nonhazardous			
Benefit Formula:	Final Compensation X Benefit Factor X Years of Service		Cash Balance Plan
Final Compensation:	Average of the highest 5 fiscal years (must contain at least 48 months). Includes lump-sum compensation payments (before and at retirement).	5 complete fiscal years immediately preceding retirement; each year must contain 12 months. Lump-sum compensation payments (before and at retirement) are not to be included in creditable compensation.	No Final Compensation
Benefit Factor:	1.97%, or 2.0% for those retiring with service for all months between 1/1998 and 1/1999.	10 years or less = 1.10%. Greater than 10 years, but no more than 20 years = 1.30%. Greater than 20 years, but no more than 26 years = 1.50%. Greater than 26 years, but no more than 30 years = 1.75%. Additional years above 30 = 2.00% (2.00% benefit factor only applies to service earned in excess of 30 years).	No benefit factor. A life annuity can be calculated in accordance with actuarial assumptions and methods adopted by the board based on member's accumulated account balance.
Cost of Living Adjustment (COLA):	No COLA unless authorized by the Legislature with specific criteria. This impacts all retirees regardless of Tier.		
Unreduced Retirement Benefit:	Any age with 27 years of service. Age 65 with 48 months of service. Money purchase for age 65 with less than 48 months based on contributions and interest.	Rule of 87: Member must be at least age 57 and age plus earned service must equal 87 years at retirement to retire under this provision. Age 65 with 5 years of earned service. No money purchase calculations.	
Reduced Retirement Benefit:	Any age with 25 years of service. Age 55 with 5 years of service.	Age 60 with 10 years of service. Excludes purchased service (exception: refunds, omitted, free military).	No reduced retirement benefit.

	Tier 1 Participation Prior to 9/1/2008	Tier 2 Participation 9/1/2008 through 12/31/2013	Tier 3 Participation on or after 1/1/2014
Hazardous			
Benefit Formula:	Final Compensation X Benefit Factor X Years of Service		Cash Balance Plan
Final Compensation:	Highest 3 fiscal years (must contain at least 24 months). Includes lump-sum compensation payments (before and at retirement).	3 highest salaries; each year must contain 12 months. Lump-sum compensation payments (before and at retirement) are not to be included in creditable compensation.	No Final Compensation
Benefit Factor:	2.49%	10 years or less = 1.30%. Greater than 10 years, but no more than 20 years = 1.50%. Greater than 20 years, but no more than 25 years = 2.25%. Greater than 25 years = 2.50%.	No benefit factor. A life annuity can be calculated in accordance with actuarial assumptions and methods adopted by the board based on member's accumulated account balance.
Cost of Living Adjustment (COLA):	No COLA unless authorized by the Legislature with specific criteria. This impacts all retirees regardless of Tier.		
Unreduced Retirement Benefit:	Any age with 20 years of service. Age 55 with 60 months of service.	Any age with 25 years of service. Age 60 with 5 years of service.	Any age with 25 years of service. Age 60 with 5 years of service.
Reduced Retirement Benefit:	Age 50 with 15 years of service.	Age 50 with 15 years of service.	No reduced retirement benefit

Contributions- Benefit and contribution rates are established by state statute. Per Kentucky Revised Statute 61.565, contribution requirements of the active employees and the participating organizations are established and may be amended by the KRS Board. For the fiscal years ended June 30, 2020 and 2019, University employees were required to contribute 5 percent of their annual covered salary for retirement benefits. The University's required contribution percentage rates per covered payroll for the years ended June 30, 2020 and 2019 are as follows:

	<u>2020</u>	<u>2019</u>
Nonhazardous pension plan	41.06%	41.06%
Hazardous pension plan	34.39%	34.39%

The required contribution is actuarially determined as an amount that, when combined with employee contributions, is expected to finance the cost of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The University's total required contribution to the KERS nonhazardous pension plan for the years ended June 30, 2020 and 2019 were \$14,310,000 and \$14,162,000, respectively. The required contribution to the KERS hazardous pension plan for the years ended June 30, 2020 and 2019 were \$287,000 and \$256,000, respectively.

Pension liabilities, pension expense, and deferred outflows of resources and deferred inflows of resources related to pensions - At June 30, 2020 and 2019, the University reported a liability of \$329,798,000 and \$313,460,000, for its proportionate share of the nonhazardous net pension liability. The University's hazardous pension liability was \$2,041,000 and \$1,952,000 for the years ended June 30, 2020 and 2019, respectively. The net pension liability was measured as of June 30, 2019 and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The University's proportion of the net pension liability was based on a projection of the University's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers, actuarially determined. At June 30, 2020 and 2019, the University's proportion was 2.335 and 2.304 percent for nonhazardous and 0.374 and 0.386 percent for hazardous, respectively.

For the years ended June 30, 2020 and 2019, the University recognized nonhazardous pension expense of \$33,067,000 and \$36,422,000; and hazardous pension expense of \$477,000 and \$356,000, respectively.

At June 30, 2020, the University reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (in thousands):

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Nonhazardous		
Differences between expected and actual experience	\$ 1,950	\$ -
Change of assumptions	10,042	-
Net difference between projected and actual earnings on investments	-	672
Changes in proportion and differences between employer contributions and proportionate share of contributions	-	3,922
Contributions subsequent to the measurement date	14,310	-
Hazardous		
Differences between expected and actual experience	39	-
Change of assumptions	143	-
Net difference between projected and actual earnings on investments	-	35
Changes in proportion and differences between employer contributions and proportionate share of contributions	24	45
Contributions subsequent to the measurement date	287	-
Total	<u>\$ 26,795</u>	<u>\$ 4,674</u>

At June 30, 2019, the University reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (in thousands):

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Nonhazardous		
Differences between expected and actual experience	\$ 2,233	\$ 877
Change of assumptions	13,999	-
Net difference between projected and actual earnings on investments	299	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	-	5,689
Contributions subsequent to the measurement date	14,162	-
Hazardous		
Differences between expected and actual experience	100	-
Change of assumptions	177	-
Net difference between projected and actual earnings on investments	(24)	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	45	40
Contributions subsequent to the measurement date	256	-
Total	<u>\$ 31,247</u>	<u>\$ 6,606</u>

At June 30, 2020, the University reported \$14,597,000 as deferred outflows of resources related to pensions resulting from University contributions subsequent to the measurement date that will be recognized as a reduction of the net pension liability in the following year. Other amounts reported as deferred outflows of resources and deferred inflows of resources at June 30, 2020, related to pensions will be recognized in pension expense as follows (in thousands):

Year Ending June 30	
2021	\$ 5,291
2022	2,472
2023	(223)
2024	(16)
	<u>\$ 7,524</u>

Pension Actuarial assumptions – The total pension liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement for nonhazardous and hazardous pensions.

	<u>Nonhazardous</u>	<u>Hazardous</u>
Inflation	2.30%	2.30%
Salary Increases	3.30% to 15.30%, varies by service	3.55% to 20.05%, varies by service
Investment Rate of Return	5.25%, net of pension plan investment expense, including inflation	6.25%, net of pension plan investment expense, including inflation

The mortality table used for active members was a Pub-2010 General Mortality table for the Non-Hazardous System and the Pub-2010 Public Safety Mortality table for the Hazardous System, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010. The mortality assumptions for non-disabled retirees is based on a system-specific mortality table based on mortality experience from 2013 – 2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019. The mortality table used for the disabled retirees was PUB-2010 Disabled Mortality table, with a 4-year set-forward for both male and female rates, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010.

The most recent actuarial experience study was for the period July 1, 2013 through June 30, 2018. The long-term expected rate of return was determined by using a building-block method in which best estimate ranges of expected future real rate of returns are developed for each asset class. The ranges are combined by weighting the expected future real rate of return by the target asset allocation percentage.

The target asset allocation and best estimates of arithmetic nominal rates of return for each major asset class are summarized in the following table:

<u>Asset Class</u>	<u>Long Term Expected Real Rate of Return</u>	<u>Nonhazardous Target Allocation</u>	<u>Hazardous Target Allocation</u>
US equity	4.30%	15.75%	18.75%
Non US equity	4.80%	15.75%	18.75%
Private equity	6.65%	7.00%	10.00%
Specialty Credit/High Yield	2.60%	15.00%	15.00%
Core Bonds	1.35%	20.50%	13.50%
Cash	0.20%	3.00%	1.00%
Real Estate	4.85%	5.00%	5.00%
Opportunistic	2.97%	3.00%	3.00%
Real Return	4.10%	15.00%	15.00%
Total		<u>100.00%</u>	<u>100.00%</u>

Pension Discount rate – The discount rate used to measure the total pension liability was 5.25 percent for the nonhazardous plan, and 6.25 percent for the hazardous plan. The projection of cash flows used to determine the discount rate assumed that local employers would contribute the actuarially determined contribution rate of projected compensation over the remaining 24 year (closed) amortization period of the unfunded actuarial accrued liability. As the assets are deemed sufficient to pay future benefits, the discount rate determination does not use a municipal bond rate.

Sensitivity of the University's proportionate share of the net pension liability to changes in the discount rate - The University's proportionate share of the net pension liability has been calculated using a discount rate of 5.25 percent for the nonhazardous and 6.25 percent for hazardous. The following presents the University's proportionate share of the net pension liability calculated using a discount rate 1 percent higher and 1 percent lower than the current rate (in thousands):

	<u>1% Decrease (4.25%)</u>	<u>Current Discount Rate (5.25%)</u>	<u>1% Increase (6.25%)</u>
Nonhazardous			
Proportionate share of the Collective Net Pension Liability	\$ 378,070	\$ 329,798	\$ 289,906
Hazardous			
Proportionate share of the Collective Net Pension Liability	\$ 2,631	\$ 2,041	\$ 1,555

Payable to the pension plan - The University reported payables of \$1,266,000 and \$1,331,000 for the outstanding amount of employer contributions to the pension plan required for the years ended June 30, 2020 and 2019, respectively.

Effective July 1, 2010, KRS 61.546 states “the value of any accumulated sick leave that is added to the member’s service credit in the KERS on or after July 1, 2010, shall be paid to the retirement system by the last participating KERS employer based upon a formula adapted by the Board.” The KERS sick leave liability as of June 30, 2020 and 2019 was \$1,044,000 and \$720,000, respectively.

c. Compensated Absences

University employees begin to accumulate annual vacation allowance from the initial date of employment; however, no vacation is granted until three months of continuous employment have been completed. The maximum accumulation of vacation leave is limited to the number of days that can be accumulated in twelve months, based upon length of service and employment classification. Eligible employees are paid their accumulated vacation upon termination, subject to certain limitations. At June 30, 2020 and 2019, the University had recognized an accrued vacation liability of \$3,580,000 and \$3,111,000, respectively.

Note 8 – Other Post-Employment Benefits

a. Defined Benefit Plan

Plan Description – The University contributes to the KRS Insurance Fund, a cost sharing multiple employer defined benefit other post-employment plan (the OPEB plan), which was established to provide hospital and medical insurance for eligible members receiving benefits from KERS. The OPEB plan pays a prescribed contribution for whole or partial payment of required premiums to purchase hospital and medical insurance. The OPEB plan is administered by the Board of Trustees of the KRS. Benefit provisions are contained in the plan document and were established and can be amended by action of the Commonwealth of Kentucky Legislature. KERS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to Kentucky Retirement Systems, Perimeter Park West, 1260 Louisville Road, Frankfort, Kentucky, 40601-6124 or by calling (502) 696-8800.

Benefits Provided –

	Tier 1 Participation Prior to 7/1/2003	Tier 2 Participation 7/1/2003 through 8/31/2008	Tier 3 Participation on or after 9/1/2008
Nonhazardous			
OPEB eligibility:	Recipient of a retirement allowance	Recipient of a retirement allowance, with at least 120 months of service at retirement	Recipient of a retirement allowance, with at least 180 months of service at retirement
OPEB benefit:	Allowance for medical insurance coverage based on years and type of service. Less than 4 years = 0%. At least 4 years, but less than 10 = 25%. At least 10 years, but less than 15 = 50%. At least 15 years, but less than 20 = 75%. 20 or more years = 100%.	Monthly contribution of \$10 for each year of earned service. Adjusted 1.5% annually.	

	Tier 1 Participation Prior to 7/1/2003	Tier 2 Participation 7/1/2003 through 8/31/2008	Tier 3 Participation on or after 9/1/2008
Hazardous			
OPEB eligibility:	Recipient of a retirement allowance	Recipient of a retirement allowance, with at least 120 months of service at retirement	Recipient of a retirement allowance, with at least 180 months of service at retirement
OPEB benefit:	Allowance for medical insurance coverage based on years and type of service. Less than 4 years = 0%. At least 4 years, but less than 10 = 25%. At least 10 years, but less than 15 = 50%. At least 15 years, but less than 20 = 75%. 20 or more years = 100%.	Monthly contribution of \$15 for each year of earned service. Adjusted 1.5% annually.	

Contributions- Benefit and contribution rates are established by state statute. Per Kentucky Revised Statute 61.565, contribution requirements of the participating organizations are established and may be amended by the KRS Board. Employees with a participation date after 9/1/2008 were required to contribute 1 percent of their covered salary for retiree healthcare benefits. The University's required contribution percentage rates per covered payroll for the years ended June 30, 2020 and 2019 are as follows:

	<u>2020</u>	<u>2019</u>
Nonhazardous OPEB plan	8.41%	8.41%
Hazardous OPEB plan	2.46%	2.46%

The required contributions to the KERS nonhazardous OPEB plan for the years ended June 30, 2020 and 2019 were \$2,931,000 and \$2,901,000, respectively. The required contributions to the KERS hazardous OPEB plan for the years ended June 30, 2020 and 2019 were \$21,000 and \$18,000, respectively.

OPEB assets and liabilities, OPEB expense and deferred outflows of resources and deferred inflows of resources related to OPEB – At June 30, 2020 and 2019, respectively, the University reported a liability of \$51,909,000 and \$54,583,000 for its proportionate share of the nonhazardous net OPEB liability. The University's OPEB asset was \$100,000 and \$128,000 for the years ended June 30, 2020 and 2019, respectively. The total OPEB liability and net OPEB liability were based on an actuarial valuation date of June 30, 2018. The total OPEB liability used to calculate the net was rolled forward from the valuation date to the plan's fiscal year ending June 30, 2019 using generally accepted actuarial principles. The University's proportion of the net OPEB liability was based on the University's actual contributions to the OPEB plan relative to the contributions of all participating employers for the measurement period. At June 30, 2020 and 2019, respectively, the University's proportion was 2.335 and 2.302 percent for nonhazardous and 0.373 and 0.387 percent for hazardous.

For the years ended June 30, 2020 and 2019, respectively, the University recognized nonhazardous OPEB expense of \$3,319,000 and \$4,182,000 and hazardous OPEB expense of \$31,000 and \$46,000.

At June 30, 2020, the University reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources (in thousands):

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Nonhazardous		
Differences between expected and actual experience	\$ -	\$ 8,280
Change of assumptions	6,807	156
Net difference between projected and actual earnings on investments	-	340
Changes in proportion and differences between employer contributions and proportionate share of contributions	-	1,332
Contributions subsequent to the measurement date	3,557	-
Hazardous		
Differences between expected and actual experience	-	179
Change of assumptions	274	1
Net difference between projected and actual earnings on investments		58
Changes in proportion and differences between employer contributions and proportionate share of contributions	1	11
Contributions subsequent to the measurement date	26	-
Total	<u>\$ 10,665</u>	<u>\$ 10,357</u>

At June 30, 2019, the University reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources (in thousands):

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Nonhazardous		
Differences between expected and actual experience	\$ -	\$ 3,564
Change of assumptions	5,738	206
Net difference between projected and actual earnings on investments	-	800
Changes in proportion and differences between employer contributions and proportionate share of contributions	-	1,246
Contributions subsequent to the measurement date	3,395	-
Hazardous		
Differences between expected and actual experience	-	104
Change of assumptions	235	2
Net difference between projected and actual earnings on investments	-	102
Changes in proportion and differences between employer contributions and proportionate share of contributions	-	14
Contributions subsequent to the measurement date	20	-
Total	<u>\$ 9,388</u>	<u>\$ 6,038</u>

The OPEB contribution amounts include the implicit subsidy of \$626,000 and \$495,000 for nonhazardous for the years ended June 30, 2020 and 2019, respectively. The implicit subsidy was \$5,000 and \$1,000 for hazardous for the years ended June 30, 2020 and 2019, respectively.

At June 30, 2020, the University reported \$3,583,000 as deferred outflows of resources related to OPEB resulting from University contributions subsequent to the measurement date that will be recognized as a reduction of the net OPEB liability in the following year. This amount includes the implicit subsidy of \$631,000. Other amounts reported as deferred outflows of resources and deferred inflows of resources at June 30, 2020, related to OPEB will be recognized in OPEB expense as follows (in thousands):

Year Ending June 30	
2021	\$ (388)
2022	(388)
2023	(1,894)
2024	(599)
2025	(6)
	<u>\$ (3,275)</u>

Actuarial assumptions - The total OPEB asset and liability was determined by an actuarial valuation as of June 30, 2018, using the following actuarial assumptions, applied to all periods included in the measurement for nonhazardous and hazardous OPEB.

	<u>Nonhazardous</u>	<u>Hazardous</u>
Inflation	2.30%	2.30%
Salary increases	3.30% to 15.30%, varies by service	3.55% to 20.05%, varies by service
Payroll growth rate	0.00%	0.00%
Health care cost trend rates		
Pre-65	Initial trend starting at 7.00% at January 1, 2020 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 12 years.	
Post-65	Initial trend starting at 5.00% at January 1, 2020 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 10 years.	
Investment Rate of Return	6.25%	6.25%
Mortality		
Pre-retirement	PUB-2010 General Mortality table, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010	PUB-2010 Public Safety Mortality table, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010
Post-retirement (non-disabled)	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019	
Post-retirement (disabled)	PUB-2010 Disabled Mortality table, with a 4-year set-forward for both male and female rates, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010	

The mortality table used for active members was a Pub-2010 General Mortality table for the Non-Hazardous System and the Pub-2010 Public Safety Mortality table for the Hazardous System, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010. The mortality assumptions for non-disabled retirees is based on a system-specific mortality table based on mortality experience from 2013 – 2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019. The mortality table used for the disabled retirees was PUB-2010 Disabled Mortality table, with a 4-year set-forward for both male and female rates, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010.

The long-term expected rate of return on OPEB Plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB Plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

OPEB Asset Allocations		
Asset Class	Long Term Expected Real Rate of Return	Target Allocation
US Equity	4.30%	18.75%
Non-US Equity	4.80%	18.75%
Private Equity	6.65%	10.00%
Specialty Credit/High Yield	2.60%	15.00%
Core Bonds	1.35%	13.50%
Cash	0.20%	1.00%
Real Estate	4.85%	5.00%
Opportunistic	2.97%	3.00%
Real return	4.10%	15.00%
Total		<u>100.00%</u>

The table above is applicable to both the nonhazardous and hazardous plans.

Discount rate - The discount rate used to measure the total OPEB asset and liability was 5.73% for the nonhazardous plan, and 5.66% for the hazardous plan. The projection of cash flows used to determine the discount rate assumed that local employers would contribute the actuarially determined contribution rate of projected compensation over the remaining 24 years (closed) amortization period of the unfunded actuarial accrued liability. The discount rate determination used an expected rate of return of 6.25%, a municipal rate of 3.13%, as reported in Fidelity Index's "20 -Year Municipal GO AA Index" as of June 28, 2019. However, the cost associated with the implicit employer subsidy was not included in the calculation of the System's actuarial determined contributions, and any cost associated with the implicit subsidy will not be paid out of the System's trusts. Therefore, the municipal bond rate was applied to future expected benefit payments associated with the implicit subsidy.

Sensitivity of the University's proportionate share of the net OPEB asset and liability to changes in the discount rate - The University's proportionate share of the net OPEB asset and liability has been calculated using a discount rate of 5.73% for the nonhazardous and 5.66% for hazardous. The following presents the University's share of the net OPEB liability calculated using a discount rate 1% higher and 1% lower than the current rate (in thousands):

	1% Decrease (4.73%)	Current Discount Rate (5.73%)	1% Increase (6.73%)
Non-hazardous			
Proportionate share of the Collective Net OPEB Liability	\$ 61,808	\$ 51,909	\$ 43,759
	1% Decrease (4.66%)	Current Discount Rate (5.66%)	1% Increase (6.66%)
Hazardous			
Proportionate share of the Collective Net OPEB Liability (Asset)	\$ 168	\$ (100)	\$ (317)

Sensitivity of the University's proportionate share of the net OPEB asset and liability to changes in the health care cost trend rates - The University's proportionate share of the net OPEB asset and liability has been calculated using an initial pre-65 health care trend rate of 7.00%, gradually decreasing to an ultimate trend rate of 4.05% over a period of 12 years. The post-65 health care trend rate starts at 5.00%, gradually decreasing to an ultimate trend rate of 4.05% over a period of 10 years.

	<u>1%</u> <u>Decrease</u>	Current Health <u>Care Cost</u> <u>Trend Rates</u>	<u>1%</u> <u>Increase</u>
Non-hazardous			
Proportionate share of the Collective Net OPEB Liability	\$ 44,100	\$ 51,909	\$ 61,355

	<u>1%</u> <u>Decrease</u>	Current Health <u>Care Cost</u> <u>Trend Rates</u>	<u>1%</u> <u>Increase</u>
Hazardous			
Proportionate share of the Collective Net OPEB Liability (Asset)	\$ (291)	\$ (100)	\$ 132

OPEB plan fiduciary net position – Detailed information about the OPEB plan’s fiduciary net position is available in the separately issued plan annual report.

Payable to the OPEB plan - The University reported payables of \$255,000 and \$269,000 for the outstanding amount of employer contributions to the OPEB plan required for the years ended June 30, 2020 and 2019, respectively.

Note 9 – Operating Expenses By Natural Classification

The University’s operating expenses by natural classification are as follows for the years ended June 30, 2020 and 2019 (in thousands):

	<u>2020</u>	<u>2019</u>
Salaries and wages	\$ 108,177	\$ 99,830
Employee benefits-pension and OPEB	37,411	41,157
Employee benefits-other	31,498	28,779
Utilities	4,843	5,499
Supplies and other services	44,904	36,827
Depreciation	20,698	21,893
Student scholarships and financial aid	20,739	17,165
Total	<u>\$ 268,270</u>	<u>\$ 251,150</u>

Note 10 – Risk Management

The University is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. These risks are covered by (1) the State Fire and Tornado Insurance Fund (the Fund), (2) Sovereign Immunity and the Kentucky Claims Commission, or (3) in the case of risks not covered by the Fund and Sovereign Immunity, commercial insurance, participation in insurance risk retention groups or self-insurance.

The Fund covers losses to property from fire, wind, earthquake, flood and most other causes of loss between \$5,000 and \$1 million per occurrence. Losses in excess of \$1 million are insured by commercial carriers up to \$1.5 billion per occurrence with buildings insured at replacement cost and contents on an actual cash value basis. As a state agency, the University is vested with Sovereign Immunity and is subject to the provisions of the Board of Claims Act, under which the University's liability for certain negligence claims is limited to \$250,000 for any one person or \$400,000 for all persons damaged by a single act of negligence. Claims against educators' errors and omissions and wrongful acts are insured through a reciprocal risk retention group. There have been no significant reductions in insurance coverage from 2019 to 2020. Settlements have not exceeded insurance coverage during the past three years. The University began self-insuring employee health insurance as of January 1, 2014. Accrued expenses are based on the estimated costs of health care claims based on claims filed subsequent to year end and an additional amount for incurred but not yet reported claims based on prior experience. The University purchases both specific and aggregate stop loss coverage on medical and prescription drug claims. The stop loss insurance limits its exposure for claims to \$250,000 per individual and 125 percent of projected aggregate claims.

The health self-insurance liability as of June 30, 2020 and 2019 is detailed below (in thousands):

	<u>2020</u>	<u>2019</u>
Liability, beginning of year	\$ 1,353	\$ 1,383
Claims and changes in estimates	15,927	15,824
Claims paid	<u>(16,136)</u>	<u>(15,854)</u>
Liability, end of year	<u>\$ 1,144</u>	<u>\$ 1,353</u>

The University also self-insures certain other employee benefits, including worker's compensation claims to the extent not covered by insurance. The University has recorded an estimate for asserted claims at June 30, 2020.

Note 11 – Contingencies

The University is a party to various litigation and other claims in the ordinary course of business. University officials are of the opinion, based upon the advice of legal counsel, that the ultimate resolution of these matters will not have a material effect on the financial position of the University.

As a result of the spread of SARS-CoV-2 virus and the incidence of COVID-19, economic uncertainties have arisen which may negatively affect the financial position, results of operations and cash flows of the University. Potential effects include but are not limited to declines in the fair value of investments, realizability of receivables, and declines in revenues. The duration of these uncertainties and the ultimate financial effects cannot be reasonably estimated at this time.

Note 12 – Restricted Net Position

At June 30, 2020 and 2019, restricted expendable net position was available for the following purposes:

	<u>2020</u>	<u>2019</u>
Appreciation on permanent endowments	\$ 4,871	\$ 5,830
Advance funded capital projects	(102)	(4,875)
Capital projects and debt service	1,247	1,801
Funds restricted for noncapital purposes	437	225
Advance funded CARES relief	<u>(2,198)</u>	-
Restricted Net Position, end of year	<u>\$ 4,255</u>	<u>\$ 2,981</u>

Note 13 –Blended Entity Condensed Financial Information

Condensed financial information for Northern Kentucky University Research Foundation (NKURF) is provided below for the years ended June 30, 2020 and 2019 (in thousands):

NKURF Condensed Statements of Net Position

	<u>2020</u>	<u>2019</u>
ASSETS		
Current assets	\$ 1,606	\$ 1,247
Noncurrent assets	11,363	11,228
Total assets	<u>12,969</u>	<u>12,475</u>
LIABILITIES		
Current liabilities	503	256
Noncurrent liabilities	11,520	11,250
Due to the University	-	104
Total liabilities	<u>12,023</u>	<u>11,610</u>
NET POSITION		
Restricted expendable	11	9
Unrestricted	935	856
Total net position	<u>\$ 946</u>	<u>\$ 865</u>

NKURF Condensed Statements of Revenues, Expenses, and Changes in Net Position

	<u>2020</u>	<u>2019</u>
OPERATING REVENUES		
Grants and contracts	\$ 2,089	\$ 1,884
Recoveries of facilities and administrative costs	221	179
Total operating revenues	<u>2,310</u>	<u>2,063</u>
OPERATING EXPENSES		
Operating expenses	2,122	1,897
Operating income (loss)	<u>188</u>	<u>166</u>
NONOPERATING REVENUES (EXPENSES)		
Noncapital transfers (to)/from the University	(135)	(116)
Gifts and grants	28	10
Net nonoperating revenues (expenses)	<u>(107)</u>	<u>(106)</u>
Increase (decrease) in net position	<u>81</u>	<u>60</u>
NET POSITION		
Net position-beginning of year	865	805
Net position-end of year	<u>\$ 946</u>	<u>\$ 865</u>

NKURF Condensed Statements of Cash Flows

	<u>2020</u>	<u>2019</u>
Net cash provided (used) by operating activities	\$ 310	\$ 134
Net cash provided (used) by noncapital financing activities	(216)	(531)
Net increase (decrease) in cash and cash equivalents	94	(397)
Cash and cash equivalents-beginning of year	12,277	12,674
Cash and cash equivalents-end of year	<u>\$ 12,371</u>	<u>\$ 12,277</u>

Note 14 – Northern Kentucky University Foundation, Inc. Notes to Financial Statements

Selected disclosures from the Foundation are included as follows:

a. Summary of Significant Accounting Policies

1. Scope of Statements

The consolidated financial statements of the Northern Kentucky Foundation, Inc. include the operations of the Foundation and several single member limited liability companies. All material intercompany transactions and balances have been eliminated for the year ended June 30, 2020.

2. Basis of Presentation

The consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (GAAP) which require management to make estimates and assumptions that affect the reported amounts and disclosures in the financial statements. Actual results could differ from those estimates. The following is a summary of the significant accounting policies consistently followed by the Foundation in preparation of its consolidated financial statements.

These statements are presented on the accrual basis of accounting and have been prepared to focus on the Foundation as a whole and to present transactions according to the existence or absence of donor-imposed restrictions. This has been accomplished by classification of balances and transactions into two classes of net assets – with donor restrictions and without donor restrictions.

Net assets and changes therein are classified as follows:

- **With donor restrictions** - Net assets with donor restrictions are subject to donor restrictions. Some restrictions are temporary in nature, such as those that will be met by the passage of time or other events specified by the donor. Other restrictions are perpetual in nature, where the donor stipulates that resources be maintained in perpetuity.
- **Without donor restrictions** - Net assets not subject to donor-imposed stipulations are available for use in general operations and not subject to donor restrictions. The governing board has designated, from net assets without donor restrictions, net assets for an operating reserve and board designated endowment.

Revenues are reported as increases in net assets without donor restrictions unless use of the related assets is limited by donor-imposed restrictions. Expenses are reported as decreases in net assets without donor restrictions. Gains and losses on investments and other assets or liabilities are reported as increases or decreases in net assets without donor restrictions unless their use is restricted by explicit donor stipulation or by law. Restricted contributions and net investment returns earned are reported as with donor restrictions and reclassified as without donor restricted when any donor-imposed restrictions are satisfied. Expirations of donor restrictions on net assets are met when a donor stipulated time restriction ends or purpose restriction is accomplished and reclassified to net assets without donor restrictions and reported in the consolidated statement of activities as net assets released from restriction.

Contributions, including unconditional promises to give, are recognized as revenues in the period received. Conditional promises to give are not recognized until the conditions on which they depend are met. Contributions receivable are discounted at an appropriate rate commensurate with the risks involved using the level-yield method. Amortization of the discount is recorded as additional contribution revenue in accordance with donor-imposed restrictions on the contributions. An allowance for uncollectible contributions receivable is provided based upon management's judgment of such factors as prior collection history, type of contribution and nature of the fund-raising activity.

The value recorded for each contribution is recognized as follows:

Nature of the Gift	Value Recognized
<i>Conditional gifts, with or without restriction</i>	
Gifts that depend on the Foundation overcoming a donor-imposed barrier to be entitled to the funds	Not recognized until the gift becomes unconditional, <i>i.e.</i> the donor-imposed barrier is met
<i>Unconditional gifts, with or without restriction</i>	
Received at date of gift – cash and other assets	Fair value
Received at date of gift – property, equipment and long-lived assets	Estimated fair value
Expected to be collected within one year	Net realizable value
Collected in future years	Initially reported at fair value determined using the discounted present value of estimated future cash flows technique

Income and realized net gains on long-term investments are reported as follows:

- As increases in net assets with donor restrictions – if the terms of the gift require that they be added to the principal of a permanent endowment fund or if the terms of the gift impose restrictions on the use of the income.
- As increases in net assets without donor restrictions – in all other cases.

Change in Accounting Principle

Revenue Recognition

As of July 1, 2019, the Foundation adopted the Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers* (Topic 606), (ASU 2014-09) using a modified retrospective method of adoption to all contracts with customers not completed at July 1, 2019.

The core guidance in ASU 2014-09 is to recognize revenue to depict the transfer of promised goods or services to customers in amounts that reflect the consideration to which the Foundation expects to be entitled in exchange for those goods or services.

The amount to which the Foundation expects to be entitled is calculated as the transaction price and recorded as revenue in exchange for providing goods or services.

The adoption has no impact on overall change in net assets or net cash used for operating activities.

Contributions Received and Contributions Made

As of July 1, 2019, the Foundation adopted the FASB ASU 2018-08, *Not-for-Profit Entities (Topic 958): Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made*, (ASU 2018-08) using a modified prospective method of adoption to all agreements that were not completed as of July 1, 2019.

The intent of ASU 2018-08 is to assist an organization in evaluating whether transactions are considered nonreciprocal transactions and should be accounted for as contributions, or if the transactions are considered reciprocal and should be accounted for as exchange transactions. Additionally, the revised guidance helps entities evaluate whether a contribution is conditional or unconditional.

The adoption has no impact on overall change in net assets or net cash used for operating activities.

3. Cash and Cash Equivalents

Cash and cash equivalents include all readily available sources of cash such as petty cash, demand deposits and temporary investments in marketable securities with maturities of less than three months. Cash and cash equivalents representing investments purchased with endowment net assets are reported as investments.

At various times throughout the year, the Foundation has cash in certain financial institutions in excess of insured limits. Additionally, at June 30, 2020 and 2019, \$2,353,000 and \$2,123,000, respectively, was insured by federal depository insurance or collateralized with securities held by the financial institution's trust department or agent, but not in the Foundation's name. At June 30, 2020 and 2019, balances of \$6,654,000 and \$7,232,000, respectively, were neither insured nor collateralized.

4. Loans and Accounts Receivable

Loans receivable consists primarily of loans made to students under privately funded loan programs. The advances are evidenced by signed promissory notes, bearing interest at varying stated interest rates, with varying due dates. Loans, accounts and other receivables are stated at the amount management expects to collect from outstanding balances. Management provides for a probable uncollectible allowance based on its assessment of the current status of individual accounts. Balances that are still outstanding after management has used reasonable collection efforts are written off through a charge to the valuation allowance and a credit to accounts receivable. The allowance for doubtful accounts at June 30, 2020 and 2019 was approximately \$39,000 and \$39,000, respectively.

5. Investments

Investments in equity securities with readily determinable fair values and all debt securities are reported at their fair value. The estimated fair value of investments is based on quoted market prices, except for investments for which quoted market prices are not available. The alternative investments, which are not readily marketable, are carried at estimated fair values as provided by the investment managers. The estimated fair value of certain alternative investments, such as private equity interests, is based on valuations provided by the external investment managers adjusted for cash receipts, cash disbursements and distributions. The Foundation believes the carrying amount of these financial instruments is a reasonable estimate of fair value. Because alternative investments are not readily marketable, their estimated value is subject to uncertainty and therefore may differ from the value that would have been used had a ready market for such investments existed. Such difference could be material.

The Foundation invests its endowment investment portfolio and allocates the related earnings for expenditure in accordance with the total return concept. A distribution of endowment return that is independent of the cash yield and appreciation (depreciation) of investments earned during the year is provided for program support.

The Foundation has significant exposure to a number of risks including interest rate, market and credit risks for both marketable and non-marketable securities. Due to the level of risk exposure, it is possible that near-term valuation changes for investment securities may occur to an extent that could materially affect the amounts reported in the Foundation's consolidated financial statements.

All true endowment investments and long-term net assets functioning as endowments are managed in a pool, unless special considerations or donor stipulations require that they be held separately.

6. Land and Land Improvements

At June 30, 2020 and 2019, land and land improvements (in thousands) consisted of:

	<u>2020</u>	<u>2019</u>
Type of Asset:		
Land	\$ 178	\$ 178
Land held for sale	32	17
Land held for future use by the University	145	145
Land improvements	<u>208</u>	<u>208</u>
Total land and land improvements	<u>\$ 563</u>	<u>\$ 548</u>

Assets acquired for Foundation use with a useful life greater than one year and a value of \$5,000 or more are capitalized. Annual depreciation for land improvements is calculated on a straight-line basis, beginning in the month of acquisition based on a useful life of 30 years. At June 30, 2020 and 2019, all land improvements were fully depreciated.

7. Long-Lived Asset Impairment

The Foundation evaluates the recoverability of the carrying value of long-lived assets whenever events or circumstances indicate the carrying amount may not be recoverable. If a long-lived asset is tested for recoverability and the undiscounted estimated future cash flows expected to result from the use and eventual disposition of the asset are less than the carrying amount of the asset, the asset cost is adjusted to fair value and an impairment loss is recognized as the amount by which the carrying amount of a long-lived asset exceeds its fair value. No asset impairment was recognized during the years ended June 30, 2020 and 2019.

Assets purchased or constructed through the Foundation for immediate use by Northern Kentucky University are recorded by the Foundation as a program expense.

8. Transfers Between Fair Value Hierarchy Levels

Transfers in and out of Level 1 (quoted market prices), Level 2 (other significant observable inputs) and Level 3 (significant unobservable inputs) are recognized on the actual transfer date.

b. Unconditional and Conditional Promises to Give

Unconditional promises to give that are expected to be collected in future years are recorded at the present value of estimated future cash flows. The discounts are computed using a risk free interest rate and amortization of the discount is included in gifts and bequests revenue.

At June 30, 2020 and 2019, the Foundation recognized contributions based on the following unconditional promises to give (in thousands):

	<u>2020</u>	<u>2019</u>
Purpose:		
Endowment giving	\$ 2,648	\$ 572
Capital purposes	300	-
Operating programs	<u>3,818</u>	<u>2,699</u>
Gross unconditional promises	<u>6,766</u>	<u>3,271</u>
Less: Discount and allowance for uncollectible accounts	<u>(221)</u>	<u>(259)</u>
Net unconditional promises to give	<u><u>\$ 6,545</u></u>	<u><u>\$ 3,012</u></u>
Amounts due in:		
Less than one year	\$ 2,391	\$ 1,204
One to five years	4,050	2,067
More than five years	<u>325</u>	<u>-</u>
Total	<u><u>\$ 6,766</u></u>	<u><u>\$ 3,271</u></u>

The discount rates used to calculate the present value of contributions receivable at June 30, 2020 and 2019 vary from 0.6 percent to 3.4 percent depending on when the promise was made.

Conditional promises to give are not included as support until such time as the conditions are substantially met. The Foundation had received conditional promises to give of approximately \$2.7 million at June 30, 2020 and \$3.1 million at June 30, 2019, consisting of the face value of life insurance policies, net of accumulated cash surrender value, as well as a conditional promises of \$1.8 million at June 30, 2020 and \$2 million at June 30, 2019 being from a single donor.

Approximately 15 percent of total pledges receivable were due from one donor at June 30, 2020. Approximately 25 percent of total pledges receivable were due from one donor at June 30, 2019.

c. Fair Value Measurements

The three levels of the fair value hierarchy under generally accepted accounting principles are described as follows:

Level 1 – Quoted prices in active markets for identical assets or liabilities

Level 2 – Observable inputs other than Level 1 prices, such as:

- Quoted prices for similar assets or liabilities;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Other inputs that are observable for the asset or liability;
- Other inputs that are derived principally from or corroborated by observable market data by correlation or other means.

If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value measurement.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodologies used for assets measured at fair value:

Where quoted market prices are available in an active market, securities are classified within Level 1 of the valuation hierarchy. Level 1 investments include short-term money market funds, cash surrender value, fixed income funds and equity funds.

Level 2 investments are based on quoted prices of securities or other property with similar characteristics and include a remainder interest in real property subject to a life estate.

Level 3 investments include those in which there is no active market. The Foundation holds no Level 3 investments at June 30, 2020 or 2019.

The following assets were measured at fair value on a recurring basis as of June 30, 2020 (in thousands):

	Fair Value Measurements Using				
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Measured at NAV*
June 30, 2020					
Type of Investment:					
Short-term money market funds	\$ 10	\$ 10	\$ -	\$ -	\$ -
Cash surrender value	463	463	-	-	-
Fixed income funds:					
Core	4,772	4,772	-	-	-
Core plus	6,148	6,148	-	-	-
Global	478	478	-	-	-
Treasury inflation protected Securities	1,798	1,798	-	-	-
5,123	5,123	-	-	-	
Equity funds:					
Large/mid-cap - broad	24,191	24,191	-	-	-
Large/mid-cap - value	6,741	6,741	-	-	-
Small cap - growth	1,746	1,746	-	-	-
Small cap - value	1,549	1,549	-	-	-
International - core	6,907	6,907	-	-	-
International - value	3,327	3,327	-	-	-
International small cap - value	2,323	2,323	-	-	-
Emerging markets - value	4,042	4,042	-	-	-
Emerging markets - small cap	3,924	3,924	-	-	-
Real estate investment trust	40	40	-	-	-
Exchange traded funds	116	116	-	-	-
Remainder interest in real property and other	3,653	-	3,653	-	-
Public natural resources-master limited partnerships	1,913	-	-	-	1,913
Private equity	8,233	-	-	-	8,233
Private debt	2,667	-	-	-	2,667
Natural resources	7,629	-	-	-	7,629
Private real estate	2,675	-	-	-	2,675
Low-volatility	5,632	-	-	-	5,632
Total	\$ 106,100	\$ 73,698	\$ 3,653	\$ -	\$ 28,749

*Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts included above are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated statement of financial position.

The following assets were measured at fair value on a recurring basis as of June 30, 2019 (in thousands):

	Fair Value Measurements Using				
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Measured at NAV*
June 30, 2019					
Type of Investment:					
Short-term money market funds	\$ 9	\$ 9	\$ -	\$ -	\$ -
Cash surrender value	445	445	-	-	-
Fixed income funds:					
Core	3,617	3,617	-	-	-
Core plus	6,553	6,553	-	-	-
Global	1,834	1,834	-	-	-
Treasury inflation protected Securities	1,664	1,664	-	-	-
Equity funds:					
Large/mid-cap - broad	25,734	25,734	-	-	-
Large/mid-cap - value	7,497	7,497	-	-	-
Small cap - growth	1,697	1,697	-	-	-
Small cap - value	1,944	1,944	-	-	-
International - core	7,875	7,875	-	-	-
International - value	3,768	3,768	-	-	-
International small cap - value	2,640	2,640	-	-	-
Emerging markets - value	4,886	4,886	-	-	-
Emerging markets - small cap	4,325	4,325	-	-	-
Real estate investment trust	23	23	-	-	-
Exchange traded funds	101	101	-	-	-
Remainder interest in real property and other	685	-	685	-	-
Public natural resources-master limited partnerships	2,946	-	-	-	2,946
Private equity	7,725	-	-	-	7,725
Private debt	2,443	-	-	-	2,443
Natural resources	10,035	-	-	-	10,035
Private real estate	2,083	-	-	-	2,083
Low-volatility	6,707	-	-	-	6,707
Total	\$ 107,236	\$ 74,612	\$ 685	\$ -	\$ 31,939

*Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts included above are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated statement of financial position.

The market values (in thousands) of the Foundation's investments as of June 30, 2020 and 2019 are categorized by type below:

	<u>2020</u>	<u>2019</u>
Type of Investment:		
Short-term money market funds	\$ 10	\$ 9
Cash and cash surrender value	597	1,712
Fixed income funds:		
Core	4,772	3,617
Core plus	6,148	6,553
Global	478	1,834
Treasury inflation protected securities	1,798	1,664
Intermediate	5,123	-
Equity funds:		
Large/mid cap - broad	24,191	25,734
Large/mid cap - value	6,741	7,497
Small cap - growth	1,746	1,697
Small cap - value	1,549	1,944
International - core	6,907	7,875
International - value	3,327	3,768
International small cap - value	2,323	2,640
Emerging markets - value	4,042	4,886
Emerging markets - small cap	3,924	4,325
Real estate investment trust	40	23
Exchange traded funds	116	101
Public natural resources -master		
Limited partnerships	1,913	2,946
Remainder interest in real property and other	3,653	685
Private equity:		
Buyout	1,868	1,761
Diversified	912	1,586
Growth	1,470	503
Venture capital	1,869	1,728
Secondary	2,114	2,147
Private debt:		
Distressed	2,659	2,432
Mezzanine	8	11
Natural resources:		
Diversified	2,115	3,096
Energy	3,013	4,490
Commodities	2,501	2,449
Private real estate:		
Opportunistic	2,236	1,472
Value added	439	611
Low-volatility:		
Diversifying strategies	<u>5,632</u>	<u>6,707</u>
Total investments	<u>\$ 106,234</u>	<u>\$ 108,503</u>

Investment return (in thousands) for the years ended June 30, 2020 and 2019 consists of:

	<u>2020</u>	<u>2019</u>
Interest and dividend income		
(net of investment fees: 2020 - \$573, 2019 - \$516)	\$ 2,395	\$ 2,420
Net realized gains	1,628	431
Net unrealized gains (losses)	<u>(6,962)</u>	<u>1,010</u>
Total investment return	<u>\$ (2,939)</u>	<u>\$ 3,861</u>

The Foundation records the cost of managing its endowment portfolio as a decrease in investment income within the appropriate net asset class in the consolidated statement of activities. Some of the Foundation's investment managers report investment transactions net of fees.

The investments of the Foundation are commingled with certain investments which the Foundation holds in trust for University. The market value of funds held in trust for the University at June 30, 2020 and 2019 was approximately \$12,487,000 and \$13,446,000, respectively. See Note 14g. for further explanation of the trust funds.

At June 30, 2020 and 2019, the Foundation had committed approximately \$57,700,000 and \$47,200,000, respectively, of its endowment investment resources to alternative investments, of which \$17,800,000 and \$9,900,000, respectively, had not yet been called by the investment managers. Alternative investments for which commitments have been made consist of private equity/debt, natural resources, private real estate and low-volatility.

Alternative investments of the Foundation have limited marketability and the related investment agreements generally contain restrictive redemption provisions to the extent that the underlying investments should be considered illiquid for the duration of the investment through normal maturity. Early redemption of such investments would likely result in recovery of significantly less than the original investment amount. Foundation management believes the investment portfolio contains sufficient liquidity among other asset classes to make early redemption of alternative investments unlikely for reasons of meeting current spending needs.

e. Endowments

The Foundation's endowment consists of 355 individual funds established for a variety of purposes. Its endowment includes both donor-restricted funds and funds designated by the Board of Directors to function as endowments (quasi-endowments). Net assets associated with endowment funds, including quasi-endowments, are classified and reported based on the existence or absence of donor-imposed restrictions. The board, at their discretion, can at any time permit spending from the principal of any quasi-endowed fund, provided the expenditure complies with any donor-imposed restrictions related to the fund.

Kentucky enacted the Kentucky Uniform Prudent Management of Institutional Funds Act (KUPMIFA), the provisions of which apply to endowment funds existing on or established after enactment, with an effective date of July 15, 2010.

An interpretation of KUPMIFA provisions by the Foundation Board of Directors requires that the historical dollar amount of a donor-restricted endowment fund be preserved. As a result of this requirement, the Foundation classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, and (b) the original value of subsequent gifts to the permanent endowment. In the absence of donor restrictions, the net appreciation on a donor-restricted endowment fund is spendable. The net appreciation of donor-restricted endowment funds is classified as temporarily restricted net assets until those amounts are appropriated for expenditure by the Foundation.

Under KUPMIFA, the Foundation endowment spending policy allows for prudent spending of future endowment earnings for accounts without accumulated earnings based upon consideration of the following factors, if applicable:

- Duration and preservation of the endowment fund
- Purpose of the institution and the endowment fund
- General economic conditions
- Possible effect of inflation or deflation
- Expected total return on investments
- Other resources of the institution
- Investment policy

The approved annual endowment spending rate is reduced by a proportion of 5 percent for each 1 percent the affected endowment is below the value of original and subsequent gifts to the permanent endowment (i.e. principal).

Return Objectives and Risk Parameters. The Foundation has adopted investment and spending policies, approved by the Board of Directors, for endowment assets that attempt to provide a predictable stream of funding to programs supported by its endowment while seeking to maintain the purchasing power of these endowment assets over the long-term. The Foundation's spending and investment policies work together to achieve this objective. The investment policy establishes an achievable return objective through diversification of asset classes. The current long-term return objective is to return a rate equal to the Consumer Price Index plus 5 percent, net of investment fees. Actual returns in any given year may vary from this amount.

Strategies Employed for Achieving Objectives. To satisfy its long-term rate-of-return objectives, the Foundation relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The Foundation targets a diversified asset allocation that includes fixed income investments as well as publicly traded equity-based investments and various alternative investment strategies to achieve its long-term return objectives within prudent risk parameters.

Spending Policy and How the Objectives Relate to Spending Policy. The spending policy calculates the amount of money annually distributed from the Foundation's various endowed funds, for grant making and administration. The current spending policy is to distribute an amount at least equal to 3-5 percent of a moving sixteen quarter average of the fair value of the endowment funds. Accordingly, over the long term, the Foundation expects its current spending policy to allow the Foundation to meet its objective to maintain the historical dollar amount of endowment assets as well as to provide additional real growth through investment return.

Endowment net asset composition by type of endowment (in thousands) as of June 30, 2020 is as follows:

	<u>Without Donor Restrictions</u>	<u>With Donor Restrictions</u>	<u>Total Net Endowment Assets</u>
Donor restricted endowment funds	\$ -	\$ 79,291	\$ 79,291
Quasi-endowment funds	2,571	6,148	8,719
Total endowment funds	<u>\$ 2,571</u>	<u>\$ 85,439</u>	<u>\$ 88,010</u>

Changes in endowment net assets (in thousands) as of June 30, 2020 are as follows:

	<u>Without Donor Restrictions</u>	<u>With Donor Restrictions</u>	<u>Total Net Endowment Assets</u>
Endowment net assets, beginning of year	\$ 2,687	\$ 90,112	\$ 92,799
Contributions collected and other additions	-	2,243	2,243
Investment income	67	2,220	2,287
Net investment gain (loss)	(160)	(5,309)	(5,469)
Amounts appropriated for expenditure	(23)	(3,831)	(3,854)
Reclassify to held in perpetuity	-	4	4
Endowment net assets, end of year	<u>\$ 2,571</u>	<u>\$ 85,439</u>	<u>\$ 88,010</u>

Endowment net asset composition by type of endowment (in thousands) as of June 30, 2019 is as follows:

	<u>Without Donor Restrictions</u>	<u>With Donor Restrictions</u>	<u>Total Net Endowment Assets</u>
Donor restricted endowment funds	\$ -	\$ 83,991	\$ 83,991
Quasi-endowment funds	<u>2,687</u>	<u>6,121</u>	<u>8,808</u>
Total endowment funds	<u>\$ 2,687</u>	<u>\$ 90,112</u>	<u>\$ 92,799</u>

Changes in endowment net assets (in thousands) as of June 30, 2019 are as follows:

	<u>Without Donor Restrictions</u>	<u>With Donor Restrictions</u>	<u>Total Net Endowment Assets</u>
Endowment net assets, beginning of year	\$ 2,614	\$ 89,227	\$ 91,841
Contributions collected and other additions	-	1,215	1,215
Investment income	64	2,161	2,225
Net investment gain (loss)	31	1,128	1,159
Amounts appropriated for expenditure	(22)	(3,642)	(3,664)
Reclassify to held in perpetuity	<u>-</u>	<u>23</u>	<u>23</u>
Endowment net assets, end of year	<u>\$ 2,687</u>	<u>\$ 90,112</u>	<u>\$ 92,799</u>

Funds with Deficiencies. From time to time, the fair value of assets associated with individual donor restricted endowment funds may fall below the level that the donor or KUPMIFA requires the Foundation to retain as a fund of perpetual duration. Deficiencies of this nature were approximately \$84,000 at June 30, 2020. These deficiencies resulted from unfavorable market conditions that occurred after the investment of permanently restricted contributions and continued appropriation for certain programs that was deemed prudent by the Board of Directors. There were no such deficiencies at June 30, 2019.

f. Contingent Liabilities

Legal counsel for the Foundation have advised that they know of no pending or threatened litigation, claims or assessments involving the Foundation that could have a material adverse financial effect on the Foundation.

g. Regional University Excellence Trust Fund

The Foundation holds certain funds, consisting of endowment matching funds received by the University from the Commonwealth of Kentucky's Regional University Excellence Trust Fund, which were subsequently transferred to the Foundation for management and investment. The Foundation reports these funds and accumulated earnings as assets held in trust for the University. Investment earnings, gains and losses and expenditures from these funds are reported as changes in the balance held in trust, rather than as revenue and expenses of the Foundation.

h. Subsequent Events

Events occurring after June 30, 2020 have been evaluated for possible adjustment to the consolidated financial statements or disclosure through September 8, 2020, the date on which the consolidated financial statements were available to be issued.

As a result of the spread of the SARS-CoV-2 virus and the incidence of COVID-19, economic uncertainties have arisen which may negatively affect the financial position, results of operations and cash flows of the Foundation. Potential effects include but are not limited to declines in the fair value of investments, realizability of pledge receivables, and declines in contributions and gifts. The duration of these uncertainties and the ultimate financial effects cannot be reasonably estimated at this time.

i. Related Party Transactions

During the year ended June 30, 2020 and 2019, the Foundation made payments on behalf of the University of \$331,000 and \$327,000, respectively, for salaries, benefits, and other administrative costs for University staff that directly support the Foundation's operations. These payments are made by agreement between the Foundation and University. Approximately \$0 and \$4,000 as of June 30, 2020 and 2019 was owed to the University for such costs.

In support of University programs, the Foundation incurred program expenses of \$6,885,000 and \$12,175,000 for 2020 and 2019, respectively, which consisted of payments on behalf of the University of \$4,858,000 and \$4,570,000, for 2020 and 2019, respectively; and amounts transferred to the University for restricted purposes of \$1,997,000 and \$7,605,000 for 2020 and 2019, respectively.

During the year ended June 30, 2020, the Foundation purchased 20.24 acres of land from the University to be held as an investment, as it is the intent of management to sell the property, for approximately \$2,968,000.

j. Liquidity and Availability

Financial assets available for general expenditure, that is, without donor or other restrictions limiting their use, within one year of June 30, 2020 and 2019, comprise the following (in thousands):

	<u>2020</u>	<u>2019</u>
Cash and equivalents	\$ 3,243	\$ 4,227
Accounts receivable	-	48
Contributions receivable	1,232	876
Less allowance for uncollectible pledges	(11)	(8)
	<u>\$ 4,464</u>	<u>\$ 5,143</u>

The Foundation receives significant contributions restricted by donors and considers contributions restricted for programs which are ongoing, major and central to its annual operations to be available to meet cash needs for general expenditures. For the years ended June 30, 2020 and 2019, restricted contributions of \$1,221,000 and \$868,000, respectively, were included in financial assets available to meet cash needs for general expenditures within one year.

The Foundation's endowment funds consist of donor-restricted endowments and funds designated by the board as endowments. Income from donor-restricted endowments is restricted for specific purposes, with the exception of the amounts available for general use. Donor-restricted endowment funds are not available for general expenditure.

The board-designated endowments of \$7,439,000 are subject to an annual spending rate of 4.75 percent as described in Note 14e. Although the Foundation does not intend to spend from this board-designated endowment (other than amounts appropriated for general expenditure as part of the Board's annual budget approval and appropriation), these amounts could be made available if necessary.

The Foundation manages its liquidity and reserves following three guiding principles: operating within a prudent range of financial soundness and stability, maintaining adequate liquid assets to fund near-term operating needs and maintaining sufficient reserves to provide reasonable assurance that long-term obligations will be discharged. The Foundation's Finance and Audit Committee reviews the liquidity policy annually and the summarized financial reports at its regular meetings.

k. Schedule of Functional Expenses

The Foundation accounts for expenses in both natural classification categories and functional area categories. The summaries of these for the years ended June 30, 2020 and 2019 are as follows (in thousands):

Schedule of Functional Expenses

For the Year Ended 6/30/20

(in thousands)

	Subgranted to NKU-Payroll	Subgranted to NKU-Other	Contracted Services	Operating	Scholarships & Awards	Total
Instruction	\$ 467	\$ 104	\$ 34	\$ 160	\$ -	\$ 765
Research	61	-	-	5	-	66
Public service	36	20	3	676	-	735
Libraries	-	-	-	10	-	10
Academic support	578	-	37	423	-	1,038
Student services	139	44	25	384	-	592
Institutional support	428	-	98	406	-	932
University facilities and equipment acquisition	-	120	-	30	-	150
Student financial aid	-	-	-	-	2,557	2,557
Other program expenses and losses	-	-	-	10	-	10
Total program expenses	\$ 1,709	\$ 288	\$ 197	\$ 2,104	\$ 2,557	\$ 6,855
Management and general	331	-	102	70	-	503
Fund raising support	-	-	-	204	-	204
Rental property	-	-	-	4	-	4
Total support expenses	\$ 331	\$ -	\$ 102	\$ 278	\$ -	\$ 711
Total expenses and losses	\$ 2,040	\$ 288	\$ 299	\$ 2,382	\$ 2,557	\$ 7,566

Schedule of Functional Expenses

For the Year Ended 6/30/19

(in thousands)

	Subgranted to NKU-Payroll	Subgranted to NKU-Other	Contracted Services	Operating	Scholarships & Awards	Total
Instruction	\$ 655	\$ 3	\$ 37	\$ 262	\$ -	\$ 957
Research	47	-	1	12	-	60
Public service	40	-	8	834	-	882
Libraries	-	-	-	23	-	23
Academic support	477	-	69	358	-	904
Student services	438	101	20	372	-	931
Institutional support	668	-	81	392	-	1,141
University facilities and equipment acquisition	-	5,177	-	119	-	5,296
Student financial aid	-	-	-	-	1,925	1,925
Other program expenses and losses	-	-	-	122	-	122
Total program expenses	\$ 2,325	\$ 5,281	\$ 216	\$ 2,494	\$ 1,925	\$ 12,241
Management and general	327	-	92	57	-	476
Fund raising support	-	-	-	281	-	281
Rental property	-	-	12	5	-	17
Total support expenses	\$ 327	\$ -	\$ 104	\$ 343	\$ -	\$ 774
Total expenses and losses	\$ 2,652	\$ 5,281	\$ 320	\$ 2,837	\$ 1,925	\$ 13,015

l. Long-Term Debt

During the year ended June 30, 2020, the Foundation borrowed \$2 million on a promissory note collateralized by maintaining an amount equal to the loan in a savings account within the lending institution. The loan was obtained to purchase 20.24 acres of land from the University to be held as an investment. Accrued interest is payable monthly commencing on July 31, 2020 and continuing each month with one final payment of all remaining interest and principal due on June 30, 2022. The interest rate is variable equal to the one month LIBOR (London Interbank Offer Rate) rate plus 1.0 percent adjusted on a monthly basis with a fixed minimum rate of 1.75 percent.

m. Future Changes in Accounting Principles

Accounting for Leases

FASB amended its standard related to the accounting for leases. Under the new standard, lessees will now be required to recognize substantially all leases on the balance sheet as both a right-of-use asset and a liability. The standard has two types of leases for income statement recognition purposes: operating leases and finance leases. Operating leases will result in the recognition of a single lease expense on a straight-line basis over the lease term similar to the treatment for operating leases under existing standards. Finance leases will result in an accelerated expense similar to the accounting for capital leases under existing standards. The determination of lease classification as operating or finance will be done in a manner similar to existing standards. The new standard also contains amended guidance regarding the identification of embedded leases in service contracts and the identification of lease and nonlease components in an arrangement. The new standard is effective for the Foundation for the year ending June 30, 2023.

Required Supplementary Information

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Schedule of Proportionate Share of the Collective Net Pension Liability
Kentucky Employees' Retirement System
(in thousands)

	<u>June 30, 2020</u>	<u>June 30, 2019</u>	<u>June 30, 2018</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Nonhazardous						
University's proportionate share of the net pension liability	2.335187%	2.304209%	2.345490%	2.403742%	2.447755%	2.489115%
University's proportionate share of the collective net pension liability	\$ 329,798	\$ 313,460	\$ 314,022	\$ 274,014	\$ 245,556	\$ 223,319
University's covered-employee payroll	\$ 34,697	\$ 34,793	\$ 37,584	\$ 39,206	\$ 37,799	\$ 39,266
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	950.50%	900.94%	835.52%	698.91%	649.64%	568.73%
Pension plan fiduciary net position as a % of the total pension liability	13.66%	12.84%	13.30%	14.80%	18.83%	22.30%
Hazardous						
University's proportionate share of the net pension liability	0.373520%	0.386465%	0.370876%	0.040113%	0.444514%	0.414511%
University's proportionate share of the collective net pension liability	\$ 2,041	\$ 1,952	\$ 1,844	\$ 1,571	\$ 1,524	\$ 1,059
University's covered-employee payroll	\$ 600	\$ 591	\$ 662	\$ 637	\$ 563	\$ 535
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	340.16%	330.29%	278.50%	246.58%	270.64%	197.80%
Pension plan fiduciary net position as a % of the total pension liability	55.49%	56.10%	54.80%	57.41%	61.70%	68.70%

*The amounts presented for the fiscal year were determined as of June 30 of the previous fiscal year (measurement date).

*This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, governments should present information for those years which information is available.

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Schedule of University Pension Contributions
Kentucky Employees' Retirement System
(in thousands)

	<u>June 30, 2020</u>	<u>June 30, 2019</u>	<u>June 30, 2018</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Nonhazardous						
Contractually required contribution	\$ 14,310	\$ 14,162	\$ 14,596	\$ 14,738	\$ 12,069	\$ 12,320
University's contributions in relation to the contractually required contribution	14,310	14,162	14,596	14,738	12,069	12,320
Contribution deficiency	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered-employee payroll	\$ 34,848	\$ 34,491	\$ 35,498	\$ 36,626	\$ 39,131	\$ 39,948
Contributions as a percentage of covered-employee payroll	41.06%	41.06%	41.06%	40.24%	30.84%	30.84%
Hazardous						
Contractually required contribution	\$ 287	\$ 256	\$ 180	\$ 170	\$ 127	\$ 136
University's contributions in relation to the contractually required contribution	287	256	180	170	127	136
Contribution deficiency	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered-employee payroll	\$ 835	\$ 744	\$ 838	\$ 806	\$ 776	\$ 831
Contributions as a percentage of covered-employee payroll	34.39%	34.39%	21.44%	21.08%	16.37%	16.37%

Notes to the Schedule:

Changes in assumptions - In fiscal year 2018, the KERS nonhazardous investment rate and discount rate both decreased from 6.75% to 5.25%. The KERS hazardous investment rate and discount rate both decreased from 7.50% to 6.25%. For the nonhazardous plan, the estimated salary increases decreased from 4.00% to 3.05% in fiscal year 2019. As of fiscal year 2020, salary increase assumptions vary from 3.30% to 15.30% based on service. For the hazardous plan, the estimated salary increases decreased from 4.00% to 3.05% in fiscal year 2019. As of fiscal year 2020, the salary increase assumptions vary from 3.55% to 20.05% based on service. In fiscal year 2018, the KERS plan inflation rate decreased from 3.25% to 2.30% for both the nonhazardous and hazardous plans.

*The amounts presented for the fiscal year were determined as of June 30.

** This is a 10-year schedule. However, the information in this schedule is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Schedule of Proportionate Share of the Net OPEB Liability
Kentucky Employees' Retirement System
(in thousands)

	June 30, 2020	June 30, 2019	June 30, 2018
Non-hazardous			
University's proportionate share of the net OPEB liability (asset)	2.335187%	2.302178%	2.345490%
University's proportionate share of the net net OPEB liability (asset)	\$ 51,909	\$ 54,583	\$ 59,481
University's covered-employee payroll	\$ 35,400	\$ 36,234	\$ 37,366
University's proportionate share of the net OPEB liability (asset) as a percentage of its covered-employee payroll	146.64%	150.64%	159.18%
Plan fiduciary net position as a % of the total OPEB liability	30.92%	27.32%	24.40%
Hazardous			
University's proportionate share of the net OPEB liability (asset)	0.372729%	0.386561%	0.370876%
University's proportionate share of the net net OPEB liability (asset)	\$ (100)	\$ (128)	\$ 22
University's covered-employee payroll	\$ 564	\$ 736	\$ 635
University's proportionate share of the net OPEB liability (asset) as a percentage of its covered-employee payroll	-17.73%	-17.43%	3.46%
Plan fiduciary net position as a % of the total OPEB liability	105.29%	106.83%	98.80%

*The amounts presented for the fiscal year were determined as of June 30, of the previous fiscal year (measurement date).

*This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, governments should present information for those years which information is available.

Northern Kentucky University
A Component Unit of the Commonwealth of Kentucky
Schedule of University OPEB Contributions
Kentucky Employees' Retirement System
(in thousands)

	June 30, 2020		June 30, 2019		June 30, 2018
Non-hazardous					
Contractually required contribution	\$ 2,931	\$	2,901	\$	2,989
University's contributions in relation to the contractually required contribution	2,931		2,901		2,989
Contribution deficiency (excess)	\$ -	\$	-	\$	-
Covered-employee payroll					
Covered-employee payroll	\$ 34,848	\$	34,491	\$	35,548
Contributions as a percentage of covered-employee payroll	8.41%		8.41%		8.41%
Hazardous					
Contractually required contribution	\$ 21	\$	18	\$	19
University's contributions in relation to the contractually required contribution	21		18		19
Contribution deficiency (excess)	\$ -	\$	-	\$	-
Covered-employee payroll					
Covered-employee payroll	\$ 835	\$	744	\$	838
Contributions as a percentage of covered-employee payroll	2.46%		2.46%		2.26%

Notes to the Schedule:

Changes in assumptions - In fiscal year 2018, the KERS nonhazardous and hazardous investment rate decreased from 7.50% to 6.25%. The nonhazardous discount rate decreased from 6.90% to 5.83%, and the hazardous discount rate decreased from 7.20% to 5.87%. The estimated salary increases decreased from 4.00% to 3.05% for both the nonhazardous and hazardous plans. The KERS plan inflation rate decreased from 3.25% to 2.30% for both the nonhazardous and hazardous plans. In fiscal year 2019, the KERS nonhazardous discount rate increased from 5.83% to 5.86%; the KERS hazardous discount rate increased from 5.87% to 5.88%. As of fiscal year 2020, salary increase assumptions vary from 3.30% to 15.30%, based on service, for the nonhazardous plan. Salary increase assumptions vary from 3.55% to 20.05%, based on service, for the hazardous plan. Also, in fiscal year 2020, the nonhazardous discount rate decreased from 5.86% to 5.73%, while the hazardous discount rate decreased from 5.88% to 5.66%.

* The amounts presented for each fiscal year were determined as of June 30.

* This is a 10-year schedule. However, the information in this schedule is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until 10 years of information is available.

* Employer contributions do not include the expected implicit subsidy.

POLICIES REPORT

The following policies were approved at the executive level after proceeding through the campus vetting process. The President and other university administrators determined that approval of these policies by the Board of Regents was not needed per the [criteria established in Presidential Recommendation C-7 of the January 2015 regular meeting](#):

The Board of Regents shall approve the following criteria to determine if a university policy requires Board approval:

- The policy identifies a major university strategic initiative;
- The policy involves the Board’s fiduciary responsibilities;
- The policy is associated with an issue of significant risk; and/or
- The policy must be approved by the Board for legal and compliance purposes

The criteria will be interpreted by the President, who may seek consultation from General Counsel or other university administrators. All new or revised university policies that meet the above criteria will be submitted to the Board for approval.

For efficiency purposes, the administration shall have the authority to make technical or editorial revisions for Board approved policies. A technical or editorial change is a non-substantive change such as the correction of statutory or regulation references, contact names, position titles, department names, office locations, email or web addresses, spelling or grammatical errors, and the like.

Copies of these policies are available upon request.

UNDERGRADUATE TEST-OPTIONAL ADMISSIONS

The [Undergraduate Test-Optional Admissions policy](#) is an interim policy in effect for Fall 2021, Spring 2022, and Summer 2022 admissions. It applies to undergraduate admissions only.

One of the objectives within NKU’s Success by Design strategic framework is to reduce barriers and simplify processes so diverse learners can successfully apply, be admitted, and enroll for educational opportunities. To address this objective, a committee was formed in Fall 2019 to review current NKU admissions standards; academic success and retention of NKU freshmen; and national, regional, and state admission criteria. The committee agrees with research that shows that the ACT and SAT can be biased and not predictive of students’ potential success and may disadvantage applicants of color, applicants from low-income backgrounds, or those who are in the first generation of their families to attend college. Additionally, colleges and universities across the nation are revisiting nearly every aspect of their operations in order to best respond to the COVID-19 pandemic. In light of SAT and ACT administration changes and cancellations, colleges within the region and beyond (University of Cincinnati, Miami University, Xavier, Wright State, Murray State, Eastern Kentucky University, Western Kentucky University, University of Kentucky, and University of Louisville) have or are in the process of implementing test-optional policies that either eliminate the requirement for prospective students to submit standardized test scores or make their submission optional. As of August 17, 2020, 1,460 colleges and universities—63% of the total recognized institutions by United States Department of Education—will not require ACT or SAT scores for some or all applicants for Fall 2021.

This interim policy has been discussed with several groups, including the Academic Affairs Council, the President’s Cabinet, the Council of Chairs, and the Faculty Senate Executive Committee. As an interim policy, this policy will proceed through NKU’s formal process of policy review, including review by the Academic and Admissions Policy Committee and a university comment period. [More information about this policy](#), including FAQs, is available on the NKU Admissions website.

FIRST YEAR RESIDENCY REQUIREMENT

A requirement for NKU first-year students to live on campus currently exists on the University Housing website and has been enforced at the University level. Given the success of students who live in on-campus housing, this revision articulates the requirement as a University policy. This policy requires first-year students to live on campus if they do not have a permanent address in one of the “exempt” counties, as specified within the policy. Other exceptions are specified in the policy (e.g., student is married, divorced, widowed, pregnant and/or parenting, has active military service, is > age 21).

COMMUNICABLE DISEASE

The purpose of this policy is to ensure that consistent procedures are followed when there is an occurrence of a communicable disease of interest among NKU faculty, staff, administrators, on-campus constituents such as contractors or vendors (e.g., dining, bookstore), and both residential and commuter students. This revision includes updates for COVID-19.

RECOMMENDATION:

That the following academic affairs personnel actions receive Board of Regents approval:

FACULTY APPOINTMENTS:

Dr. Bradley Sarchet, lecturer in the Department of Biological Sciences, College of Arts and Sciences, effective August 10, 2020.

DEPARTURES:

Dr. Joshua Hamilton, Coordinator and Clinical Professor in the School of Nursing, College of Health and Human Services, effective September 26, 2020.

Dr. Michelle Teschendorf, Assistant Professor in the School of Nursing, College of Health and Human Services, effective December 31, 2020.

Ms. Emily Wagner, Academic Advisor and Lecturer in the CHHS Advising Center, College of Health and Human Services, effective October 9, 2020.

EMERITUS STATUS:

Dr. Bill Attenweiler, associate professor in Psychological Science, Arts, College of Arts and Sciences, effective August 2020.

Mr. Thomas McGovern, professor in Visual Arts in the School of the Arts, College of Arts and Sciences, effective August 2020.

Mini Vitas Follow

TEMPORARY APPOINTMENTS:

College of Arts and Sciences

History and Geography	Dr. Meredith Shockley Smith	Academic Year
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College of Education

Teacher Education & School Leadership	Ms. Erin Elfers	Academic Year
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College of Health and Human Services

Advising Center	Ms. Jasmine Riddlespriger	Fiscal Year
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College of Informatics

Communication

Ms. Michelle Crowley

Academic Year

Mr. Jonathan Hale

Academic Year

Mini Vitas Follow

MINI VITA

Name: Bill Attenweiler

Title: Associate Professor

Education: M.B.A., 2015, Northern Kentucky University

Ph.D. in Industrial and Organizational Psychology, 2002, Clemson University

M.S. in Applied Psychology, 2000, Clemson University

B.A. in Psychology, 1975, University of Maine

Experience: 2008-present, Associate Professor, Department of Psychology, Northern Kentucky University

2015-2018, Program Director, Master of Science in Industrial-Organizational Psychology (MSIO), Northern Kentucky University

2010-2014, Associate Dean and Director of Integrative Studies, College of Arts and Science, Northern Kentucky University

2004-2006, Program Director, Master of Science in Industrial-Organizational Psychology (MSIO), Northern Kentucky University

2002-2008, Assistant Professor, Department of Psychology, Northern Kentucky University

MINI VITA

Name: Michelle Crowley

Title: Lecturer (non-tenure track, temporary)

Education: M.A. in Communication, 2012, University of Cincinnati

B.A. in Theatre/Communication, 2010, Thomas More College

Experience: 2016-present, Lecturer of Communication, Northern Kentucky University

2013-2016, Adjunct Professor of Communication, Cincinnati State and Technical College

2012-2016, Adjunct Professor of Communication, Northern Kentucky University

2012-2016, Adjunct Professor of Communication, University of Cincinnati Clermont Campus

2011-2012, Assistant Individual Events Forensics Coach, University of Cincinnati

2011-2012, Graduate Teaching Assistant of Public Speaking, University of Cincinnati

MINI VITA

Name: Jonathan Hale

Title: Lecturer (non-tenure track, temporary)

Education: M.F.A. in Art Studio, 2012, University of Kentucky

M.A. in Art, 2009, Morehead State University

B.A. in Art 2007, Morehead State University

Experience: 2016-present, Adjunct Professor, Eastern Kentucky University

2013-2015, Part-time Instructor, University of Kentucky

2010-2012, Teaching Assistant, University of Kentucky

2009, Adjunct Professor, Morehead State University

MINI VITA

Name: Erin Elfers

Title: Lecturer (non-tenure track, temporary)

Education: M.Ed. in Special Education, 2008, Vanderbilt University

B. S. in Psychology, 2001, Appalachian State University

B.A. in Literature, 2001, Appalachian State University

Experience: 2018-2020, Adjunct Instructor, Northern Kentucky University

2018-2020, Clinical Director, Positive Solutions Behavior Group

2013-present, Educational Consultant, Greater Cincinnati/NKY area

2009-2018, Board Certified Behavioral Analyst, Greater Cincinnati/NKY area

2015, Instructor, Virginia Commonwealth University

2009-2014, Autism and Behavior Consultant, Boone County Schools, KY

2008-2009, Child Developmentalist, Thompson Center for Autism, University of Missouri-Columbia

2006-2008, Research Assistant, Vanderbilt University

2006-2008, Teacher, Metropolitan Davidson County School District, Nashville, TN

1999-2006, Lead Behavioral Technician

MINI VITA

Name: Thomas McGovern

Title: Professor

Education: M.F.A., Fine Arts, 1986, Tyler School of Art of Temple University

B.F.A., Fine Arts, 1982 Massachusetts College of Art and Design

Experience: 2018-2019, professor, School of the Arts, Northern Kentucky University

2015 -2018, Associate Director, School of the Arts, Northern Kentucky University

2002-15, Chair and Professor of Art, Department of Visual Arts, Northern Kentucky University

1987-1995, Area Head, Sculpture, School of Visual Arts, Pennsylvania State University

1999-2002, Assistant Director, School of Visual Arts, Pennsylvania State University

1995-2002, Graduate Program Head, School of Visual Arts, Pennsylvania State University

MINI VITA

Name: Jasmine Riddlespriger

Title: Academic advisor/Lecturer (non-tenure track, temporary)

Education: M.A. in Business Management and Leadership, 2019, Webster University
B.A. in General Studies, 2015, Indiana University Southeast

Experience: 2020-present, Academic advisor/Lecturer, Northern Kentucky University
2019-2020, Career and Student Services Specialist, Sullivan University
2018-2019, Independence Readiness Specialist, Boys and Girls Haven
2017-2018, Credit Recovery Facilitator, Floyd County Schools
2015-2017, Jobs for America's Graduates Specialist, Jobworks, Inc.
2013-2015, Residential Youth Worker, Childplace Adoption Agency

MINI VITA

Name: Bradley Alan Sarchet

Title: Lecturer (non-tenure track, renewable)

Education: Ph.D. in Zoology and Physiology, 1995, University of Wyoming, Laramie
M.A. in Philosophy, University of Wyoming, Laramie
B.S. in Biology, 1987, Bowling Green State University

Experience: 2016-2020 Assistant and Associate Professor, Galan College of Nursing
2010-2016, Assistant Professor, Biology, University of Cincinnati
2008-2010, Biology Instructor, Coconino Community College
2003-2008, Assistant and Associate Professor, Manatee Community College
1995-2003, Assistant and Associate Professor, Colby-Sawyer College
1995-2003, Visiting Scholar, Department of Environmental Health, School of Public Health, Harvard University

MINI VITA

Name: Meredith C. Shockley-Smith

Title: Visiting Professor (non-tenure track, temporary)

Education: Ph.D. in Educational Studies, 2015, University of Cincinnati

M.A. in Educational Studies, 2008, University of Cincinnati

Graduate Certificate in Social Justice, Peace Education, and Research, 2008,
University of Cincinnati

B.A. in Africana Studies, 2006, University of Cincinnati

Experience: 2018-present, Direct, Cradle Cincinnati, Equity and Community Strategies

2016-2017, Visiting Assistant Professor, Miami University, Oxford

2008-2016, Co-Director of Black Studies Courses, Northern Kentucky University

RECOMMENDATION:

That the attached non-academic personnel actions receive Board of Regents approval.

BACKGROUND:

The following categories of non-academic personnel actions which occurred between August 8, 2020 and October 9, 2020 require approval by the Board of Regents:

1. Activations/Rehires
2. Reassignments, Reclassifications, Title/Status Changes, Promotions
3. Transfers
4. Contract/Temporary/Student to Regular & Regular to Contract
5. Departures
6. Retirements
7. Administrative/Executive

ACTIVATIONS/REHIRES**08/08/20 – 10/09/20**

NAME	DEPARTMENT	TITLE	EFF. DATE
Ball, Tracey	Center for Innovation & Tech. in Education	Instructional Designer	09/21/2020
Barrett-Wolcott, Tammy	Institute for Health Innovations	Coordinator, Prevention Coalition	09/15/2020
Brown, Jennifer	College of Education	Assistant to the Dean	08/24/2020
Dawes, Donnie	Institute for Health Innovations	QRT/Reentry Specialist	08/17/2020
Hoffman, Danielle	IT-BW Business Support Group	Business Analyst	09/21/2020
Jones, Ashly	Building Services 2nd Shift	Custodian	08/17/2020
Mathews, Alyssa	Athletic Academic Services	Advisor	09/01/2020
Poe, Natasha	Institute for Health Innovations	Care Coordinator, IHI	08/10/2020
Sanogo, Habib	Health, Counseling, & Student Wellness	Counselor	10/05/2020
Walker, Latavia	Admissions	Coordinator, Adms. Diversity & Outreach	10/01/2020

REASSIGNMENTS, RECLASSIFICATIONS, TITLE/STATUS CHANGES, PROMOTIONS**08/08/20 – 10/09/20**

NAME	DEPARTMENT	TITLE	STATUS	EFF. DATE
Rowland, William	University Police-Field Ops	Public Safety Officer	Salary Adjustment	09/04/2020

TRANSFERS**08/08/20-10/09/20**

NAME	PREVIOUS DEPARTMENT	NEW DEPARTMENT	TITLE	EFF. DATE
Humphress, Kacie	Housing Facilities Management	Building Services 1st Shift	Custodian	08/17/2020

CONTRACT/TEMPORARY/STUDENT TO REGULAR & REGULAR TO CONTRACT**08/08/20-10/09/20**

NAME	DEPARTMENT	TITLE	STATUS	EFF. DATE
Navarro-Guzman, Alexandria	Admissions	Cnslr for Adms for Diversity & Outreach	Student to Staff	08/17/2020
Schalk, Robert	IT-Enterprise Systems Group	Applications Developer, Mobile Apps	Contract to Regular	09/01/2020

DEPARTURES**08/08/20-10/09/20**

NAME	DEPARTMENT	TITLE	EFF. DATE
Broomall, Benjamin	Horticulture	Horticulture Technician	08/15/2020
Calhoun, Erica	Student Financial Assistance	Specialist	08/20/2020
Collins, Kris	Automotive Shop	Motor Coach Driver/Mechanic	08/27/2020
Everson, Stephen	Building Services 1st Shift	Custodian	08/21/2020
Fern, Ryan	University Police-Field Operations	Public Safety Officer	08/26/2020
Henry, Kevin	Building Services 3rd Shift	Floor Care Operator	08/06/2020*
Holley, Felicia	Building Services 2nd Shift	Custodian	09/17/2020
Kent, Logan	Roads & Grounds	Heavy Equipment/Grounds Operator	09/05/2020
Loftis, Rachel	Center for Student Inclusiveness	Assistant Director	09/12/2020
Martin, Jimmy	Housing Facilities Management	General Maintenance Worker	08/14/2020
Massie, Elizabeth	Steely Library	Specialist	10/09/2020
McGuire, Byron	Building Services 3rd Shift	Lead Floor Care Operator	09/01/2020
Nesbitt, Brandon	IT-BW Business Support Group	Senior Business Analyst	09/02/2020
Pratt, Lawrence	Building Services 1st Shift	Custodian	08/08/2020
Riley, Chance	Building Services 1st Shift	Custodian	09/15/2020
Shi, Qipiong	Ctr for Innovation & Tech in Education	Instructional Designer	09/01/2020
Smith, Chloe	Athletics Communication	Assistant Athletics Communication Director	09/01/2020
Stodola, Lauren	Women's Basketball	Assistant Coach	09/05/2020
Thomas, Bradley	IT-SLCM Business Support Group	Applications Developer II	08/29/2020
Torres, Richard	IT-Infrastructure and Operations Group	Senior System Analyst I	09/26/2020
Wheeler, Martha	IT-Information Technology Central	Coordinator	10/01/2020

RETIREMENTS

08/08/20-10/09/20

NAME	DEPARTMENT	TITLE	EFF. DATE
O'Neill, John	Roads & Grounds	Turf Specialist	09/01/2020
Trumble, Maryann	Student Union & Programming	Specialist	10/01/2020

ADMINISTRATIVE/EXECUTIVE

08/08/20 – 10/09/20

NAME	DEPARTMENT	TITLE	REASON	EFF. DATE
Brooks, Sheena	Graduate Education	Director, Graduate Programs	New Hire	09/10/2020

***Not on previous report**

RECOMMENDATION:

The Board of Regents officially hereby accepts contributions totaling **\$1,780,000** received by the NKU Foundation Inc. for the benefit of Northern Kentucky University during the period August 1, 2020 through September 30, 2020 per the below list.

BACKGROUND:

At the March 12, 2014 Board Meeting, a major gift policy was approved by the Regents raising the level of major gifts submitted for review and acceptance by the Board to \$25,000. Contributions of \$25,000 or more for the period 8/1/20 through 9/30/20 are itemized below.

NKUF - Contributions of \$25,000 or More (8/1/2020 — 9/30/2020)				
Name	Gift Date	Gift Designation	Gift Type	Amount
Richard M. Funk	9/23/20	NKU Women's Soccer Program	Pledge	\$250,000.00
Bradley & Karen Shipe	9/1/20	NKU Basketball Excellence Fund	Pledge	\$100,000.00
Heritage Bank	8/17/20	Collaborative for Economic Engagement	Pledge	\$30,000.00
Daniel P. Mecklenborg	9/23/20	Daniel P and Mary T Mecklenborg Endowed Scholarship	Planned Gift	\$25,000.00
William T. Hoover	8/27/20	NKU Haile-US Bank College of Business Dean's Advisory Board LIFT Scholarship	Pledge	\$25,000.00
Carol J. Swarts	9/29/20	Frank Sinton Milburn Endowed Professorship	Planned Gift	\$1,000,000
Carol J. Swarts	9/29/20	Karen Ruschman Nursing Endowment	Planned Gift	\$250,000
Carol J. Swarts	8/26/20	Carol's Peripatetic Scholarship	Cash	\$25,000.00
Carol J. Swarts	8/26/20	Frogs Snails & Lizard Tails Endowment	Cash	\$75,000.00

RECOMMENDATION:

The Board of Regents hereby approves the following naming actions:

- (1) The naming of an endowed LIFT scholarship to support students in the Haile/US Bank College of Business who demonstrate financial need as determined by the Free Application for Federal Student Aid (FAFSA) and are full-time, first-generation students. “NKU Haile/US Bank College of Business Dean’s Advisory Board LIFT Scholarship” (Brian and Christy Berning)
- (2) The naming of an endowed LIFT scholarship to support students in the Haile/US Bank College of Business who demonstrate financial need as determined by the Free Application for Federal Student Aid (FAFSA) and are full-time, first-generation students. “NKU Haile/US Bank College of Business Dean’s Advisory Board LIFT Scholarship” (William Hoover and Lifetime Financial Growth, LLC)
- (3) The renaming of the Founders Room in the NKU Soccer Stadium in recognition of the donor’s support of the NKU Women’s Soccer Excellence Fund and for the space to serve as a memorial for Jeanna Goettelman for a term of 35 years. “Jeanna Goettelman Funk Suite”
- (4) The renaming and repurposing of an endowed scholarship to support students who have declared biological sciences as their major. “Larry Giesmann Biology Scholarship” (formerly Laura MD Pre-Medical Scholarship)
- (5) The naming of an endowed scholarship to support students enrolled in the Salmon P. Chase College of Law. The scholarship will be awarded annually to students demonstrating high academic promise who are enrolled in the evening division. “Daniel P. and Mary T. Mecklenborg Endowed Scholarship”
- (6) The naming of an endowed professorship in the College of Arts and Sciences. “Dr. Miriam Steinitz-Kannan Endowed Professorship in Biological Sciences”
- (7) The naming of an endowed professorship in the College of Arts and Sciences. “Dr. Richard Durtsche Endowed Professorship in Biological Sciences”
- (8) The naming of an endowed professorship in the College of Arts and Sciences. “Straws Endowed Professorship in Chemistry”
- (9) The naming of an endowed professorship in the College of Arts and Sciences. “Dr. Robert Wallace Endowed Professorship in Literature”
- (10) The naming of two (2) endowed professorships in the College of Informatics. “Frank Sinton Milburn Endowed Professorship(s) in the College of Informatics”

BACKGROUND:

Naming actions in connection with private gifts are governed by NKU Administrative Regulation-II-4.0-2, section 2.2. NKU’s Naming Policy provides for naming opportunities in consideration of a major contribution to the university. The policy allows flexibility in determining the level of contribution appropriate for each naming action, enabling each gift to be judged on its own merit.

After careful consideration by university officials and unanimous support by the University Naming Committee, it was recommended to offer the following naming recognitions.

(1) The university has received a gift to support a LIFT scholarship for students in the Haile/US Bank College of Business who demonstrate financial need as determined by the Free Application for Federal Student Aid (FAFSA) and are full-time, first-generation students.

Donor: Brian and Christy Berning

Naming Gift: \$25,000

Naming Recognition: NKU Haile/US Bank College of Business Dean's Advisory Board
LIFT Scholarship

This agreement in combination with a gift from William Hoover and Lifetime Financial Growth, LLC will meet the minimum matching contribution of \$50,000 required by the LIFT Matching Scholarship Program. Brian Berning is a member of the Haile/US Bank College of Business Dean's Advisory Board and the Accounting Board. He received his bachelor's degree from NKU in Accounting. Currently, he is a Partner at RSM US LLP. Brian and his wife, Christy, wanted to help first generation and financial need students which is why they committed to starting this fund with William Hoover.

(2) The university has received a gift to support a LIFT scholarship for students in the Haile/US Bank College of Business who demonstrate financial need as determined by the Free Application for Federal Student Aid (FAFSA) and are full-time, first-generation students.

Donor: William Hoover and Lifetime Financial Growth, LLC

Naming Gift: \$25,000

Naming Recognition: NKU Haile/US Bank College of Business Dean's Advisory Board
LIFT Scholarship

This agreement in combination with a gift from Brian and Christy Berning will meet the minimum matching contribution of \$50,000 required by the LIFT Matching Scholarship Program. William Hoover currently serves as a member of the Dean's Advisory Board in the Haile/US Bank College of Business.

(3) The university has received a gift to support the NKU Women's Soccer Excellence Fund. This contribution will receive recognition via the renaming of the Founders Room in the NKU Soccer Stadium to the Jeanna Goettelman Funk Suite for a term of 35 years.

Donor: Richard Funk

Naming Gift: \$250,000

Naming Recognition: Jeanna Goettelman Funk Suite

Jeanna played soccer at NKU for three years from 2004 – 2006, and soon thereafter was diagnosed with brain cancer. Several years went by as Jeanna bravely battled cancer. Jeanna met with Coach Bob Sheehan in the winter of 2009 and shared her goal of returning to NKU to complete both her fourth year of soccer and earn her degree. Jeanna said on numerous occasions that she is not a quitter and that she was going to return to NKU to finish. Jeanna worked exceptionally hard over the winter, spring, and summer months of 2009 to be able to return in the fall of 2009. In late July of that year, just before preseason was to begin, more spots were found

on Jeanna's brain. Jeanna was not cleared to return to play. This was just a minor setback for Jeanna, as she then turned her sights toward 2010. After several years of battling brain cancer and not being able to play intercollegiate soccer, Jeanna returned to play for NKU in the fall of 2010. Jeanna is truly an inspiration. There is much more to Jeanna as she was highly intelligent, kind, caring, loved to laugh, enjoyed life, and exemplified what it meant to be a Norse and a student-athlete. She lost her battle with brain cancer on Wednesday, July 15th, 2020 at the age of 35. In recognition of donor's interest to secure naming rights and for the space to serve as a memorial for Jeanna, a naming rights term of 35 years for the Jeanna Goettelman Funk Suite at the NKU Soccer Stadium will be in place, the same age Jeanna was when she passed away. At the end of the term, members of the Funk family will have first right of refusal for renewal of naming rights if/when another interested party expresses interest

(4) The donor wishes to rename and repurpose an endowed fund to support a scholarship for students who have declared biological sciences as their major.

Donor: Dr. Larry Giesmann and Dr. Laura Trice
Naming Gift: \$25,000
Naming Recognition: Larry Giesmann Biology Scholarship

The scholarship is created from a gift commitment from Dr. Larry Giesmann and his wife, Dr. Laura Trice. Dr. Giesmann is a retired faculty member from the NKU Department of Biological Sciences who, during his tenure, encouraged many students to continue on to medical school and has maintained relationships with many of these alumni. The donors wish to change the name and modify the purpose of their endowed fund from the Laura Trice Pre-Medical Scholarship to the Larry Giesmann Biology Scholarship.

(5) The university has received a planned gift to support a scholarship for students enrolled in the Salmon P. Chase College of Law. The scholarship will be awarded annually to students demonstrating high academic promise who are enrolled in the evening division.

Donor: Daniel P. and Mary T. Mecklenborg
Naming Gift: \$25,000
Naming Recognition: Daniel P. and Mary T. Mecklenborg Endowed Scholarship

Daniel P. Mecklenborg attended Chase College of Law in the evening division, graduating in 1981. Dan is Chief Legal Officer and Secretary of the Ingram Barge Company, the largest dry cargo carrier and one of the top chemical carriers on the nation's rivers. He has been actively involved in civic and professional organizations throughout his career, including serving as chair of the Inland Waterways Users Board, Waterways Council, Inc., National Waterways Foundation, and America's Watershed Initiative. Dan served as Chase College of Law's Distinguished Practitioner in Residence in 2011, and he was the recipient of the Chase Alumni Association's Professional Achievement Award in 2019. Dan and his wife, Mary, live in Bon Aqua, near Nashville, Tennessee. The donor reserves the right to pay all or part of the \$25,000 gift before his death.

(6) The university has received a planned gift to establish an endowed professorship in the College of Arts and Sciences. This professorship is designed to strengthen the college's capacity to obtain or retain top-flight faculty members by enhancing the profile of their position. The annual endowment's spending can be used to supplement faculty salary, professional development, research funding, and student research support.

Donor: Dr. Carol Swarts

Naming Gift: \$500,000

Naming Recognition: Dr. Miriam Steinitz-Kannan Endowed Professorship in Biological Sciences

Dr. Carol Swarts, recently amended her original planned gift to NKU to include the establishment of various professorships. Dr. Swarts has been a longtime supporter of NKU faculty and students through her establishment of various endowments across the university.

(7) The university has received a planned gift to establish an endowed professorship in the College of Arts and Sciences. This professorship is designed to strengthen the college's capacity to obtain or retain top-flight faculty members by enhancing the profile of their position. The annual endowment's spending can be used to supplement faculty salary, professional development, research funding, and student research support.

Donor: Dr. Carol Swarts

Naming Gift: \$500,000

Naming Recognition: Dr. Richard Durtsche Endowed Professorship in Biological Sciences

Dr. Carol Swarts, recently amended her original planned gift to NKU to include the establishment of various professorships. Dr. Swarts has been a longtime supporter of NKU faculty and students through her establishment of various endowments across the university.

(8) The university has received a planned gift to establish an endowed professorship in the College of Arts and Sciences. This professorship is designed to strengthen the college's capacity to obtain or retain top-flight faculty members by enhancing the profile of their position. The annual endowment's spending can be used to supplement faculty salary, professional development, research funding, and student research support.

Donor: Dr. Carol Swarts

Naming Gift: \$500,000

Naming Recognition: Straws Endowed Professorship in Chemistry

Dr. Carol Swarts, recently amended her original planned gift to NKU to include the establishment of various professorships. Dr. Swarts has been a longtime supporter of NKU faculty and students through her establishment of various endowments across the university.

(9) The university has received a planned gift to establish an endowed professorship in the College of Arts and Sciences. This professorship is designed to strengthen the college's capacity

to obtain or retain top-flight faculty members by enhancing the profile of their position. The annual endowments spending can be used to supplement faculty salary, professional development, research funding, and student research support.

Donor: Dr. Carol Swarts

Naming Gift: \$500,000

Naming Recognition: Dr. Robert Wallace Endowed Professorship in Literature

Dr. Carol Swarts, recently amended her original planned gift to NKU to include the establishment of various professorships. Dr. Swarts has been a longtime supporter of NKU faculty and students through her establishment of various endowments across the university.

(10) The university has received a planned gift to establish two endowed professorships in the College of Informatics. These professorships are designed to strengthen the college's capacity to obtain or retain top-flight faculty members by enhancing the profile of their position. The annual endowments' spending can be used to supplement faculty salary, professional development, research funding, and student research support.

Donor: Dr. Carol Swarts

Naming Gift: \$1,000,000

Naming Recognition: Frank Sinton Milburn Endowed Professorship(s) in the College of Informatics

Dr. Carol Swarts, recently amended her original planned gift to NKU to include the establishment of various professorships. Dr. Swarts has been a longtime supporter of NKU faculty and students through her establishment of various endowments across the university.

Dr. Carol Swarts:

In addition to her medical outreach, the Nebraska native has been a philanthropist to academia and a staunch contributor to endeavors for environmental conservation. She has provided generous gifts to NKU and other schools, including her alma mater. At NKU she established the Frank Sinton Milburn Outstanding Professor Award in honor of her late entrepreneurial husband, an annual accolade honoring the university's top faculty. Dr. Swarts also has donated objects from her extensive travels to the school's Museum of Anthropology and was instrumental in the museum acquiring a rare collection of Southeast Asian ceramics. In addition, she funds scholarships at NKU in world languages and literature, nursing, and an undergraduate research award in biological sciences. Most recently she established the Straws Endowed Professorship in Computer Science, a professorship in the College of Informatics.

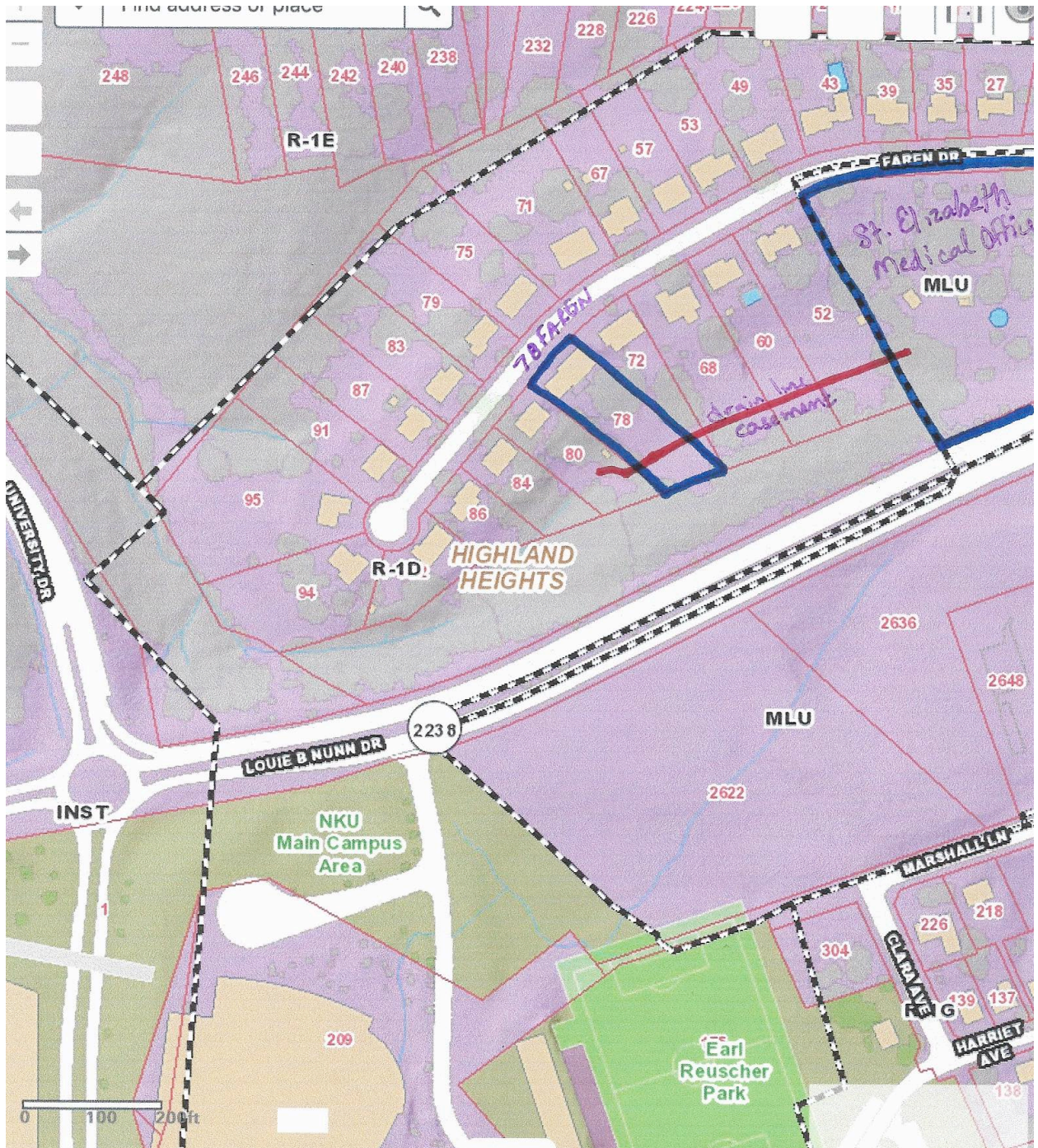
RECOMMENDATION:

That the Board of Regents authorize the granting of temporary easements (2) and permanent easements (2) to the City of Highland Heights for the improvement of storm water drainage from the detention outfall at 2626 Alexandria Pike (St. Elizabeth Healthcare Medical Office Building) and at 78 Faren Drive.

BACKGROUND:

Construction of the St. Elizabeth Healthcare Medical Office Building (MOB) included the installation of an SD1 approved underground storm water detention system located on the east end of the project site. To resolve a drainage issue in the rear back yards of adjacent Faren Drive parcels located below the MOB, that pre-existed the MOB but was exacerbated by the MOB project, the City of Highland Heights is partnering with St. Elizabeth Healthcare to improve storm water drainage between Faren and Nunn Drive. An existing underground drainage system will be replaced with a new line connected to the detention outfall on the Medical Office Building site. The drain will run underground and daylight on private property at 80 Faren.

The City of Highland Heights is requesting a permanent 20-foot wide easement from NKU at two locations for this drain system. This easement request is approximately 4.5 feet in length on NKU's property at 2626 Alexandria Pike (MOB site) and 101.9 feet in length as it crosses 78 Faren Drive. During construction, the temporary easement is 50 feet wide at both locations.



RECOMMENDATION:

That the Board of Regents approve the sale of the approximately one +/- acre parcel and building located at 4505 Sophie Avenue in Middletown, Ohio.

BACKGROUND:

In 2016, the former WNKU Middletown site was split into two separate parcels. The larger parcel with the radio tower and FCC license was determined to be the asset with value and sold in 2017. The approximate one-acre section of the site at 4505 Sophie Avenue, which includes a building in very poor condition, was a liability to the sale of the tower, diminished the overall value of the larger parcel, and was set aside for a later offering.

In August, an Invitation to Bid was issued for the sale of this piece of surplus real property, and it was marketed in “as-is condition”. A responsive offer was received. The approval of the Secretary of Finance is required for this disposition, and those discussions are underway. The disposition will proceed in accord with State guidelines.

RECOMMENDATION:

That the Board of Regents adopt the attached Resolution which provides for approval of NKU's 2019 Hazard Mitigation Plan ("Plan"). The purpose of the Plan is to set a strategy for building a more resilient campus community that will mitigate damages and losses caused by natural hazard events.

BACKGROUND:

NKU entered into a 2017—2019 Memorandum of Agreement with the Commonwealth of Kentucky, Department of Military Affairs, Division of Emergency Management to develop a Hazard Mitigation Plan specific to NKU.

The Plan is designed to reduce risk to people and property from natural hazards and was developed using grant funding provided by the Federal Emergency Management Agency's ("FEMA") Pre-Disaster Mitigation grant program.

Plan development included a thorough risk assessment utilizing historical data. Eleven potential hazards were identified and mitigation strategies were developed for each hazard. Plan mitigation strategies address vulnerabilities identified by the risk assessment.

The Plan was submitted for the Commonwealth's approval in 2019. Having received approval of the Plan by Kentucky Emergency Management in 2020, Board of Regents adoption is necessary to finalize the Plan for the purposes of future grant opportunities.

Board adoption will allow NKU to apply for FEMA Hazard Mitigation Assistance (HMA) grants. HMA provides partial or full funding for qualified mitigation efforts. During the risk assessment process, NKU stakeholders identified 41 actions related to the eleven identified hazards that have the potential to reduce or eliminate risk and increase community safety.

The Hazard Mitigation Plan includes an initial five-year term with a five-year plan update and renewal thereafter. The annual maintenance and five-year plan updates include university and community collaboration as well as a plan to minimize future vulnerability (mitigation strategy), accompanied by a schedule that outlines a method for monitoring and evaluating plan progress (plan maintenance).

A RESOLUTION OF THE BOARD OF REGENTS OF NORTHERN KENTUCKY UNIVERSITY APPROVING THE 2019 HAZARD MITIGATION PLAN

WHEREAS, the Board of Regents (the "Board") of Northern Kentucky University (the "University"), desires to approve the 2019 Hazard Mitigation Plan (the "Plan") prepared in collaboration with Commonwealth of Kentucky, Department of Military Affairs, Division of Emergency Management; and

WHEREAS, the purpose of the Plan is to set a strategy for building a resilient campus community that will mitigate damages and losses caused by natural hazard events. The Plan is the result of a systematic evaluation of the nature and extent of the vulnerability posed by the effects of hazards (risk assessment), includes a five-year action plan to minimize future vulnerability (mitigation strategy), and is accompanied by a schedule that outlines a method for monitoring and evaluating plan progress (plan maintenance).

NOW THEREFORE BE IT RESOLVED that the Board hereby authorizes its Chair, André R. Ward, to act on behalf of NKU and NKU's Board, to execute this Resolution which approves the 2019 Hazard Mitigation Plan as submitted for any and all legal purposes, including future submission for grant funding.

APPROVED NOVEMBER 11, 2020, at the Video Teleconferenced Board Meeting

André R. Ward, Chair,
Board of Regents, Northern Kentucky University

**Please see Appendix
for the
Northern Kentucky University
2019 Hazard Mitigation Plan**

RECOMMENDATION:

That the Board of Regents authorize the President to execute a Ground Lease Agreement with FPNKU, LLC (Fairmount Properties) to develop the Phase Two mixed-use site at the gateway of NKU's campus at US-27 and Nunn Drive.

BACKGROUND:

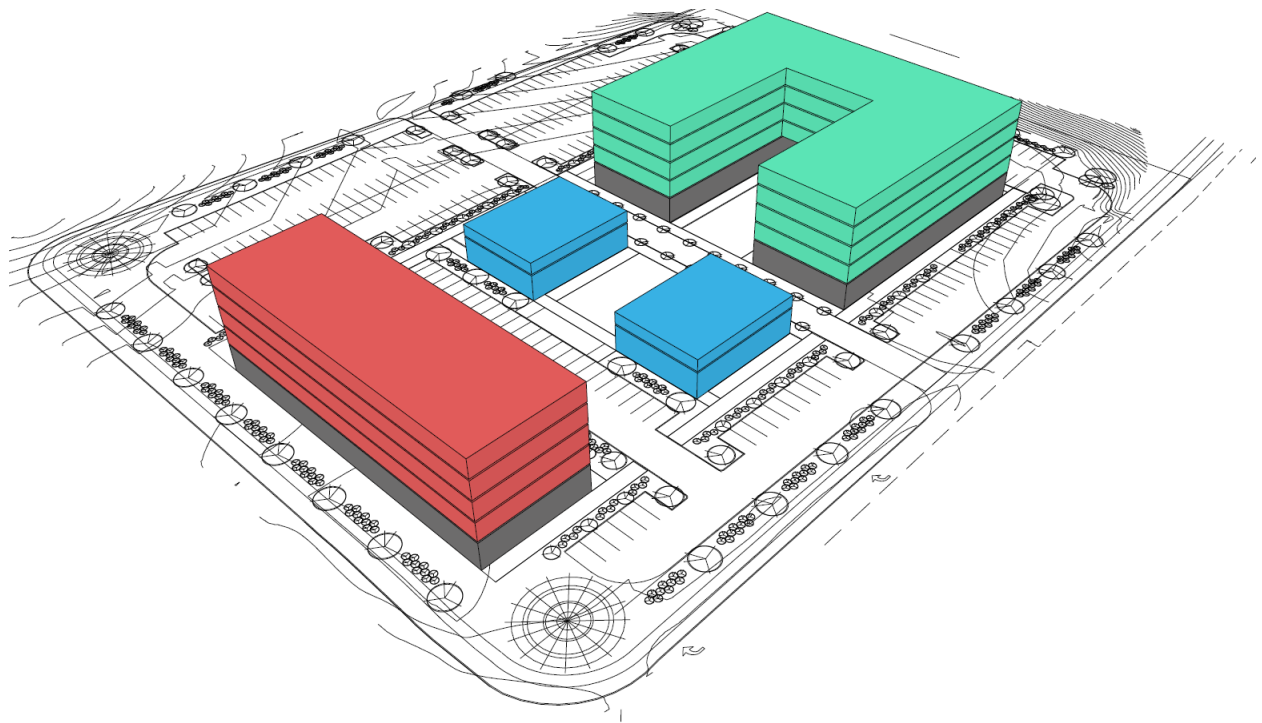
In 2009, NKU adopted a Campus Master Plan, entitled "A Guide to a Residential, Student Focused Learning Community." After consultation with the Board of Regents, the University issued a Request for Proposal (RFP) on March 16, 2016, to develop a portion of its campus into a mixed-use development through a private partnership consistent with the Campus Master Plan.

The University entered into a Master Development Agreement with Fairmount Properties (Developer) on December 21, 2017 to develop a "Town and Gown" site at the campus gateway located at Nunn Drive and US-27 to include retail, residential and office components as well as potentially a hotel and garage component (the "Gateway Project"), as specified in the RFP and the Campus Master Plan.

Phase One, which was completed in April 2020, is a 65,000 square foot office building and associated parking garage on the north side of the Nunn Drive intersection for St. Elizabeth Healthcare and OrthoCincy.

Phase Two, on the south side of Nunn Drive, will be a mixed-use development of 30-38,000 square feet of full-service and casual restaurant and retail tenants; a 110-room hotel; 75-150 market rate apartments; parking; and, potentially, office space. Retail uses will result in a safe, active pedestrian experience complete with al fresco dining on patios, sidewalk amenities, public art installations and an urban environment that embraces the notion of a unique street experience.

Fairmount Properties will pay NKU an annual base rent consistent with market rates, which will escalate annually over the term of the lease. Construction is expected to begin in late 2021 and occupancy is anticipated to occur in spring 2023.



RECOMMENDATION:

That the attached organizational chart receives the Board of Regents approval.

BACKGROUND:

The attached organizational chart reflects all NKU Administrative updates through November 11, 2020. The reporting lines listed are for Director level and above, but include; individuals who directly report to the President; Department Chairs under Academic Affairs; Coaching areas under Intercollegiate Athletics; and the Manager of the Bookstore/Barnes & Noble and Food Services/Chartwells, which are separate entities from the University.

NORTHERN KENTUCKY UNIVERSITY ORGANIZATIONAL STRUCTURE¹

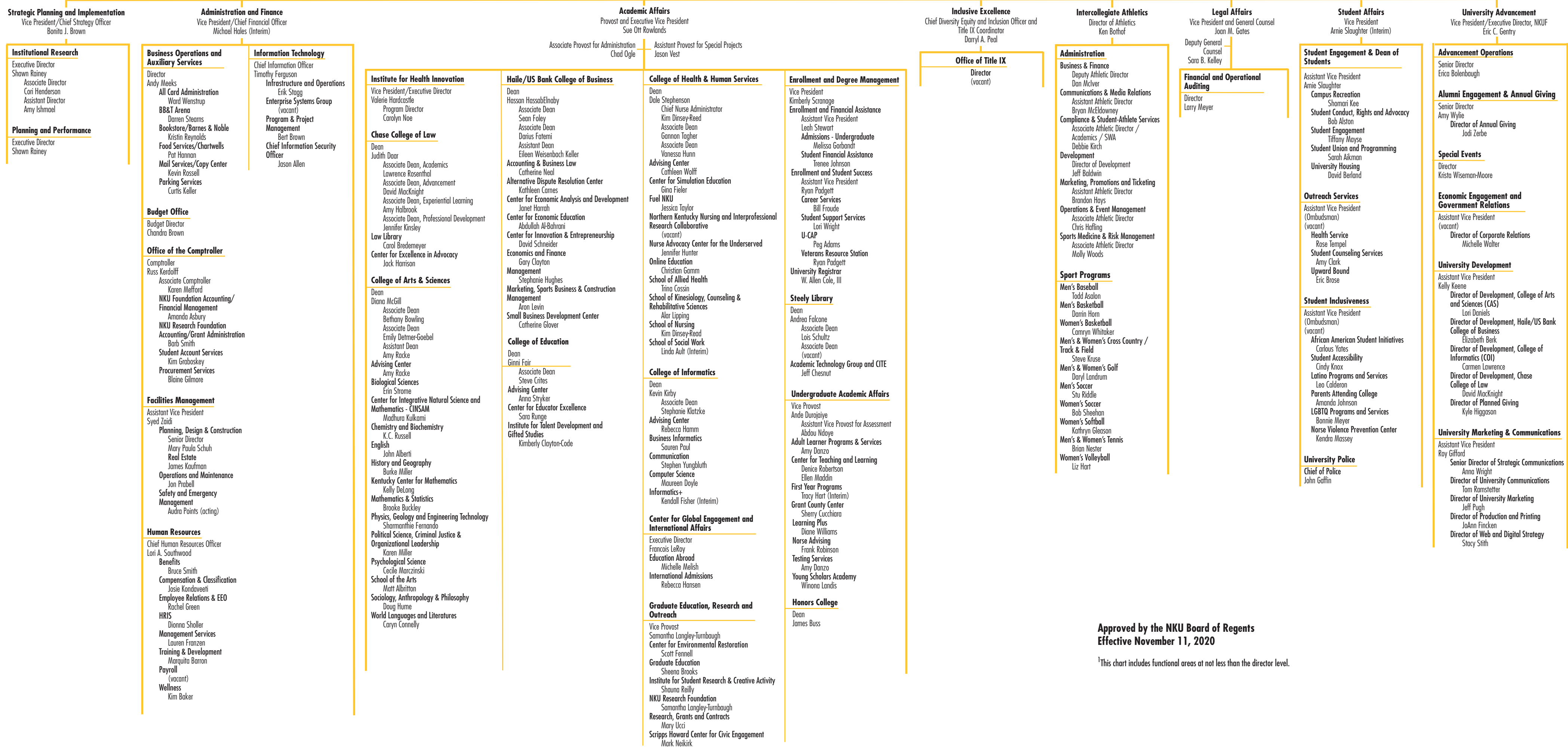
BOARD OF REGENTS

Andr a R. Ward (Chair), Normand G. Desmarais (Vice Chair), Gregory S. Shumate (Secretary), Michael Baranowski, Staff Regent, Richard Boehne, Lauren Goodwin, Ashley F. Himes, Ken Perry, Dennis Repenning, William L. Scheben

PRESIDENT

Ashish K. Vaidya

Assistant to the President: Tammy Knochelmann



Approved by the NKU Board of Regents
Effective November 11, 2020

¹This chart includes functional areas at not less than the director level.

RECOMMENDATION:

That the Board of Regents authorize the President to execute a long-term Lease with Brighton Properties, Inc. for the Brown Building, located near Callahan Hall at 3530 Alexandria Pike, for the purpose of creation of an Opportunity House (similar to Scholar House).

BACKGROUND:

Opportunity House is an innovative initiative to develop postsecondary educational opportunities for youth between the ages of 18-24 who are foster care alumni as well as other vulnerable youth. Affordable and stable housing along with viable transportation options play an important role in their ability to complete a degree. The support provided by Opportunity House will allow education to be their priority. Youth will sign an annual lease requiring a commitment to the House's education and work requirements: enroll at least part-time in an approved post-secondary institution, maintain employment, and participate in case management and life skills. Opportunity House will work to reduce barriers to success, ultimately leading to educational attainment, employment and self-sufficiency.

Brighton Properties, Inc. will develop and serve as property manager for the facility, including execution and management of tenant leases, and will be responsible for all building maintenance and operational costs. The university will retain responsibility for site maintenance and snow removal. Brighton Center will be responsible for the renovation costs. They will lease it as is, and they will be responsible for any hazardous material remediation that may be required.

Brighton Properties, Inc. will submit a CDBG grant application for part of the renovation funding and will seek private funds for the remainder of the project costs.

The Brown Building, acquired as part of the 2007 Callahan Hall purchase, has been vacant since about 2002. Constructed in 1970, the two-level 8,586 gross square foot building was at one time a residential women's shelter facility. While the structure of the building is in good condition, the building's interior finishes and systems are in poor condition. An architect has confirmed the feasibility of the proposed conversion.

Brighton Properties, Inc. will pay \$1/year lease payment over the term of the lease.

Rationale:

There would be between 14-16 students staying at the Opportunity House. Many would go to NKU but it would not be a requirement due to some of the units being Section 8 qualified housing. Those not attending NKU would most likely go to Gateway.

Following is the rationale for charging \$1/year lease payments:

- Brighton Center is covering all building maintenance, operational costs, and renovation costs
- There is little to no incremental cost to NKU
- NKU may benefit from additional students

- The community benefits by reducing the barriers that these young people face leading to educational success, employment and self-sufficiency
- The Opportunity House students may be able to eat at the Callahan Bistro which would help increase the usage of that facility



RECOMMENDATION:

That the Board of Regents adopt the 2020 Campus Master Plan.

BACKGROUND:

Ayers Saint Gross, an internationally recognized design firm focused on projects for colleges and universities, led a collaborative planning process over the past year to update the master plan for NKU's Highland Heights campus. The plan aligns improvement of the physical campus with the priorities of *Success by Design*. A 23-member Steering Committee, co-chaired by Provost Sue Ott Rowlands and Interim Vice President for Administration & Finance/CFO Mike Hales, provided leadership for the planning effort. The entire campus community, along with the local community, actively engaged in the planning process.

The design team worked with the University to identify the following planning principles which guided the development of the master plan and will continue to inform the implementation of the plan over the next 10-15 years.

1. Support a more engaged university serving the Northern Kentucky region
2. Create a place of academic excellence and innovation to support a diversity of learners
3. Design a welcoming and desirable NKU experience
4. Leverage campus assets to create value

Ayers Saint Gross completed a space needs assessment which identified academic space needs in the Colleges of Arts and Sciences, Informatics, Business, and Health and Human Services. The space needs assessment also identified significant space deficits for academic affairs, student services, administration and athletics. With these needs in mind, the following goals were established:

- Optimize the campus core for collaborative teaching and learning - improve adjacencies and connectivity
- Enhance the student experience with improvements to the library, student center, student union and student living spaces
- Define the campus perimeter to provide easier access to the academic core and improvements to parking, communications, signage, walkways, wayfinding and campus entry points.

Projects identified in the master plan focus on the stewardship of assets and investments to the physical campus that add value through improving student engagement, advancing NKU's competitive advantage, supporting digital initiatives and growing strategic partnerships. While the primary focus of the recommendations is on the renovation of existing space, the plan also includes strategic additions and new buildings.

Academic Core Overview

The recommendations for the academic core will provide needed growth in strategic areas while modernizing key buildings for today's educational environment. Highlights include:

- Expansion of the Science Building will provide much needed class labs and research space as well as space for Engineering Technology, thus freeing up space in the Business Academic Center to allow renovation and expansion to house Chase College of Law and the College of Business.
- Following the relocation of Law to BC, Nunn Hall will be renovated and an addition constructed to house the engineering and art disciplines, creating opportunities for STEAM collaborations. The additional space for art will enable renovation and modernization of the Fine Arts Center. Space

- vacated by engineering in the Science Center will support growth in the sciences.
- An Integrated Science Building is planned on the site between Herrmann Science Center and Griffin Hall, completing NKU's STEM quad. Since there are no enabling projects, funding and space needs will determine the timing of this project.
 - The master plan anticipates incremental renovations of Landrum and the Mathematics-Education-Psychology Center. Major renovations are expected following completion of the Nunn Hall renovation.

Student Centered Space Overview

Improving space for student engagement and increasing the sense of belonging are priorities identified in the master plan. Achieving this goal is enabled by the transformation of Steely Library to an Academic Knowledge Hub to support the academic needs of all students in one location. Surplus space in the existing library will allow academic services currently located in the University Center and the Student Union to relocate to the library, thus freeing up space for a Center for Student Inclusiveness as well as other student services, organizations and activities. This strategy closely aligns with *Success by Design* and is identified for early phase implementation. The plan also supports the goal of enhancing the on-campus residential experience. The First-Year Experience will be supported with completion of the New Residence Hall as well as the renovation of Commonwealth and Kentucky Halls. Renovation of Callahan will provide a value option for upper division students as well as an opportunity for growth in the Honors College. Renovation of the Civic Center as an Alumni Center will benefit both current students and alumni by providing opportunities for greater interaction and programming.

Other Notable Recommendations

- The master plan includes a variety of recommendations building upon the university's commitment to sustainability and the goal of reaching carbon neutrality by 2050. Notable among these is the decision to renovate and modernize rather than demolish existing buildings, a strategy similar to the HIC/Founders renovation project.
- A comprehensive infrastructure assessment is included in the master plan and addresses the capacity of current systems as well as strategies to meet sustainability goals.
- The master plan provides recommendations for improvements to parking and circulation, both vehicular and pedestrian.
- For athletics and recreation, the plan includes improvements to existing baseball, softball and tennis facilities and identifies a site for future construction of a basketball practice facility, an indoor multi-purpose center, and a track and field stadium. Recreation fields are envisioned on the current site of Woodcrest Apartments.
- The master plan provides recommendations for gateways, branding, landscape and wayfinding improvements to create a more welcoming campus.
- Various partnership sites are identified, with a goal to further NKU's integration with the community and to establish the University as a regional innovation hub providing opportunities for students and faculty to engage with private businesses.

Land Acquisition Recommendations

The university's 2009 Land Acquisition Plan has been updated to reflect the recommendations for perimeter campus development. While the long-term vision requires the acquisition of additional land, the near-term projects can be implemented within the University's current boundary. Some parcels previously identified for acquisition have been removed from the Acquisition Plan while others have shifted in priority. With Board approval of the master plan's Illustrative Site Plan and recommendations, the design team will proceed with the preparation of the final master plan document, including all supporting analysis. The final master plan document will be available in Spring 2021.

Priority Projects

Campus Master Plan

- Academic Projects
 - A Science Center Addition
 - B Bus. Acad. Ctr. Renovation/Addition
 - C Nunn Renovation/Addition
 - D Interdisciplinary Science Building
 - E Major Academic Renovation

- NKU Student Experience
 - A Library Knowledge Hub
 - B Student Centered Space
 - C Alumni Center

- Housing Projects
 - A First Year Experience
 - B Callahan Renovation


- Athletics + Rec Projects
 - A Recreation Fields
 - B Baseball Stadium Improvements
 - C Tennis and Softball Improvements
 - D Basketball Practice Facility

- Landscape Projects
 - A Kenton Walk
 - B Pedestrian Connections
 - C Campus Gateway Improvements

- Partnership Projects
 - A Town Center
 - B Innovation Partnerships



Long Term Vision Campus Master Plan

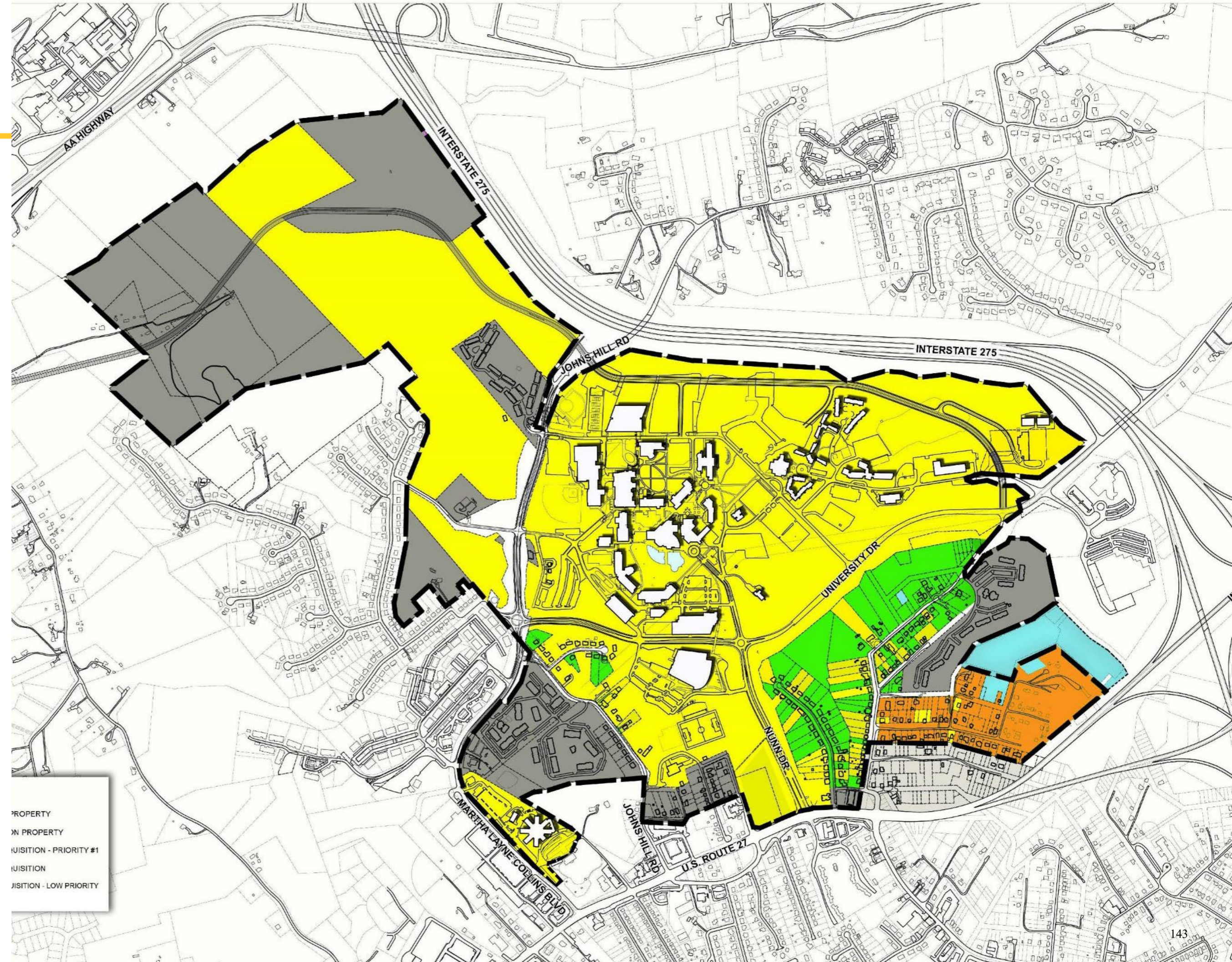
 Potential Long Term
Development Site








N

Land Acquisition

2009 Plan







LEGEND

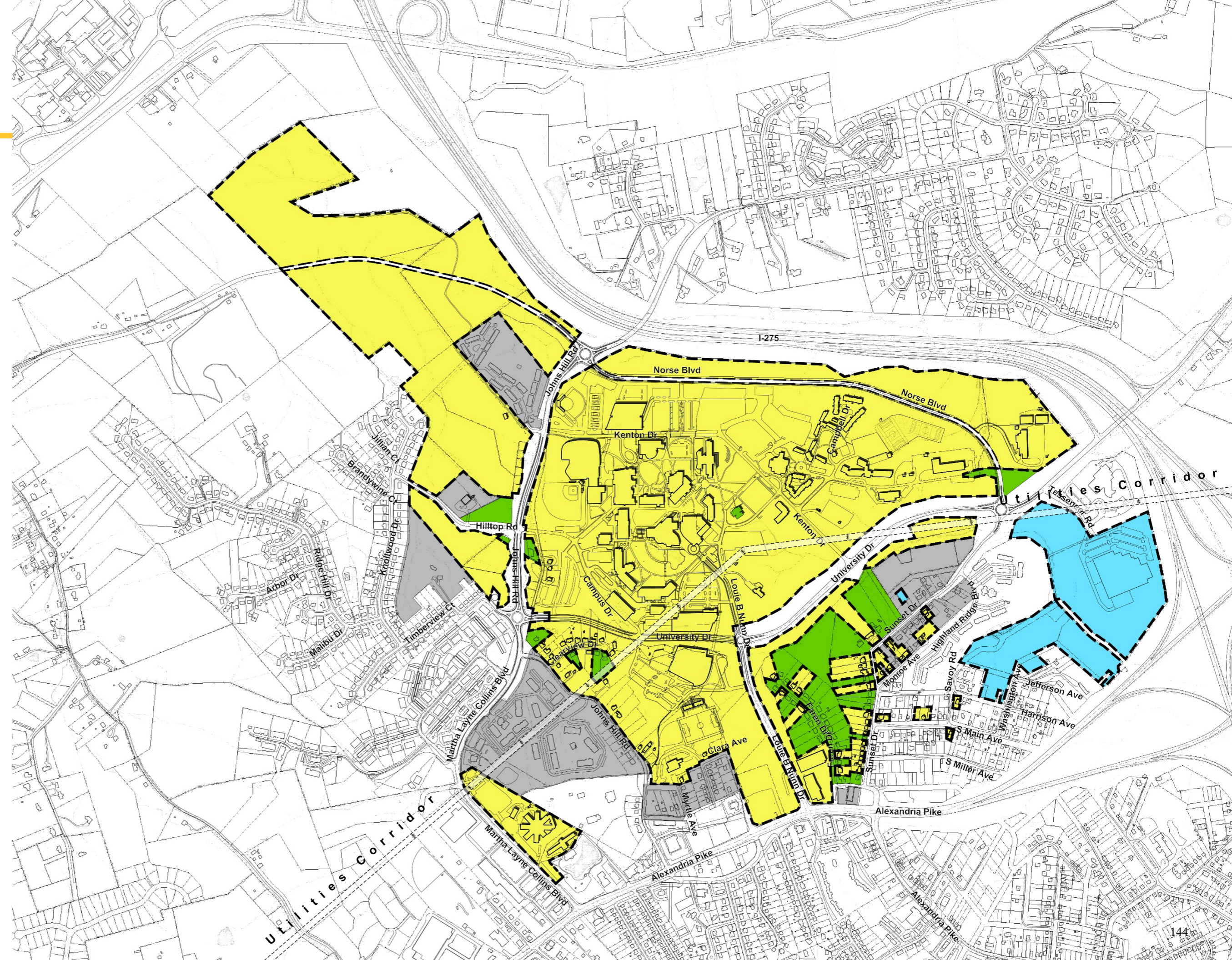
-  CURRENT NKU PROPERTY
-  NKU FOUNDATION PROPERTY
-  PROPOSED ACQUISITION - PRIORITY #1
-  PROPOSED ACQUISITION
-  PROPOSED ACQUISITION - LOW PRIORITY

PROPERTY
IN PROPERTY
ACQUISITION - PRIORITY #1
ACQUISITION
ACQUISITION - LOW PRIORITY

Land Acquisition

2020 Plan

-  CURRENT NKU PROPERTY
-  NKU FOUNDATION PROPERTY
-  PRIORITY ACQUISITION
-  POTENTIAL ACQUISITION OR AREA OF INFLUENCE



Appendix



NORTHERN
KENTUCKY
UNIVERSITY

2019 HAZARD MITIGATION PLAN



Prepared by
Northern Kentucky University
& Stantec Consulting Services.



Stantec

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1. Executive Summary

1.1. Why to produce a Hazard Mitigation Plan

To Reduce Risk

Disasters can cause loss of life; damage to buildings and infrastructure; and have devastating consequences for a community’s economic, social, and environmental well-being. Hazard Mitigation reduces disaster damages and is defined as a sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards.

While local governments, regions, and the state have the responsibility to protect the health, safety, and welfare of their citizens, universities equally share this same responsibility for their student, staff, faculty, and visitors. Proactive mitigation policies and actions help reduce risk and create safer, more disaster resilient communities. Mitigation and floodplain management is an investment in the university’s future safety and sustainability. In completing the Northern Kentucky University (NKU) Hazard Mitigation Plan (HMP) the university is protecting, reducing and preventing damage to the university’s unique economic, cultural and environmental assets.

Hazard mitigation is crucial to the faculty, staff, and students that commute to and/or reside in and around NKU. Hazard mitigation activities may be implemented prior to, during, or after an event. However, it has been demonstrated that hazard mitigation is most effective when based on an inclusive, comprehensive, long-term plan that is developed before a disaster occurs.

To be in accordance with Federal Standards

Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act enacted under the Disaster Mitigation Act of 2000 (DMA 2000) established revitalized approaches to mitigation planning with a new requirement for Local Mitigation Plans. The NKU Hazard Mitigation Plan (HMP) was developed and funded through the Pre-Disaster Mitigation (PDM) grant program which is grant under the Hazard Mitigation Assistance (HMA) grants program of the Federal Emergency Management Agency (FEMA). DMA 2000 emphasizes greater interaction between State and Local mitigation planning entities highlighting the need for improved linkages between risk assessments and assessing one’s capability to deal with the identified hazards.

1.2 What is the purpose of the NKU HMP

The purpose of the NKU HMP is to set a strategy for building a more resilient campus community that will mitigate damages and losses caused by natural hazard events. The HMP is the result of a systematic evaluation of the nature and extent of the vulnerability posed by the effects of hazards (risk assessment)

Hazard mitigation is any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards (44 CFR 201.2).

Disaster Mitigation Act of 2000

The purpose of the Stafford Act, as amended by the Disaster Mitigation Act of 2000, is “to reduce the loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters.”

Section 322 of the Act specifically addresses mitigation planning and requires state and local governments to prepare multi-hazard mitigation

and includes a five-year action plan to minimize future vulnerability (mitigation strategy), accompanied by a schedule that outlines a method for monitoring and evaluating plan progress (plan maintenance).

1.3 Which hazards does the NKU HMP addresses

The NKU HMP assesses risk and outlines mitigation actions to address 11 identified hazards with a historical record or the potential to cause damage to the university community (see listing below). The hazard categories included in the plan are consistent with the 2018 Commonwealth of Kentucky Enhanced Hazard Mitigation Plan.

- Earthquake
- Extreme Heat
- Extreme Cold
- Flood
- Hailstorm
- HAZMAT
- Karts/Sinkhole
- Landslide
- Severe Storm
- Severe Winter Storm
- Tornado

1.4 How is the NKU Hazard Mitigation Plan organized

The HMP contains the following five sections, plus appendices

- Planning Process
- Risk Assessment
- Capability Assessment
- Mitigation Strategy
- Plan Maintenance
- Plan Approval

The **Planning Process** includes a narrative of how the plan was produced, who was involved, and what other policies and programs were reviewed to inform the plan. Key stakeholders were identified and organized into a stakeholder group and were invited to attend four publicly advertised meetings. Input provided during these meetings, work sessions, and other individual stakeholder meetings drove the formation of the risk assessment, mitigation strategy, and plan maintenance sections of the plan.

The **Risk Assessment** includes developing a profile for the 11 identified hazards as well as the identification, compilation, and integration of the existing hazard databases into one managed, university database contained in Geographical Information Systems (GIS). Once the hazards were identified, vulnerability was assessed on a building-by-building basis with extra weight placed on critical facilities. These maps provided the necessary information for the stakeholder group to examine past occurrences of hazards and assess probabilities in order to determine appropriate mitigation strategies to pursue in the future.

The **Capability Assessment** helps determine the ability of the university to implement a comprehensive mitigation strategy and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects.

Mitigation Planning Requirements

44 CFR Part 201

Text boxes in this color and shape are used throughout the plan to summarize the regulations in 44 CFR Part 201.

Exact CFR references applicable to each section help the reader understand the rule and/or planning requirements.

The **Mitigation Strategy** includes the determination of hazard mitigation goals and actions as identified during the planning process and based on a review of the risk assessment results. The plan developers also took inventory of NKU's current capabilities.

The **Plan Maintenance** section outlines the steps for plan implementation which includes monitoring, evaluating, and updating the plan. The plan will be maintained through collaborative efforts of the university departments to allow for better incorporation of existing planning mechanisms.

The **Plan Approval** section demonstrates NKU's commitment to endorsing and fulfilling the mitigation strategy. A signed copy of the formal adoption is included in Appendix A.

2. INTRODUCTION

2.1 University Profile

To provide context for the NKU HMP, the university is briefly described below by its mission, history, campuses and properties, department structure, campus population, occupancy, research and economic impact, infrastructure and critical facilities. The following subsections outline each of these profile attributes. For more information, visit Northern Kentucky University in the [website](#).

Mission

As a public comprehensive university located in a major metropolitan area, Northern Kentucky University delivers innovative, student-centered education and engages in impactful scholarly and creative endeavors, all of which empower our graduates to have fulfilling careers and meaningful lives, while contributing to the economic, civic, and social vitality of the region.

Planning Context

NKU is nested in the hills of Northern Kentucky in Highland Heights which is part of Campbell County. The campus is located in a strategic location. It is seven miles south of Cincinnati, OH, three miles south of the Ohio River and runs parallel to the East of I-275 which connects Kentucky and Ohio.

NKU campus is located in the mid-west section of Highland Heights and slightly isolated from high density commercial and residential areas. The campus boundaries include I-275 which runs along the campus to the west, University Drive to the north and east, and John Hills Road to the south. These roads form semi-defined boundaries.

University Drive serves as a divider mark between the campus and the rest of the city. To the west of University Drive there is single-family, multi-family residential and some commercial areas.

Louis B. Nunn Drive intersects the campus midpoint, and it is the main port of entry to the campus and the main communication with Highland Heights downtown area where most commercial and entertainment is located.

Northern Kentucky University Campus Area Statistics

2017 Enrollment	14,488
2017 Faculty Headcount	1332
2017 Staff Headcount	926
Existing Main Campus Buildings Gross Square Feet (GSF)	3,480,000
Campus Size	404 Acres
Main Campus Non-residential Buildings	35
Main Campus Residential Buildings	12
University Housing (beds)	1,961

Sources: NKU Office of Institutional Research & Facilities Management



Current Student Enrollment

Students: Fall 2017

- Students enrolled: 14,488
- Undergraduates: 12,572
- Graduate: 1,472
- Law: 444
- Female: 8,355
- Male: 6,133
- Full-time: 9,758
- Part-time: 4,730
- Students from 44 states
- Students from 61 countries
- From Kentucky: 9,910
- From Boone, Campbell, or Kenton counties: 7,107

Faculty: Fall 2017

- Full-time faculty: 568
- Student-faculty ratio: 19 to 1

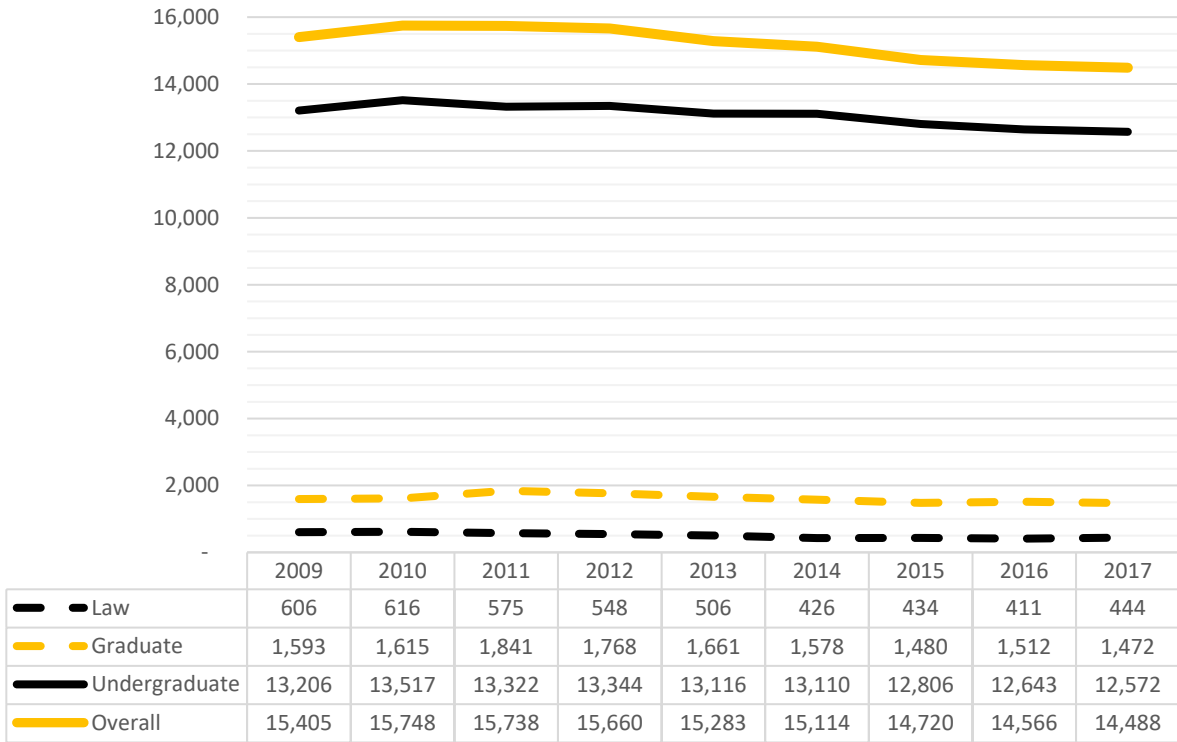
Student Life

- 1,961 residence hall spaces
- 14.6 percent of the undergraduate student population reside in University Housing (as of Fall 16) (All Students)
- 19.9 percent of the FULL-TIME undergraduate student population reside in the University Housing (as of Fall 16)
- Over 220 campus clubs and organizations

Other Information

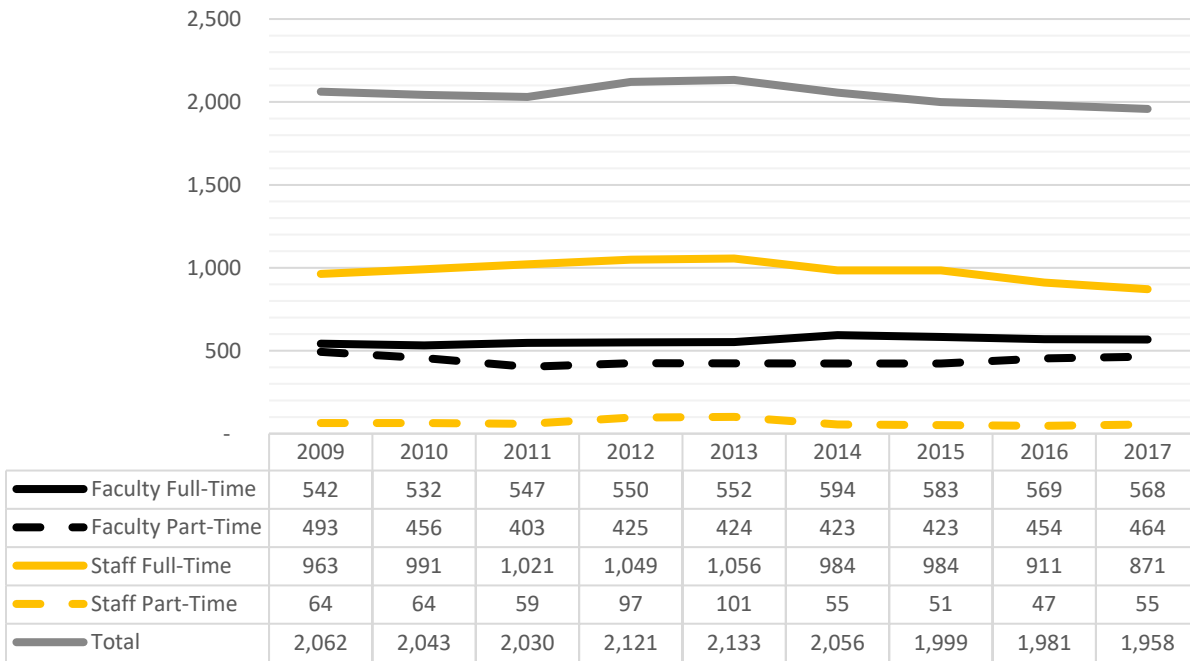
- Fiscal year 2013-2014 budget: \$225,000,000
- Portion of budget from regular state appropriation: \$48,537,600 (20.9%)
- Portion of budget from tuition and fees: \$139,036,300 (62%)
- Total employees as of November 1, 2013: 2,108
- 94% of spring 2014 senior survey respondents indicated they would recommend NKU to another student

Student Enrollment 2009 - 2017



Source: NKU Office of Institutional Research

Employee Headcount 2009 - 2017



Source: NKU Office of Institutional Research

Summary of Fiscal Year 2017 - 2018 Unrestricted Revenues and Expenditures

Sources of Funds	Annual Budget	Percent of Total	Percent of Revenues	
Education & General				
Government Appropriation - Regular	\$51,621,100	24.98%	22.80%	
Tuition	\$138,067,200	66.82%	60.80%	
Camps Recreation Mandatory Fee	\$4,397,600	2.13%	1.94%	
Other Fees	\$991,400	0.48%	0.44%	
Sale and Services of Educational Activities	\$4,644,600	2.25%	2.05%	
Other Sources	\$6,899,100	3.34%	3.05%	
Total Educational & General	\$ 206,621,000	100.00%	91.08%	
Sale and Services of Auxiliary Enterprises				
Housing	\$ 10,529,100	62.75%	4.65%	
Food Services	\$ 2,363,900	14.09%	1.04%	
Bookstore	\$ 452,000	2.69%	0.20%	
Vending Operations	\$ 340,000	2.03%	0.15%	
Parking Services	\$ 3,094,000	18.44%	1.37%	
Total Auxiliary Enterprises	\$ 16,779,000	100.00%	7.41%	
Total Revenues	\$223,400,000			
Plus: Nonrecurring sources (net assets)	\$3,000,000	1.33%		
Total Sources of Funds	\$226,400,000	100.00%		

Expenditures by Major Object	Annual Budget	One-Time Special Allocation	Total Annual Budget	Percent of Total
Personnel Services	\$96,783,900	\$824,800	\$97,608,700	43.11%
Benefits	\$44,470,900	\$204,300	\$44,675,200	19.73%
Contract Services	\$3,245,000	\$3,000	\$3,248,000	1.43%
Operating	\$26,128,700	\$1,953,700	\$28,082,400	12.40%
Utilities	\$5,958,300	\$14,200	\$5,972,500	2.64%
Capital	\$3,443,000	-	\$3,443,000	1.52%
Student Financial Aid	\$27,016,800	-	\$27,016,800	11.93%
Transfers (Debt Service)	\$13,996,800	-	\$13,996,800	6.18%
Reserves (E&G)	\$2,356,600	-	\$2,356,600	1.04%
Total Expenditures	\$223,400,000	\$3,000,000	\$26,400,000	100.00%

Expenditures by Major Function	Annual Budget	One-Time Special Allocation	Total Annual Budget	Percent of Total
Education and General				
Instruction	\$66,745,600	695,400	\$67,441,000	29.79%
Research	\$185,700	-	\$185,700	0.08%
Public Service	\$7,025,900	\$407,200	\$7,433,100	3.28%
Libraries	\$6,076,100	-	\$6,076,100	2.68%
Academic Support	\$20,709,700	-	\$20,709,700	9.15%
Student Services	\$21,654,900	-	\$21,654,900	9.56%
Institutional Support	\$27,811,800	\$586,000	\$28,397,800	12.54%
Operations and Maintenance of Plant	\$19,485,900	\$1,311,400	\$20,797,300	9.19%
Student Financial Aid	\$26,574,100	-	\$26,574,100	11.74%
Mandatory Transfers	\$6,113,500	-	\$6,113,500	2.70%
Non-Mandatory Transfers	\$1,881,200	-	\$1,881,200	0.83%
Reserves (E&G)	\$2,356,600	-	\$2,356,600	1.04%
Total Education and General	\$206,621,000	\$3,000,000	\$209,621,000	92.58%
Auxiliary Enterprises				
Student Services	\$10,386,600	-	\$10,386,600	4.59%
Student Financial Aid	\$423,100	-	\$423,100	0.19%
Transfers	\$5,969,300	-	\$5,969,300	2.64%
Total Auxiliary Enterprises	\$16,779,000	-	\$16,779,000	7.42%
Total Expenditures	\$223,400,000	\$3,000,000	\$226,400,000	100.00%

Critical Facilities

Prior to updating the risk assessment, NKU Stakeholder Group members reviewed and updated a listing of critical infrastructure and facilities to determine which structures were to be designated as critical facilities. The planning team approved the following definition for critical facilities:

Assets to the university, essential to its functioning and the destruction of which would cause a serious impact on the continued operation of the university. Buildings selected under this definition include: Campus police, fire, emergency operations, major technology nodes, and structures containing major campus power feeds/supplies.

Below are the buildings that have been identified as ‘critical’ by the planning team:

Bldg. No.	Bldg. Name	City
0130	Nunn Hall	Highland Heights
0330	Business Academic Center	Highland Heights
0360	Lucas Administration Center	Highland Heights
0381	New Power Plant	Highland Heights
9995	Electrical Substation	Highland Heights
9996	Electrical Substation	Highland Heights

Development Trends

An examination of development trends provides NKU the basis for making decisions on the type of mitigation approaches to consider, and the locations where these approaches can be implemented. Campus master planning at NKU has developed long-range strategies for the growth and transformation. Common to all recent plans is a belief that no single issue can be considered in isolation. Physical planning interrelates buildings, infrastructure, open spaces, transit, site ecology, storm water management, and other hazards.

The history of campus planning at NKU dates to 1971, when the first Master Plan was prepared. In 1979, 1987 and 2000 major revisions were done. The most recent Master Plan (2009) involved a 16-month planning process where campus and community participated in different activities such as campus sessions and one-on-one small group interviews. Some goals of the 2009 Master Plan included creating a compact, well organized and accessible campus, achieving a sense of community within the campus and the surrounding area, and the region, creating a sustainable campus, and working with the city to achieve a mutually satisfying and supportive living and working environment.

Recent additions to the NKU campus include the Health Innovation Center (124,250 square feet) in 2018, the Student Recreation Center addition to Albright Hall in 2015, and Griffin Hall (133,600 square feet) in 2011. Griffin Hall is home of the College of Informatics and is NKU's first LEED (Silver) certified building. In 2008, the university opened BB&T Arena (243,000 square feet), a 10,000 seat multi-purpose arena and the Student Union (144,000 square feet).

3. PLANNING PROCESS

A comprehensive description of the planning process informs citizens and other readers about the way the plan was developed. Retention of leadership, staffing, and in-house knowledge may fluctuate over time. Therefore, the description of the planning process serves as a permanent record that explains how decisions were reached through stakeholder input.

Capturing the narrative of the planning process is crucial. The following sections describe the Northern Kentucky Hazard Mitigation Plan (NKU HMP) plan development process by summarizing the contributions of the Planning Team, NKU Stakeholder Group, community participation, outreach methods, and the incorporation of planning mechanisms.

3.1 Documentation of the Planning Process

The NKU hazard mitigation planning process was coordinated by NKU Safety and Emergency Management and Stantec. Duties included meeting and work session facilitation, data collection, risk assessment analysis, mitigation strategy development, plan maintenance strategy, and plan assembly. The following lists members of the Planning Team:

Jeff Baker	Safety & Emergency Management
Anna Wright	Marketing & Communications
John Gaffen	University Police
Syed Zaidi	Facilities Management
Josh Human	Stantec
John Bucher	Stantec

While the planning team was responsible for leading and facilitating the plan development process, input from our strategic NKU Stakeholder Group ensured that the plan represents the entire university.

Once the planning team identified faculty and staff to be represented in the NKU Stakeholder Group, an email was sent to each, requesting commitment to the plan development process, that included a schedule of four NKU Stakeholder Group meetings throughout a twelve month period (See Appendix B for meeting records and invites).

To expand the reach across the general campus community, the planning team posted meeting information on publicly accessible websites, social media, and university-wide email listservs, and when needed through telephone calls.

Mitigation Plan Documentation

§201.6(b) requires the plan to contain a discussion of how the planning process involved local agencies and other interests and how the planning process allowed for public comment.

§201.6(c)(1)-The Hazard Mitigation Plan shall document the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

Participants in the plan process include a cross-section of the university community; most prominently key staff from university departments who are responsible for implementing the five-year action plan, and other local, regional, and state agencies; all that represent the community-at-large. See Appendix C (NKU Stakeholder Group List and Attendance) for the list of key stakeholders that helped develop the plan.

3.2 Public and Stakeholder Meetings

To ensure stakeholder involvement, the planning team conducted two public meetings in addition to four stakeholder group work sessions. This section describes each meeting and how the contributed to development of the NKU HMP. For meeting documentation see Appendix B.

Planning Team Kick-Off Meeting - January 30, 2018, 10:00 am - 12:00 pm

This meeting served as an overview of hazard mitigation planning in Kentucky and the history of university plans. There was a quick discussion of data needs for the vulnerability assessment. NKU has a few different databases with building data that they are working to consolidate into a central database. It was discussed that NKU would also like to add hazard layers to their GIS inventory. It was discussed that Stantec will need to coordinate with other data collection efforts and pull data from multiple sources for the assessment. NKU is undergoing re-accreditation and has pulled some data for that process that may be useful for the HMP.

The audience brought up some question about including terrorism in the vulnerability assessment as a hazard. The group decided to focus on effects and impacts, as they can be similar to those caused by several hazards. Response related actions in the mitigation strategy relate to multiple hazards, including terrorism. For example, a continuity of operations plan for the data center may be included as an action, as well as related equipment, such as generators.

Finally, there was some discussion of the importance of a strong outreach effort to involve stakeholders, including some retired staff with institutional knowledge and key community leaders outside of the university. It was necessary to highlight that NKU staff will be finding funds for projects from outside sources (HMGP, PDM) that will benefit the university. Stakeholders will be asked to send an alternate to meetings if they cannot attend.

The following describes the four Stakeholder/Public meetings used to develop the NKU HMP.

Meeting	Date
NKU Stakeholder and Public Kick-off Meetings	March 20, 2018
NKU Stakeholder Risk Assessment Meeting	June 6, 2018
NKU Stakeholder Mitigation Strategy Meeting	September 27, 2018
NKU Stakeholder and Public Draft Plan Overview Meeting	March 13, 2019

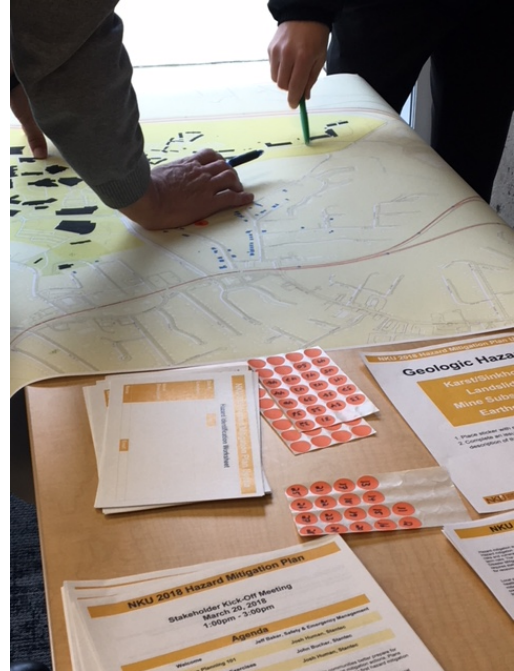
NKU Stakeholder Group Kick-Off Meeting - March 20, 2018, 1:00 pm - 3:00 pm

The purpose of this meeting was to introduce the NKU Stakeholder Group to the concept of mitigation, explain the planning process, and discuss hazards affecting NKU.

Jeff Baker (NKU) started the meeting by briefly explaining the benefits of having a Hazard Mitigation Plan in place. He mentioned that in December, NKU put out a Request for Proposal and Stantec was selected as the firm to help NKU in developing the university's first hazard mitigation plan (HMP).

Josh Human (Stantec) gave a presentation about hazard mitigation planning. First, he emphasized the importance for a university to have a hazard mitigation plan in place, especially with the high number of recent disasters and the availability of government hazard mitigation funding.

Among the attendees, there were a group of key campus figures including the Manager for Research Compliance and Biosafety, the Student Enrollment Coordinator, the Business and IT Manager, the Facilities Manager, the Sustainability Coordinator, and the Insurance Claims Assessor. Additionally, some authorities of the City of Highland Heights were also present including the Public Works Director, Fire Chief, Police Chief, and EMS Director.



Josh Human's presentation included a Hazard Mitigation 101 description, a clarification of the difference between risk and mitigation, and a detailed step by step explanation of the planning steps to complete the NKU HMP including Planning Process, Risk Assessment, Mitigation Strategy, Plan Maintenance, and Plan Adoption. Josh Human also explained the Vulnerability Score and the tools used during the planning process. He continued to go over each one of the hazards and ask the audience for input. Forest Fires, Drought and Mine Subsidence were dropped from the original list of hazards because they don't represent a risk to NKU Campus.

There was a question about how to identify sinkholes on campus. The Stantec team explained that through data analysis, it was possible determine if the NKU campus is in a sinkhole prone area. Another attendant noted the existence of a sinkhole on campus. Another member of the audience asked if biohazard materials such as viruses are part of the HMP. Mr. Human addressed the question by saying that this was not part of the HMP, but that some data collected and produced by the plan can be useful in biohazard projects.

After the break, John Bucher (Stantec) introduced an activity to let the audience vote on how concerned they felt with each of the hazards. The exercise served to rank the hazards to help with prioritizing projects in the Mitigation Strategy. Results of the voting and the HMP's hazard ranking are presented below.

Rank	Hazard	Score
1	Severe Storm	59
2	Sever Winter Storm	50
3	Tornado	49
4	Haz/Mat	40
5	Earthquake	37
6	Hail	34
7	Flood	31
8	Extreme Heat	27
9	Landslide	25
10	Extreme Cold	24
11	Karst/Sinkhole	20

After voting, members were invited to look at three different maps where they could pinpoint exact hazard locations. To conclude the meeting, the Stantec team asked the audience for resources to acquire data for the risk assessment map. The meeting ended by announcing that the Public Survey is available online.

Public Kick-Off Meeting - March 20, 2018, 4:00 pm - 6:00 pm

The purpose this meeting was to introduce attendees to the concept of hazard mitigation and the planning process, as well as to discuss hazards affecting the NKU campus.

Jeff Baker (NKU) started the meeting by briefly explaining the benefits of having an HMP in place. Josh Human (Stantec) proceeded to give a presentation about hazard mitigation planning. First, he emphasized the importance for a university to have a hazard mitigation plan in place, especially with the high number of recent disasters and the availability of government hazard mitigation funding.

There was a limited number of attendees. A Chemistry professor expressed his concern about the hazardous materials on campus, which was discussed and noted as a concern. To conclude the meeting, the Stantec team asked the audience for resources to acquire data for the risk assessment map. The meeting ended by announcing that the Public Survey is available online.

NKU Stakeholder Group Risk Assessment Meeting - June 6, 2018, 12:45 pm – 3:45 pm

The purpose of this meeting was to present the preliminary results of the risk assessment, gather feedback from the stakeholders, and to introduce the mitigation strategy.

Jeff Baker (NKU) started the meeting by welcoming the attendees and giving a brief explanation of the project. Josh Human (Stantec) then asked the attendees to introduce themselves and tell the group how their role related to hazard mitigation on campus. Mr. Human gave a brief introduction to hazard mitigation planning, the



Disaster Mitigation Act of 2000, and the FEMA Local Mitigation Planning Handbook. He then gave an overview of the risk assessment process and hazard identification.

John Bucher (Stantec) then presented the details of the risk assessment methodology including the exposure score and hazard risk score. He then showed a few examples of the maps created to demonstrate the results of the risk assessment. At that point the attendees were asked to look at the maps to check for accuracy and provide additional details, where possible. Feedback included:

- Nunn Hall's content value is too high
- Founders Hall should have a condition score of 1 because of renovation
- Founders content value needs to be updated
- There was a storm/wind incident that caused a tree to fall on the intramural field
- The intramural field replacement value is about \$2million
- The baseball field replacement value is about \$750,000
- The soccer field replacement value is about \$700,000
- The softball field replacement value is about \$150,000
- The tennis courts replacement value is about \$150,000.
- The mapped HazMat sites need to be verified

Josh Human introduced the mitigation strategy, including mitigation goals, mitigation actions, and the action plan. He then led the attendees in an exercise to draft NKU's mitigation goals. The group settled on the following goals and will review them prior to the next meeting.

1. Pursue consistent funding from a variety of sources for prevention, maintenance, and mitigation of disasters.
2. Increase public and university awareness through education and support for disaster preparedness practices.
3. Enhance staff capacity and collaboration, policies, and technical capabilities that will mitigate and reduce damages from hazard events.
4. Protect university property, organizational information, and research assets from hazards and threats.
5. Build and sustain partnerships between government, educational institutions, business, and the community.
6. Protect lives and minimize injuries that could be caused by hazard events.

Question about what was meant by "consistent funding sources." This means regular grant application (FEMA and other), capital improvements, and operational budgets, if available. Question about what type of public awareness and education are intended. These could include websites, trainings, and student orientation.

Mr. Human then introduced the mitigation strategy and the mitigation action workbook. He informed the group that he will email the workbook and ask them to add possible mitigation actions. He told the group that he will be sending another announcement about the survey, because we had very few complete surveys so far.

NKU Stakeholder Group Mitigation Strategy Meeting – September 27, 2018, 1:00 pm - 4:00 pm

The purpose of this meeting was to review the actions submitted by the NKU Stakeholder Group for inclusion in the Mitigation Strategy. Jeff Baker (NKU) started the meeting by welcoming the attendees. Josh Human (Stantec) reminded the audience about the importance of having an HMP in place. He then asked the audience to briefly introduce themselves since new people joined the meeting.

Josh introduced the concept of mitigation strategy and presented examples of mitigation strategy actions plans from the University of Kentucky and the University of Louisville. John Bucher (Stantec) then introduced the meeting's activity. The stakeholders were divided into small groups with a facilitator to discuss current mitigation strategies and come up with new ones. Each small group reported out to the larger group at the end of the activity so that the ideas could be discussed and refined. The results of the activity are captured in the Mitigation Strategy workbook found in section 6.3.

NKU Stakeholder Group/Public Draft Plan Presentation – March 13, 2019, 1:00 pm – 4:00 pm

The purpose this meeting was to present the final plan to the NKU Stakeholder Group and the public. Jeff Baker (NKU) started the meeting by introducing everyone and discussing the future of Hazard Mitigation at NKU. Josh Human (Stantec) proceeded to give a presentation about each section of the NKU Hazard Mitigation Plan and emphasized the critical components of each section.

At the end of the meeting the next steps were discussed, including the public review comment period that occurred from 4/15 – 5/7 (See Appendix B for Public Review Instructions). The NKU Stakeholder Group was excited and looking forward to adopting the document and seeking out implementable mitigation projects.

3.3 Public Survey

In addition to the two public meetings described above, a survey was distributed to the campus community asking for input on the HMP. Unfortunately, only 12 people completed the survey, and several of those did not answer all questions. Because the response rate was so low, the results are not statistically significant, however there were some items where there was consensus among the respondents:

1. Tornadoes are the hazard that is the highest threat to the university;
2. There is some concern about active shooters;
3. More extreme and frequent thunderstorms and heat waves are the aspects of climate change that are the highest threat to the university;
4. Internet and social media are the most effective ways to communicate; and
5. There is general support for Prevention activities (building codes, open space preservation, and others) and Emergency Services activities (warning systems, evacuation planning, emergency response training, and others).

4. Risk Assessment

The 2019 NKU HMP assesses the university's risks and vulnerabilities. This section is to be used as the blueprint for the mitigation strategy. The risk assessment section uses best available data received for the main campus and other NKU facilities. This includes the first-hand knowledge from individual stakeholders, state and national datasets, and the use of Geographic Information System (GIS) for the assessment of the main campus and other properties owned by NKU.

This section of the Plan follows the "Local Mitigation Plan Review Tool" section "Hazard Identification and Risk Assessment" Element B. The requirements for this section are described below:

- Does the Plan include a description of the type, location, and extent of all-natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))
- Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))
- Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))
- Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

To complete the above elements the planning team decided to use a very similar methodology accomplished in other Kentucky based hazard mitigation plans. This included breaking this section into three areas of examination.

1. Identify Hazard
2. Profile Hazard
3. Assessing Vulnerability

Each identified hazard was developed with one continuous Risk Assessment overview. This provides an independent review of each hazard following the three sections described above (Identify, Profile and Assessing Vulnerability). This allows the end users the ability to review all facets of each hazards complete Risk Assessment within one section.

Throughout the risk assessment, GIS spatial data, when possible, provides the baseline for the risk assessments developed for the HMP. GIS provides the architecture to facilitate an inventory of assets and hazards as well as providing the platform to calculate a building-by-building risk assessment. The maps

Risk Assessment

§201.6(c)(2) requires local jurisdictions to provide sufficient information from which to develop and prioritize appropriate mitigation actions to reduce losses from identified hazards.

This includes detailed descriptions of all the hazards that could affect the jurisdiction along with an analysis of the jurisdiction's vulnerability to those hazards. Specific information about numbers and types of structures, potential dollar losses, and an overall description of land use and development trends should be included in this analysis.

developed through GIS production are used whenever possible to convey where spatially defined vulnerable areas and hazard extent are located. The maps created from this production also provide a visual tool for analysis of the data. The information developed throughout this section was guided and developed using the best available data acquired from key Stakeholders and other relevant data sources. This included the approved 2017 Northern Kentucky Regional Hazard Mitigation Plan and the Commonwealth of Kentucky Hazard Mitigation Plan.

4.1 Identifying Hazards Overview

This section provides a complete overview and definition of each hazard that could potentially affect the NKU community. A complete understanding of each hazard better prepares decision makers, local agencies and residents on the causes of, potential damages contributed to, and possible scenarios of each hazard.

Hazard Description Requirement
 §201.6(c)(2)(i): [The risk assessment shall include a] description of the type...of all hazards that can affect the jurisdiction.

A list of common U. S. natural hazards includes:

- Avalanche;
- Coastal Storms;
- Dam Failure;
- Drought;
- Earthquake;
- Extreme Heat;
- Flood;
- Forest Fire;
- Hailstorm;
- Hurricane;
- Mine Subsidence;
- Severe Winter Storm;
- Tornado;
- Tsunami;
- Volcano; and
- Windstorm.

The plan includes identified hazards where there is a historical record of damage caused to people and property or where the potential for such damage exists within the area. Due to NKU’s climate, geology, and geographical setting, the university is vulnerable to a wide array of hazards that threaten life and property.

Through research of historic impacts, occurrences, dollar losses to date, review of the past State and Local Hazard Mitigation Plans, and discussions with key agencies and stakeholders, the following eleven (11) hazards are assessed in the 2018 NKU Hazard Mitigation Plan:

- | | |
|-----------------|-------------------------|
| 1. Earthquake | 7. Karts/Sinkhole |
| 2. Extreme Heat | 8. Landslide |
| 3. Extreme Cold | 9. Severe Storm |
| 4. Flood | 10. Severe Winter Storm |
| 5. Hailstorm | 11. Tornado |
| 6. HAZMAT | |

As mentioned before, each hazard will have an individual “Identify” section where the hazard will be described and defined.

4.2 Profiling Hazards Overview

The Profile Hazard section describes each hazard’s past, present and future effects on the university community through completing an extensive overview.

The NKU hazard profiles have been created using the best available data from a variety of resources, including but not limited to the NKU Insurance Claim data, local interviews, hazard identification exercise, National Center for Environmental Information (NCEI), National Weather Service (NWS), Kentucky Division of Water (KDOW), Kentucky Office of Geographical Information, Kentucky Geological Survey (KGS), the Commonwealth of Kentucky Hazard Mitigation Plan, and the 2017 Northern Kentucky Regional Hazard Mitigation Plan.

Public input was an invaluable local resource throughout the planning process. Stakeholders participated in workshops, completed a hazard identification exercise, and discussed information gathered from the sources listed above as well as their own general knowledge. Stakeholders discussed issues such as past events and significant occurrences that did not warrant a declared disaster and how those events impacted the university community and properties.

The profile section provides the historical context for identifying the hazards. The following table displays presidential declaration occurrences since 2000 that have occurred within Campbell County Kentucky (NKU’s Campus Location), which provides background on the type, of natural disasters that have affected the NKU campus and surrounding area.

Profiling Hazards Requirement
 §201.6(c)(2)(i):
 [The risk assessment **shall** include a] description of the ... location and extent of all-natural hazards that can affect the jurisdiction. The plan **shall** include information on previous occurrences of hazard events and on the probability of future hazard events.

FEMA Local Mitigation Planning Handbook, page 5-3
 Extent can be described in a combination of ways depending on the hazard.

FEMA Guidelines	NKU Plan Location
Scientific scale or measurement system	Identifying Hazard section
Measures of magnitude	Hazard Score & Profile Risk Table
Warning time	Profile Risk Table
Duration of event	Profile Risk Table

Presidential Declarations in Campbell County Kentucky	
Year	Disaster
1993	Severe Snowfall & Winter Storm
1996	Blizzard of 96
1997	Severe Storm, Flooding, and Tornadoes
2005	Hurricane Katrina
2008	Severe Windstorms associated with tropical depression Ike
2009	Severe Winter Storm and Flooding
2011	Severe Storm, Flooding, and Tornadoes
2012	Severe Storm, Flooding, Straight-line Winds and Tornadoes
2018	Severe Storms, Tornadoes, Flooding, Landslides and Mudslides

Source: <https://www.fema.gov/data-visualization-disaster-declarations-states-and-counties>

In order to streamline the dissemination of hazard information the planning team developed a common format to display multiple layers of information, including information on extent. The table format allows the end user to view a snapshot of the hazard and how it has impacted the university as well as the county that the university is within, Campbell County. The addition of the county information provides a better overview of hazard information for NKU, as there is more data for the county and it is relevant to the campus area. The following table describes the “Profile Risk Table” along with an explanation of each data element.

Profile Risk Table	
Period of occurrence	When does this hazard occur?
Campbell County Number of Events	Number of events in the Campbell County area based on the 2017 NKADD Hazard Mitigation Plan
Campbell County Probability of Events	Probability of the event occurring within Campbell County based on the 2017 NKADD Hazard Mitigation Plan
Campbell County Past Damages	Report of damages occurring within Campbell County based on 2017 NKADD Hazard Mitigation Plan
NKU Number of Events	Number of NKU incidents per building
NKU Damages Claimed	Amount of damages that NKU has claimed
Warning Time	Average warning time for this type of hazard – factor of Extent
Potential Impact	The potential impact this hazard could produce
Potential of Injury or Death	The potential this hazard could cause injury or death
Potential Duration of Facility Shutdown	The potential duration that this hazard could cause a facility to shut down – factor of Extent
Extent	The worst anticipated strength or magnitude of each identified hazard

The “Profile Risk Table” provides a summary of each hazards profile section. It provides the historical perspective of how the hazard has affected the community (Campbell County) and the university.

The following elements will be found in each hazard profile section:

- A “Profile Risk Table”, which summarizes the overall risk.
- A local description of each identified hazard and potential impact.
- Historical background on each identified hazard and a brief description of known events.

Understanding risk and each hazard’s potential effect on the NKU community is imperative to the mitigation strategy and provides the information needed to understand the overall risk to the university. The following “Loss Matrix” table provides quantitative data that portrays which hazards have caused the most damages according to found insurance claim data and the hazard identification exercise. This data is used to display which hazards are most destructive based on university insurance claim data and stakeholder knowledge. While this data is limited in quantity, it does provide an identified snap shot of actual occurrences and losses and can be used to estimate potential losses. Also, important to note, many hazards have a very low probability but a potential high magnitude, such as earthquakes.

The data was used by the planning team to prioritize which hazards should receive the most consideration when justifying potential mitigation projects. Due to the fact NKU does not have a lengthy record of loss and occurrence data, this data is used to show a very primitive loss estimation model. In the future, the university is planning on keeping a better record of occurrences and damages to improve their loss estimation methodology.

Hazard Type	Frequency	Damages	Average Loss per event
Earthquake	0	\$0	N/A
Extreme Heat	0	\$0	N/A
Extreme Cold	1	\$26,153	\$13,077
Flood	0	\$0	N/A
Hail	0	\$0	N/A
HazMat	0	\$0	N/A
Karst/Sinkhole	0	\$0	N/A
Landslide	0	\$0	N/A
Severe Storm	3	\$26,146	\$8,715
Severe Winter Storm	0	\$0	N/A
Tornado	0	\$0	N/A
TOTAL DAMAGES		\$52,299	

4.3 Assessing Vulnerability Overview

The Assessing Vulnerability section uses best available data from national, state, and local sources. The model used for the NKU HMP has been used for other university mitigation plans and provides an understanding of relative risk and vulnerabilities from hazards across the university. Uncertainties are inherent in any vulnerability/risk assessment, arising in part from incomplete scientific knowledge concerning natural and man-made hazards and their effects on the built environment. Uncertainties can also result from approximations and simplifications that are necessary when loss and occurrence data are limited.

One of the most important steps in creating a vulnerability assessment model within GIS is to define the geographic unit of measurement. University hazard mitigation plans provide the unique opportunity to complete a vulnerability assessment at the building level. After review of multiple building data sets, the planning team identified 149 buildings and structures that would be assessed. Implementing the vulnerability assessment at the building/structure level allows the university community to view each building's vulnerability against each identified hazard.

Assessing Vulnerability Requirement

§201.6(c)(2)(ii): [The risk assessment *shall* include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description *shall* include an overall summary of each hazard and its impact on the community.

Vulnerability Assessment Methodology

$$\text{Hazard Vulnerability Score} = \text{Exposure Score} + \text{Hazard Score}$$

The model was designed to produce a "Hazard Vulnerability Score" for each building in relation to each hazard. The Hazard Vulnerability Score is built on multiple layers of data to provide the end users with various ways of using and interpreting the data.

To calculate the Hazard Vulnerability Score, the Exposure Score and Hazard Score are first scored on a 0 to 1 scale individually and then added together. The sums of those scores are then rescored on the 0 to 1 scale.

In order to visualize the data on the Hazard Vulnerability Maps each Hazard Vulnerability Score is categorized into five categories: Very Low, Low, Moderate, High, and Severe, based on the Natural Breaks (Jenks) classification, which breaks data into like classes. These categories are displayed within the legends of the map. By categorizing the buildings on the map into these categories it provides the end user the ability to visually label which buildings are more vulnerable and thus more at risk based on relative risk to each other.

The Hazard Score is determined by the geographic boundaries of each hazard area. For example, for flood, areas within the 1% annual chance flood hazard area receive a flood hazard score of 1, while areas outside receive a score of 0. For karst/sinkhole, areas within the Kentucky Geological Society (KGS) Karst Map area or moderate karst risk receive a score of .5, while areas in the area of high karst risk received a score of 1.

The Exposure Score is a building specific score that represents the combination of weighted scores for all of the five exposure variables: building population, replacement value, content value, critical facility, and building condition. All five exposure variables were scored on the 0-1 scale and then the weight was applied before adding the scores together. Finally, the sum of all five weighted scores were rescored on the 0-1 scale. Figure 4.1 shows the Exposure Score for all NKU buildings/structures. Maps showing scores for each exposure variable may be found in Appendix D.

Building Population Score - NKU provided building occupancy and capacity amounts for all main campus buildings. Those amounts were scored on a 0 to 1 scale with the highest number (BB&T Arena) receiving a score of 1. The score was multiplied by .25 before adding with the other variables for the Exposure Score.

Replacement Value Score – NKU provided replacement values for campus buildings and the off-campus rental houses. Those values were scored on a 0 to 1 scale with the highest number (BB&T Arena) receiving a score of 1. The score was multiplied by .25 before adding with the other variables for the Exposure Score.

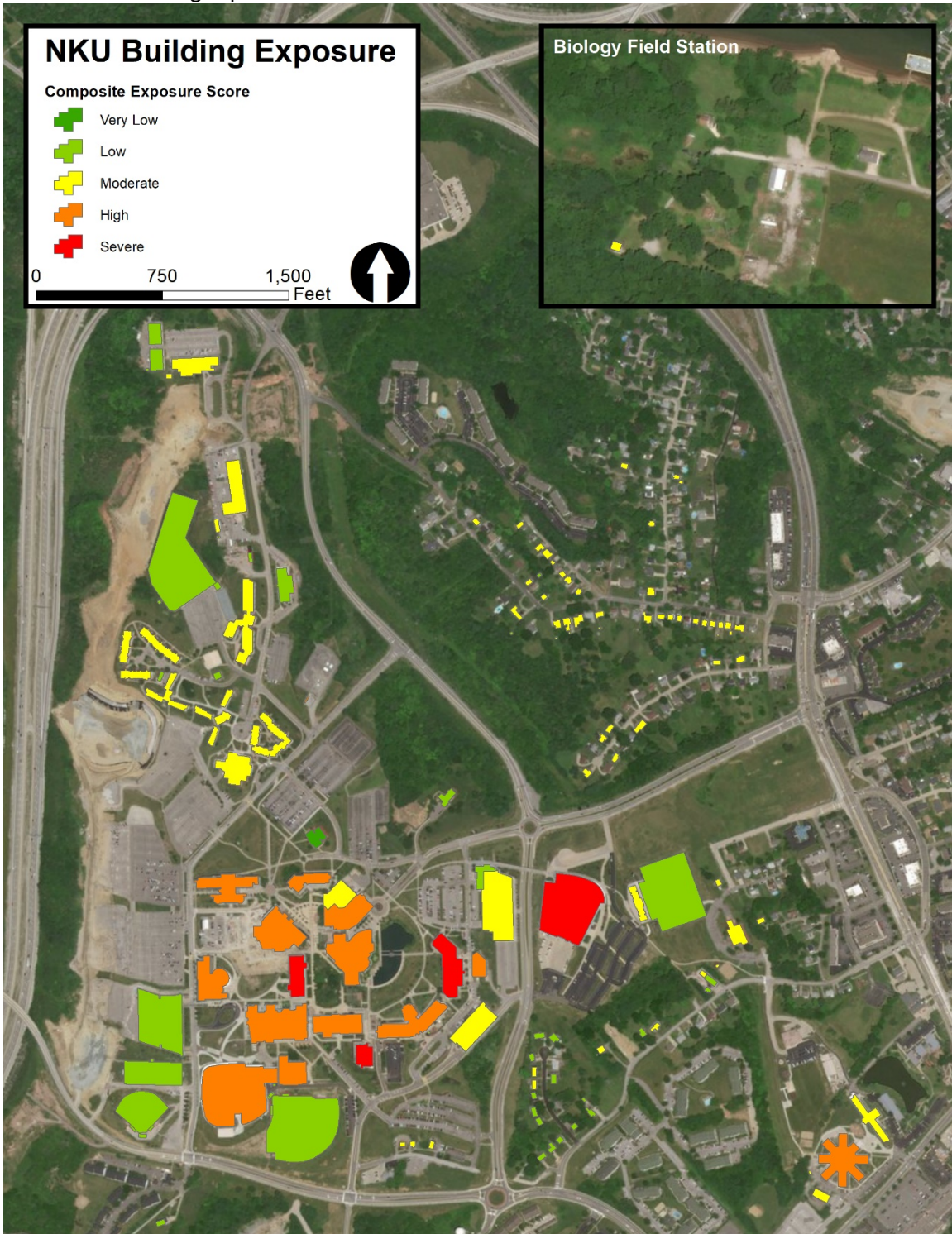
Content Value – NKU provided content values for campus buildings. Content values were not available for off-campus rental houses, so their value was set at \$0. Those values were scored on a 0 to 1 scale with the highest value (Lucas Administration Center) receiving a score of 1. The score was multiplied by .0 before adding with the other variables for the Exposure Score.

Critical Facility – NKU designated six critical facilities as described in Section 2 of this document. Critical facilities received a score of 1 and non-critical facilities received a score of 0. The score was multiplied by .2 before adding with the other variables for the Exposure Score.

Building Condition – NKU provided building condition ratings for all campus and off-campus buildings. Those values were scored on a 0 to 1 scale with the best rating (1-Satisfactory) receiving a score of 1 and the worst rating (4-Remodeling C) receiving a score of 0. The score was multiplied by .1 before adding with the other variables for the Exposure Score.

Building Condition	
1	Satisfactory – Suitable for continued use with normal maintenance. Any single item of major or capital renewal is not greater than \$40,000. (Catastrophic failures excepted.)
2	Remodeling A – Requires restoration and/or replacement of some building system components in order to meet acceptable standards without major room use changes, alterations, or modernizations. The approximate cost of “Remodeling A” is not greater than 25 percent of the estimated replacement cost of the building.
3	Remodeling B – Requires major updating and/or modernization of the building. The approximate cost of “Remodeling B” is greater than 25 percent, but not greater than 50 percent of the estimated replacement cost of the building.
4	Remodeling C – Requires major remodeling and total replacement of the major building system components. The approximate cost of “Remodeling C” is greater than 50 percent of the replacement cost of the building.
NKU decided not to include buildings already designated for Demolition or Termination in the risk assessment.	
Source: National Council for Higher Education Management Systems (NCHEMS) Building Condition Codes	

Figure 4.1: NKU Building Exposure



Sources: NKU Facilities Management, NKU Office of the Comptroller, NKU Campus Planning, ESRI

4.4 Earthquake

4.4.1 Identify: Earthquake

An earthquake is a sudden, rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. For hundreds of millions of years, the forces of plate tectonics have shaped the earth as the huge plates that form the Earth's surface move slowly over, under, and past each other. Sometimes the movement is gradual. At other times, the plates are locked together, unable to release the accumulating energy. When the accumulated energy grows strong enough, the plates break free releasing the stored energy and producing seismic waves generating an earthquake. The areas of greatest tectonic instability occur at the perimeters of the slowly moving plates, as these locations are subjected to the greatest strains from plates traveling in opposite directions and at different speeds. However, some earthquakes occur in the middle of plates.

Ground motion, the movement of the earth's surface during earthquakes or explosions, is the catalyst for most of the damage during an earthquake. Produced by waves generated by a sudden slip on a fault or sudden pressure at the explosive source, ground motion travels through the earth and along its surface. Ground motions are amplified by soft soils overlying hard bedrock, referred to as ground motion amplification. Ground motion amplification can cause an excess amount of damage during an earthquake, even to sites very far from the epicenter.

Earthquakes strike suddenly and without warning. Earthquakes can occur at any time of the year and at any time of the day or night. On a yearly basis, 70 to 75 damaging earthquakes occur throughout the world. Estimates of losses from a future earthquake in the United States approach \$200 billion.

Ground shaking from earthquakes can collapse buildings and bridges, disrupt gas, electric, and phone service, and sometimes trigger landslides, avalanches, flash floods, fires, and huge, destructive ocean waves (tsunamis). Buildings with foundations resting on unconsolidated landfill and other unstable soil, and trailers and homes not tied to their foundations are at risk because they can be shaken off their mountings during an earthquake. When an earthquake occurs in a populated area, it may cause deaths and injuries and extensive property damage.

The largest earthquakes felt in the United States were along the New Madrid Fault in Missouri, where a three-month long series of quakes from 1811 to 1812 included three quakes larger than a magnitude of 8 on the Richter Scale. These earthquakes were felt over the entire eastern United States, with Missouri, Tennessee, Kentucky, Indiana, Illinois, Ohio, Alabama, Arkansas, and Mississippi experiencing the strongest ground shaking.

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Types

Earthquakes are measured in terms of their magnitude and intensity using the Richter Scale and Modified Mercalli Scale of Earthquake Intensity.

The Richter magnitude scale measures an earthquake’s magnitude using an open-ended logarithmic scale that describes the energy release of an earthquake through a measure of shock wave amplitude. The earthquake’s magnitude is expressed in whole numbers and decimal fractions. Each whole number increase in magnitude represents a 10-fold increase in measured wave amplitude, or a release of 32 times more energy than the preceding whole number value.

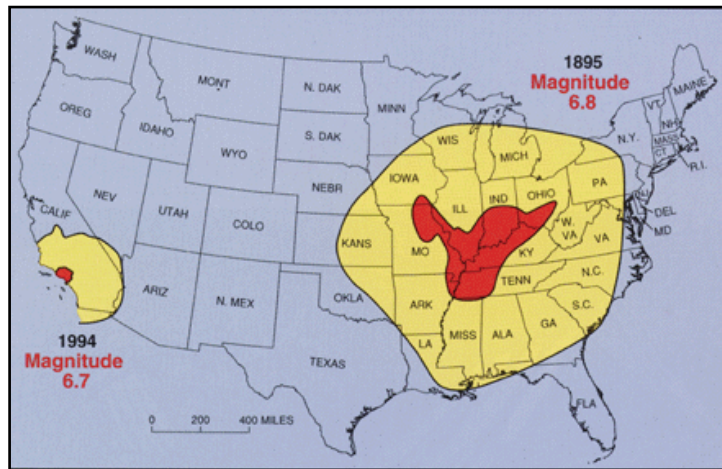
The Modified Mercalli Scale measures the effect of an earthquake on the Earth’s surface. Composed of 12 increasing levels of intensity that range from unnoticeable shaking to catastrophic destruction, the scale is designated by Roman numerals. There is no mathematical basis to the scale; rather, it is an arbitrary ranking based on observed events. The lower values of the scale detail the way the earthquake is felt by people, while the increasing values are based on observed structural damage. The intensity values are assigned after gathering responses to questionnaires administered to postmasters in affected areas in the aftermath of the earthquake.

The Modified Mercalli Intensity Scale				
Scale	Intensity	Description of Effects	Maximum Acceleration (mm/sec)	Corresponding Richter Scale
I	Instrumental	Detectable only on seismographs	<10	
II	Feeble	Some people feel it	<25	<4.2
III	Slight	Felt by people resting (like a truck rumbling by)	<50	
IV	Moderate	Felt by people walking	<100	
V	Slightly Strong	Sleepers awake; church bells ring	<250	<4.8
VI	Strong	Trees sway; suspended objects swing; objects fall off shelves	<500	<5.4
VII	Very Strong	Mild alarm; walls crack; plaster falls	<1000	<6.1
VIII	Destructive	Moving cars uncontrollable; masonry fractures; poorly constructed buildings damaged	<2500	
IX	Ruinous	Some houses collapse; ground cracks; pipes break open	<5000	<6.9
X	Disastrous	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread	<7500	<7.3
XI	Very Disastrous	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards	<9800	<8.1
XII	Catastrophic	Total destruction; trees fall; ground rises and falls in waves	>9800	>8.1

Source: USGS, <http://earthquake.usgs.gov/learn/topics/mercalli.php>

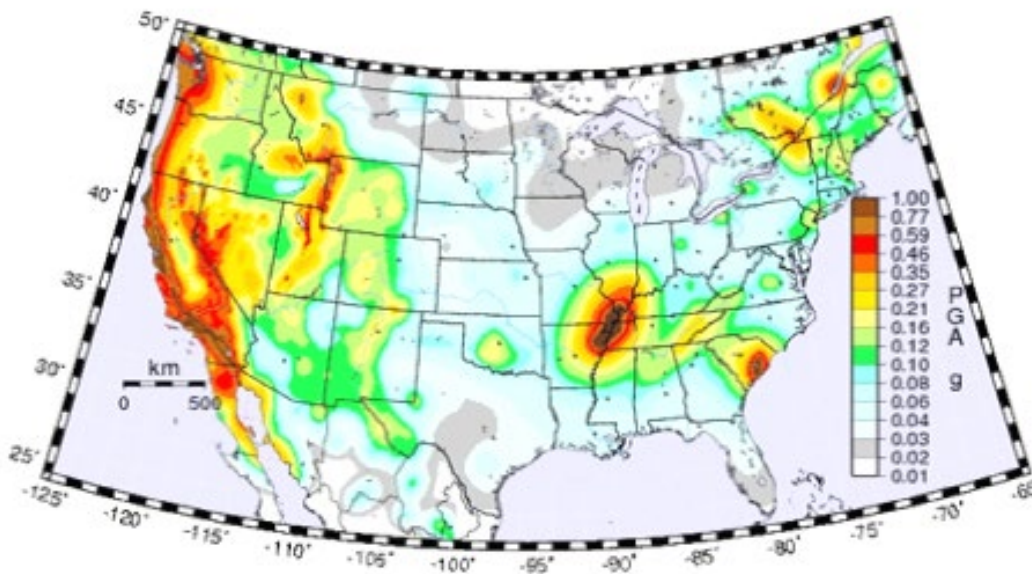
Facts

Earthquakes in the central or eastern United States affect much larger areas than earthquakes of similar magnitude in the western United States. For example, the San Francisco, California earthquake of 1906 (magnitude 7.8) was felt 350 miles away in the middle of Nevada, whereas the New Madrid earthquake of December 1811 (magnitude 7.7) rang church bells in Boston, Massachusetts, 1,000 miles away. Differences in geology east and west of the Rocky Mountains cause this strong contrast.



Although earthquakes in the central and eastern United States are less frequent than in the western United States, they affect much larger areas. Red on the below map indicates minor to major damage to buildings and their contents. Yellow indicates shaking felt, but little or no damage to objects.

PGA with 2% in 50 year PE. BC rock. 2008 USGS



Source: <http://earthquake.usgs.gov/hazards/products/>

This figure corresponds to the 2008 U.S. Geological Survey National Seismic Hazard Maps. This figure shows a probabilistic ground motion map for Peak Ground Acceleration (PGA), 1Hz (1.0 second SA [spectral accelerations]), and 5Hz (0.2 second SA). Peak ground acceleration tells how hard the earth shakes within the geographic area. This is vital in understanding the impact to structures. The size and magnitude are important, but the PGA will demonstrate expected damages in a finer manner.

The U.S. Geological Survey (USGS) National Seismic Hazard Maps display earthquake ground motions for various probability levels across the United States and are applied in seismic provisions of building codes, insurance rate structures, risk assessments, and other public policy. This update of the maps incorporates new findings on earthquake ground shaking, faults, seismicity, and geodesy. The resulting maps are derived from seismic hazard curves calculated on a grid of sites across the United States that describe the frequency of exceeding a set of ground motions.

Likelihood of Occurrence

The goal of earthquake prediction is to give warning of potentially damaging earthquakes early enough to allow appropriate response to the disaster, enabling people to minimize loss of life and property. The U.S. Geological Survey conducts and supports research on the likelihood of future earthquakes. This research includes field, laboratory, and theoretical investigations of earthquake mechanisms and fault zones. Scientists estimate earthquake probabilities in two ways: by studying the history of large earthquakes in a specific area, and by the rate at which strain accumulates in the rock.

Scientists study the past frequency of large earthquakes in order to determine the future likelihood of similar large shocks. For example, if a region has experienced four magnitude 7 or larger earthquakes during 200 years of recorded history, and if these shocks occurred randomly in time, then scientists would assign a 50 percent probability (that is, just as likely to happen as not to happen) to the occurrence of another magnitude 7 or larger quake in the region during the next 50 years.

Another way to estimate the likelihood of future earthquakes is to study how fast strain accumulates. When plate movements build the strain in rocks to a critical level, like pulling a rubber band too tight, the rocks will suddenly break and slip to a new position. Scientists measure how much strain accumulates along a fault segment each year, how much time has passed since the last earthquake along the segment, and how much strain was released in the last earthquake. This information is then used to calculate the time required for the accumulating strain to build to a level resulting in an earthquake. This simple model is complicated by the fact that such detailed information about faults is rare. In the United States, only the San Andreas fault system has adequate records for using this prediction method.

The University of Memphis estimates that, for a 50-year period, the probability of a repeat of the New Madrid 1811-1812 earthquakes with:

- a magnitude of 7.5 - 8.0 is 7 to 10%
- a magnitude of 6.0 or larger is 25 to 40%

Earthquakes can be experienced in any part of Kentucky, putting Kentucky's entire population and building stock at risk. Each county has at least one fault running beneath it.

4.4.1 Profile: Earthquake

Earthquake Profile Risk Table	
Period of occurrence	208 Years (1811-2019)
Campbell County Number of Events	18 that registered at least 4.0 ¹ on the Richter scale and that were recorded felt in Kentucky and where information beyond a date and site were recorded. See “Historical Impacts” below.
Campbell County Probability of Events	.09
Campbell County Past Damages	Qualitative (e.g., houses/buildings shaken; plaster cracked)
NKU Number of Events	0
NKU Damages Claimed	\$0.00
Warning Time	Almost non-existent
Potential Impact	Earthquakes can heavily impact human life, health, and public safety. Large events can cause infrastructure damage, utility damage, and critical facilities damage. Secondary events often trigger landslides, dam failure/flooding, and may facilitate the release of hazardous materials from containment structures.
Potential of Injury or Death	The potential this hazard could cause injury or death
Potential Duration of Facility Shutdown	Indefinite
Extent	Year: 1980 Scale: 5.1 Damage: \$1,000,000 in Maysville, unknown in NKADD area (50-year probability for New Madrid magnitude of 7.5 - 8.0 is 7 to 10%)

¹ Given the corresponding Richter Scale to Modified Mercalli Intensity Scale equivalent cited above, it is fair to distinguish as impactful and, thus, relevant for a risk assessment that will justify mitigation actions that 4.0 on the Richter Scale is the point where a risk assessment on earthquakes will begin. The Richter Scale was devised “to measure the magnitude of earthquakes of moderate size [Encyclopedia Britannica]” (i.e., 3.0 to 7.0) and if below a 4.2 constitutes the equivalent of earthquakes being “Feeble” or that “some people feel it” according to the Modified Mercalli Intensity Scale, then for the sake of argument, discussing earthquakes 4.0 and above on the Richter Scale is illustrative and prudent for a risk assessment. More directly stated, if an individual or community is not even going to feel an earthquake “like a truck rumbling by,” (i.e., at 4.2 or above on the Richter Scale), then its existence is inconsequential for assessing and making decisions on mitigation activity.

Historical Impacts

Kentucky is affected by earthquakes from several seismic zones in and around the state. The most important one is the **New Madrid Seismic Zone**, in which at least three great earthquakes occurred from December 1811 to February 1812. Because of the infrequency and relatively minor impacts from earthquakes around Campbell County, historical data on occurrences and losses is anecdotal and refers to statewide events. The table below lists past earthquakes felt in Kentucky, some of which may have been felt in Campbell County, but none caused any recorded damage to Northern Kentucky University.

Past Occurrences (Anecdotal) of Earthquakes Felt in Kentucky			
Origin of Earthquake	Date	Magnitude	Property Damage
New Madrid, Missouri	1811 to 1812	7.2 – 8.2	Reelfoot Lake formed
Appalachian Shock #1 ² (felt in Maysville, KY)	1828	IV - V	See Footnote 1.
Northern Kentucky area	11/20/1834	V	Plaster Cracked
Hickman	12/27/1841	V	Plaster Cracked
Appalachian Shock #3 (felt in Louisville, KY; Cincinnati, OH) ³	08/31/1861	~ VI	Beds rocked (Cincinnati, OH)
Columbus, KY	3/12/1878	V	Bluff Fell into MS River
Mayfield	10/26/1915	V	Items Fell from Walls
Mouth of Ohio River	12/07/1915	V - VI	Windows, Dishes Rattled
Hickman	12/18/1916	VI - VII	Bricks Shaken from Chimneys
Mouth of Ohio River	03/02/1924	≥ V	No Damage Reported
Henderson	09/02/1925	≥ V	Chimney Fell; House Sank
Middlesboro	01/01/1954	V	No Damage Reported
Southern Illinois	11/09/1968	Up to VII	Masonry damage
Maysville, Kentucky	07/27/1980	5.1	\$1,000,000

² See MacCarthy, Gerald R. (April, 1963). "Three Forgotten Earthquakes." Bulletin of Seismological Society of America. 53 (3). pp. 687-692: According to MacCarthy, there were three (3) historic earthquake events that – at the time at least – had been neglected in citations of past earthquakes. They were "forgotten." Epicenters of these three (3) "forgotten" earthquake events were not cited. Rather, MacCarthy referred to the three (3) "forgotten" events as "Appalachian shocks." As the party writing the revisions to this hazard mitigation plan, the Commonwealth of Kentucky through the University of Kentucky Hazard Mitigation Grants Program Office is responsible for referring to the events cited in the above table as Appalachian Shock #1 and #3. Two of the three "Appalachian shocks" (i.e., #1 that occurred in 1828 and #3 that occurred in 1861) were said to have had effects in Kentucky. MacCarthy did lament that historical records supporting Appalachian Shock #1 and its impacts were contradictory and, thus, suspect. Effects in Maysville, Kentucky were not cited for Appalachian Shock #1. The "Appalachian shock" that occurred in 1852 (i.e., Appalachian Shock #2) did not have records for any location in Kentucky.

³ *Ibid.*: MacCarthy describes an earthquake that began in Washington, D.C. and that had effects that were recorded at 24 sites that included Louisville, Kentucky and Cincinnati, OH (i.e., about seven miles from Northern Kentucky University). The recorded effects are all anecdotal. The magnitude (of VI) is an estimate by the author based upon historical accounts/anecdotes about which he cites in the paper. Cincinnati, OH is mentioned specifically as having recorded that the earthquake was strong enough to awaken people; to make dishes, windows, and doors "rattle smartly"; and to "rock the beds."

Past Occurrences (Anecdotal) of Earthquakes Felt in Kentucky			
Origin of Earthquake	Date	Magnitude	Property Damage
Bardwell, Kentucky	06/06/2003	4	Bricks Fell; Ceiling Collapsed
Illinois Basin-Ozark dome region	04/18/2008	5.2	Minor Damage
Ottawa, Canada	06/23/2010	5.5	Walls Seemed to Shift
Richmond, Virginia ⁴	08/23/2011 ⁵	5.8	No Reports of Damage
Sources: Northern Kentucky 2017 Regional Natural Hazard Mitigation Plan; Additional Information See Footnotes ⁶			

⁴ The Richmond, Virginia (Louisa County, Virginia) earthquake recorded on August 23, 2011 is considered by the United States Geological Survey (USGS) to be the most widely felt earthquake to occur for the East Coast of the United States. At a magnitude 5.8 occurring at 1:51 PM EDT, there were 26 aftershocks that included locations in Kentucky. Specifically, Kentucky Geological Survey (KGS) recorded seismic activity resulting from the August 23, 2011 Richmond (Louisa County), Virginia earthquake in Fulgham, Kentucky (at the very western end of Kentucky bordering Missouri); Henderson, Kentucky (in western Kentucky near the Ohio River and bordering Indiana); in Lexington, Kentucky (in central Kentucky); and in the City of Grayson, Kentucky (in northeastern Kentucky. The Grayson readings recorded an aftershock at magnitude 4.2 at 8:04 PM EDT, i.e., approximately six (6) hours after the earthquake hit. The City of Grayson is about a two-hour drive and roughly 100 miles from the Northern Kentucky University and the city and county within which it is housed, Highland Heights and Campbell County.

⁵ Using both USGS's earthquake tracker (earthquake.usgs.gov) and "Earthquake Track" (earthquake-track.com), there only have been no earthquakes measuring 4.0 or above on the Richter scale since 2011.

- ⁶
- https://fox41blogs.typepad.com/wdrb_weather/2012/11/a-43-magnitude-earthquake-has-hit-kentucky.html citing "Earthquake Information Bulletin," Volume 5, Number 1, January-February 1973
 - Ohio Department of Natural Resources (ODNR) Geological Survey. March 3, 2003. "1980 Northern Kentucky Earthquake." From "Summer 1981 Ohio Geology Newsletter." See: <http://geosurvey.ohiodnr.gov/border-region-quake-pgs/northern-kentucky-1980>.
 - United States Department of Commerce, National Oceanic and Atmospheric Administration. 1973. (Reprinted 1977). "Earthquake History of the United States, Publication 41-1 (Revised Edition through 1970)." Coffman, Jerry L. & von Hake, Carl A. (eds.) See: ftp.library.noaa.gov/Earthquake_history_US/Pub_41-1_1970_repr1977
 - Horton, Stephen P.; Won-Young Kim; Mitch Withers. (2004). "The 6 June 2003 Bardwell, Kentucky, Earthquake Sequence: Evidence for a Locally Perturbed Stress Field in the Mississippi Embayment."
 - Central United States Earthquake Consortium (CUSEC)
 - Clarke, Katrina; Allison Cross. (May 17, 2013). "Two earthquakes rattle Quebec, Ontario on Friday." *National Post*. See: <https://nationalpost.com/news/canada/4-8-magnitude-earthquake-hits-ontario>.

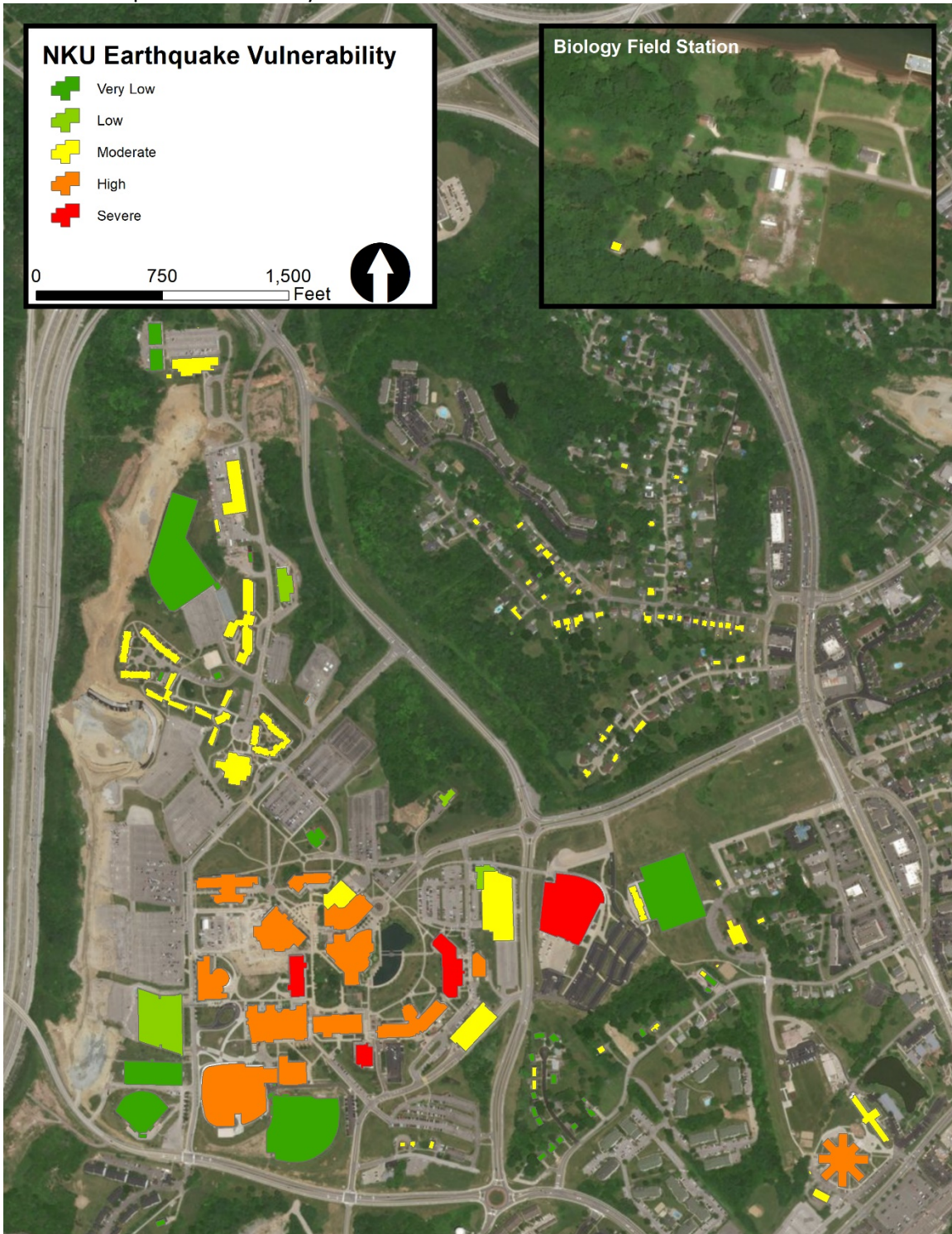
4.4.2 Assessing Vulnerability: Earthquake

$$\text{Earthquake Vulnerability Score} = \text{Hazard Score} + \text{Exposure Score}$$

The Earthquake Hazard Score was calculated by combining scores derived from the 2014 USGS 2% chance in 50 years peak ground acceleration (PGA) data and the National Earthquake Hazards Reduction Program (NEHRP) amplification potential data. All NKU buildings and structures are in a moderate earthquake risk area relative to the rest of Kentucky, so they all share the same Earthquake Hazard Score, making the Exposure Score the determining factor in earthquake vulnerability.

The Hazard Score and the Exposure Score were added together and an overall Earthquake Vulnerability Score (0-1) was calculated for each building. The Earthquake Vulnerability Scores are displayed in Figure 4.2.

Figure 4.2: Earthquake Vulnerability



Sources: NKU, Kentucky Geological Survey, United States Geological Survey, ESRI

4.5 Extreme Heat

4.5.1 Identify: Extreme Heat

Extreme high temperatures are responsible for many deaths in the United States each year. Extreme heat has historically affected huge populations. Due to the breadth of occurrence, “on average, excessive heat claims more lives each year than floods, lightning, tornadoes and hurricanes combined” (NOAA).

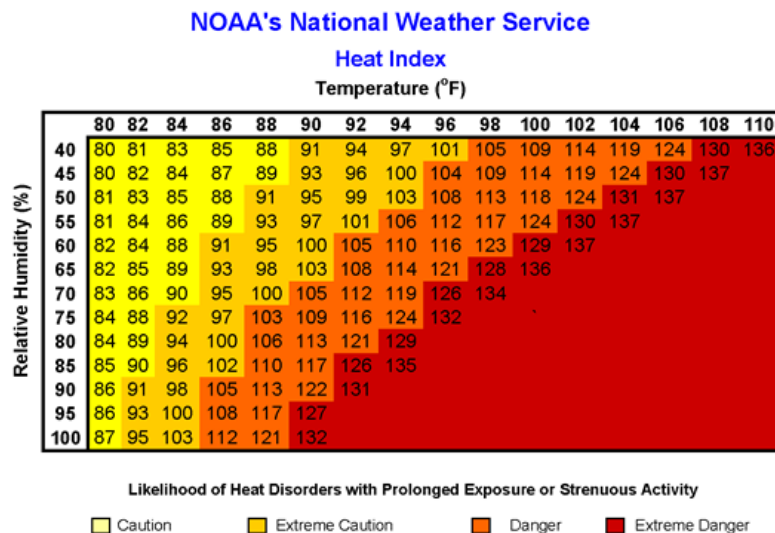
Excessive heat occurs from a combination of high temperatures (significantly above normal) and high humidity. At certain levels, the human body cannot maintain proper internal temperatures and may experience heat stroke.

These combined elements can manifest medical conditions which are directly attributable to excessive heat exposure:

- **heat cramps:** Painful muscle cramps and spasms, usually in muscles of legs and abdomen, heavy sweating
- **heat exhaustion:** Heavy sweating, weakness, cool skin, pale, and clammy. Weak pulse. Normal temperature possible. Possible muscle cramps, dizziness, fainting, nausea, and vomiting.
- **heat stroke (sunstroke):** Altered mental state. Possible throbbing headache, confusion, nausea, and dizziness. High body temperature (106°F or higher). Rapid and strong pulse. Possible unconsciousness. Skin may be hot and dry, or patient may be sweating. Sweating likely especially if patient was previously involved in vigorous activity.

Heat Index

The "Heat Index" is a measure of the effect of the combined elements of heat and humidity on the body. A temperature as low as 80°F and a relative humidity of 40% is significant in that it ranks at the "caution" level of the NOAA's Apparent Temperature chart – also known as the heat index.



It is important to note that these heat index values were devised for shady, light wind conditions. Exposure to full sunshine can increase heat index values by up to 15°F.

Matching the possible medical conditions with the four-element scale of the heat index above is critical to understanding the likelihood of impacts from exposure:

- **Extreme Danger:** Heat stroke or sunstroke likely.
- **Danger:** Sunstroke, muscle cramps, and/or heat exhaustion likely. Heatstroke possible with prolonged exposure and/or physical activity.
- **Extreme Caution:** Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.
- **Caution:** Fatigue possible with prolonged exposure and/or physical activity.

NOAA's Watch, Warning, and Advisory Products for Extreme Heat

Each NWS Weather Forecast Office can issue the following heat-related products as conditions warrant:

- **Excessive Heat Outlook:** are issued when the potential exists for an excessive heat event in the next 3-7 days. An Outlook provides information to those who need considerable lead time to prepare for the event, such as public utilities, emergency management, and public health officials.
- **Excessive Heat Watch:** is issued when conditions are favorable for an excessive heat event in the next 12 to 48 hours. A Watch is used when the risk of a heat wave has increased, but its occurrence and timing is still uncertain. A Watch provides enough lead time so those who need to prepare can do so, such as cities that have excessive heat event mitigation plans.
- **Excessive Heat Warning/Advisory** is issued when an excessive heat event is expected in the next 36 hours. These products are issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. The warning is used for conditions posing a threat to life or property. An advisory is for less serious conditions that cause significant discomfort or inconvenience and, if caution is not taken, could lead to a threat to life and/or property.

The EPA has also developed a guidebook on excessive heat events (EHE) that has two basic goals:

1. to provide local health and public safety officials with the information they need to develop EHE criteria and evaluate the potential health impacts of EHEs
2. to offer a menu of EHE notification and response actions to be considered

4.5.2 Profile: Extreme Heat

Extreme Heat Profile Risk Table	
Period of occurrence	May through October
Campbell County Number of Events	7 (recorded by NCEI) 23 years (1996-2019)
Campbell County Probability of Events	.30
Campbell County Past Damages	\$0.00 recorded
NKU Number of Events	7
NKU Damages Claimed	\$0.00
Warning Time	Days to a week
Potential Impact	Main impacts are to public health and safety, especially the elderly. Heavy use of utilities (electric and water) causes a strain on energy systems resulting from increased air conditioner, fan, and water usage. Economic losses due to 'stay-indoor warnings' that prevent people from going to work are possible.
Potential of Injury or Death	Slight chance of injury and risk of deaths in children and elderly
Potential Duration of Facility Shutdown	Days to months
Extent	Temperature over 100 degrees and one heat related death in nearby Boone County in July 1999.

Historical Impacts

Records for extreme heat events are limited, with only a few recorded events for Campbell County. While other events may have occurred, the events described here represent best available data from the National Centers for Environmental Information (NCEI) Storm Events Database. NKU itself has no records of extreme heat events. Since the NCEI began tracking “Excessive Heat” events in 1996, there have been seven (7) discrete “Excessive Heat” and “Heat” events in Campbell County as recorded by NCEI. Because heat is not contained in a specific location, it is assumed the Campbell County events had a similar impact on the NKU campus.

1999 - Most of northern Kentucky experienced a heat wave in July 1999. Over the last half of the month, nearly every day experienced temperatures above 90 degrees, with a few going over 100. There was one heat related death in nearby Boone County.

2007 - From August 7 through August 10, 2007, northern Kentucky experienced oppressively hot and humid conditions. Most days saw the heat index reach 105 degrees. Later in August, the 23rd and 24th northern Kentucky experienced a heat index near 105 degrees.

2012 - In late June 2012 a very warm air mass entered the northern Kentucky region that brought a prolonged period for record heat and dangerous heat indices. The heat index exceeded 101 degrees on June 28, 109 on June 29, and 99 on June 30. This heat wave continued into July, with heat indices ranging from 95 to 105 degrees each day through August 7. (NCEI records July 1 as a separate event.)

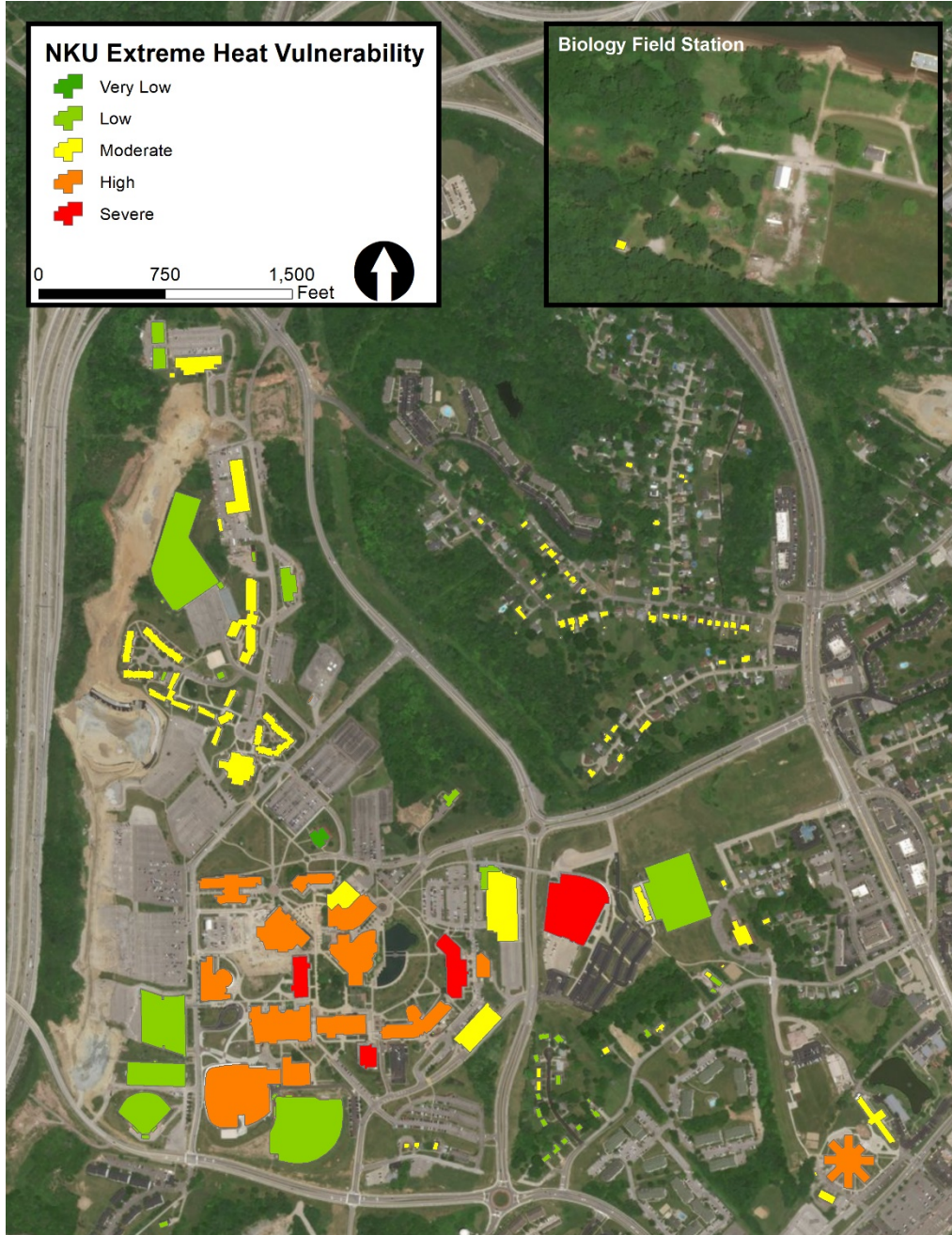
2019 – NCEI records as two (2) events “Excessive Heat” on July 19, 2010 and July 20, 2019. With a combination of high temperatures in the 90s and added humidity, heat index values across the region reached into the triple digits. Temperatures in the 90s and dewpoints in the upper 70s to near 80 degrees created heat index values in excess of 105 degrees.

4.5.3 Assessing Vulnerability: Extreme Heat

$$\text{Extreme Heat Vulnerability Score} = \text{Hazard Score} + \text{Exposure Score}$$

Variations in Extreme Heat are difficult to identify at the county level, and even more difficult at the campus level. Because Extreme Heat is assumed to impact all NKU buildings and structures equally, the Extreme Heat Hazard Score is assumed to be the same for all university buildings. Therefore, the Exposure Score represents the Extreme Heat Vulnerability Score.

Figure 4.3: Extreme Heat Vulnerability



Sources: NKU Facilities Management, NKU Office of the Comptroller, NKU Campus Planning, ESRI

4.6 Extreme Cold

4.6.1 Identify: Extreme Cold

What constitutes extreme cold and its effect varies across different areas of the United States. In areas unaccustomed to winter weather, near freezing temperatures are considered "extreme cold." In the north, below zero temperatures may be considered as "extreme cold." Extreme cold often accompanies a winter storm or is left in its wake.

Whenever temperatures drop decidedly below normal and as wind speed increases, heat can leave your body more rapidly. These weather-related conditions may lead to serious health problems. Extreme cold is a dangerous situation that can bring on health emergencies in susceptible people, such as those without shelter or who are stranded, or who live in a home that is poorly insulated or without heat. Prolonged exposure to the cold can cause frostbite or hypothermia and become life-threatening. Infants and elderly people are most susceptible.

Freezing temperatures can also cause severe damage to citrus fruit crops and other vegetation. Pipes may freeze and burst in homes that are poorly insulated or without heat. Long cold spells can cause rivers to freeze, disrupting shipping. Ice jams may form and lead to flooding.

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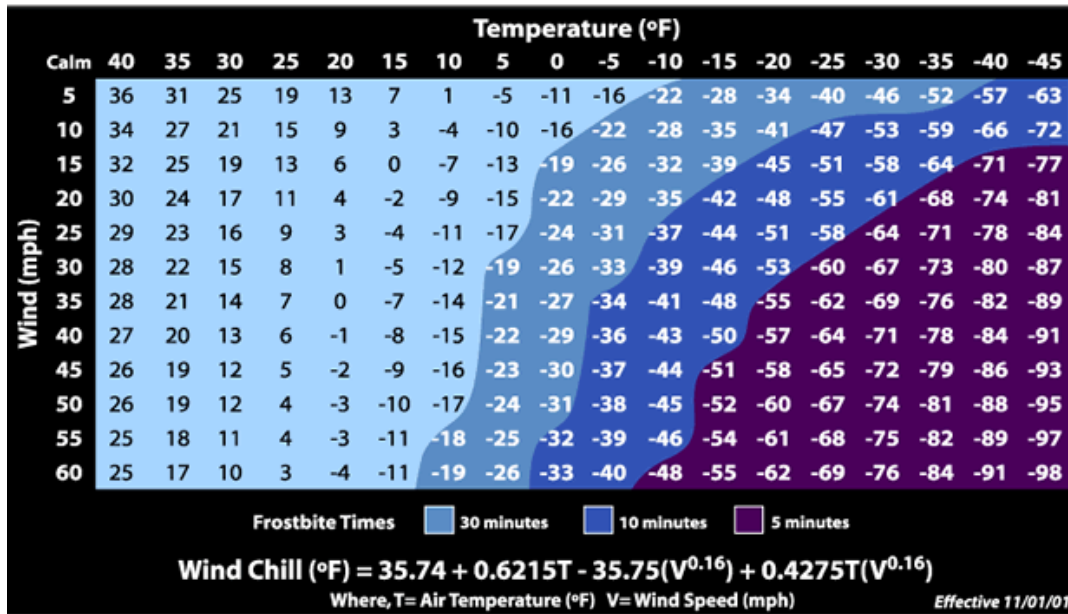
NOAA's National Weather Service wind chill chart shows the increasing dangers as temperature drops and wind speed increases. In cold winter months, National Weather Service weather forecast offices routinely issue two types of alerts to warn people about dangerously low wind chill temperatures.

- A *Wind Chill Advisory* is issued when wind chill temperatures are potentially hazardous.
- A *Wind Chill Warning* is issued when wind chill temperatures are life threatening.

However, temperature criteria for an advisory or warning can vary from state to state to reflect regional climate differences.



NWS Windchill Chart



Source: NOAA/NWS, <http://www.nws.noaa.gov/om/windchill/>

4.6.2 Profile: Extreme Cold

Extreme Cold Profile Risk Table	
Period of occurrence	October through April
Campbell County Number of Events	2 (Recorded by NCEI) + 1 anecdotal event 23 years (1996-2019)
Campbell County Probability of Events	.13
Campbell County Past Damages	Recorded Losses - \$465,000.00 Annualized Losses - \$20,217.39
NKU Number of Events	3
NKU Damages Claimed	Recorded Losses - \$26,153.00 Annualized Losses - \$6,538.00
Warning Time	Days to a week
Potential Impact	Extreme cold, impacts human life, health, and public safety. Rivers and lakes freeze causing transportation issues. Energy consumption goes up and depending on the time of year extreme cold can have large impacts on agriculture. Cold temperatures can also cause ruptured pipes and stressed on engines and motors.
Potential of Injury or Death	Slight chance of injury and risk of deaths in children and elderly
Potential Duration of Facility Shutdown	Days to months
Extent	1996, 11 below zero coldest temperature, property damage

Historical Impacts

Records for extreme cold events are limited, with only a few recorded events for Campbell County and NKU. While other events may have occurred, the events described here represent best available data from the NCEI Storm Events Database and from NKU records. Specifically, this assessment isolated “Extreme Cold/Wind Chill,” “Cold/Wind Chill,” and “Frost/Freeze” options within the NCEI Storm Events database.

1996 – In February of 1996 Arctic high pressure brought very cold air to northern Kentucky. The Greater Cincinnati/Northern Kentucky Airport recorded the lowest temperature ever on February 4, at 11 degrees below zero. The airport set records for the lowest maximum temperature at 7 degrees on the 3rd and followed that with 6 degrees in the 4th. The cold spell lasted five days and resulted in an estimated \$20,000 of property damage in Campbell County.

2007 – March 2007 experienced unseasonably warm temperatures that resulted in early agricultural production on northern Kentucky. Unfortunately, April brought a cold spell with temperatures dropping into the twenties, causing an estimated \$465,000 of crop damage in Campbell County.

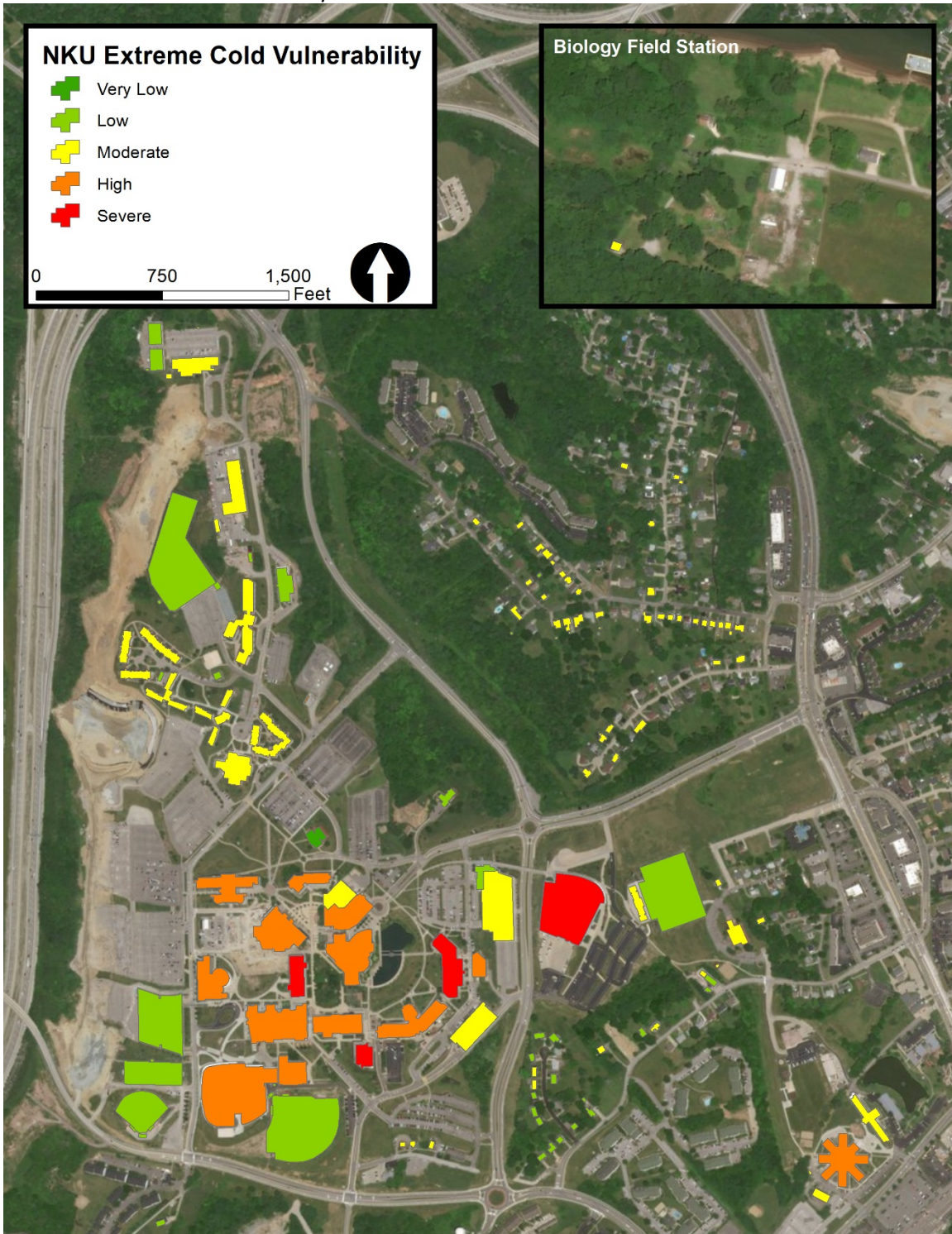
2017 – Cold temperatures in January and February caused two separate incidents of frozen pipes bursting resulting in over \$26,000 in property damage to Norse Hall and University Suites on the NKU campus.

4.6.3 Assessing Vulnerability: Extreme Cold

$$\textit{Extreme Cold Vulnerability Score} = \textit{Hazard Score} + \textit{Exposure Score}$$

Variations in Extreme Cold are difficult to identify at the county level, and even more difficult at the campus level. Because Extreme Cold is assumed to impact all NKU buildings and structures equally, the Extreme Cold Hazard Score is assumed to be the same for all University buildings. Therefore, the Exposure Score represents the Extreme Cold Vulnerability Score.

Figure 4.4 Extreme Cold Vulnerability



Sources: NKU Facilities Management, NKU Office of the Comptroller, NKU Campus Planning, ESRI

4.7 Flood

4.7.1 Identify: Flood

A flood is a natural event for rivers and streams and is caused in a variety of ways. Winter or spring rains, coupled with melting snows, can fill river basins too quickly. Torrential rains from decaying hurricanes or other tropical systems can also produce flooding. The excess water from snowmelt, rainfall, or storm surge accumulates and overflows onto the banks and adjacent floodplains. Floodplains are lowlands, adjacent to rivers, lakes, and oceans that are subject to recurring floods. Currently, floodplains in the U.S. are home to over nine million households.

A flood, as defined by the NFIP is a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area, or of two or more properties from:

- overflow of inland or tidal waters
- unusual and rapid accumulation or runoff of surface waters from any source
- a mudflow
- a collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood

Factors determining the severity of floods include:

- Rainfall intensity and duration
- A large amount of rain over a short time can result in flash flooding
- Small amounts may cause flooding where the soil is saturated
- Small amounts may cause flooding if concentrated in an area of impermeable surfaces
- Topography and ground cover
- Water runoff is greater in areas with steep slopes and little vegetation

Frequency of inundation depends on the climate, soil, and channel slope. In regions without extended periods of below-freezing temperatures, floods usually occur in the season of highest precipitation.

Types

Floods are the result of a multitude of naturally occurring and human-induced factors, but they all can be defined as the accumulation of too much water in too little time in a specific area. Types of floods include regional floods, river or riverine floods, flashfloods, urban floods, ice-jam floods, storm-surge floods, dam-and levee-failure floods, and debris, landslide, and mudflow floods. The following information is specific to the mid-west, especially, Kentucky:

- *Regional Flooding* can occur seasonally when winter or spring rains coupled with melting snow fill river basins with too much water too quickly. The ground may be frozen, reducing infiltration into the soil and thereby increasing runoff. Extended wet periods during any part of the year can create saturated soil conditions, after which any additional rain runs off into streams and rivers, until river capacities are exceeded. Regional floods are many times associated with slow-moving, low-pressure or frontal storm systems including decaying hurricanes or tropical storms.
- *River or Riverine Flooding* is a high flow or overflow of water from a river or similar body of water, occurring over a period too long to be considered a flash flood.

- *Flash Floods* are quick-rising floods that usually occur as the result of heavy rains over a short period of time, often only several hours or even less. Flash floods can occur within several seconds to several hours and with little warning. They can be deadly because they produce rapid rises in water levels and have devastating flow velocities.
 - Several factors can contribute to flash flooding. Among these are rainfall intensity, rainfall duration, surface conditions, and topography and slope of the receiving basin. Urban areas are susceptible to flash floods because a high percentage of the surface area is composed of impervious streets, roofs, and parking lots where runoff occurs very rapidly. Mountainous areas also are susceptible to flash floods, as steep topography may funnel runoff into a narrow canyon. Floodwaters accelerated by steep stream slopes can cause the flood-wave to move downstream too fast to allow escape, resulting in many deaths.
- Flash floods can also be caused by ice jams on rivers in conjunction with a winter or spring thaw, or occasionally even a dam break. The constant influx of water finally causes a treacherous overflow; powerful enough to sweep vehicles away, roll boulders into roadways, uproot trees, level buildings, and drag bridges off their piers.
- *Urban Flooding* is possible when land is converted from fields or woodlands to roads and parking lots; thus, losing its ability to absorb rainfall. Urbanization of a watershed changes the hydrologic systems of the basin. Heavy rainfall collects and flows faster on impervious concrete and asphalt surfaces. The water moves from the clouds, to the ground, and into streams at a much faster rate in urban areas. Adding these elements to the hydrological systems can result in floodwaters that rise very rapidly and peak with violent force. During periods of urban flooding, streets can become swift moving rivers and basements can fill with water. Storm drains often back up with vegetative debris causing additional, localized flooding.
- *Dam-Failure Flooding* is potentially the worst flood event. A dam failure is usually the result of neglect, poor design, or structural damage caused by a major event such as an earthquake. When a dam fails, an access amount of water is suddenly let loose downstream, destroying anything in its path. Dams and levees are built for flood protection. They usually are engineered to withstand a flood with computed risk of occurrence. For example, a dam or levee may be designed to contain a flood at a location on a stream that has a certain probability of occurring in any one year. If a larger flood occurs, then that structure will be overtopped. If during the overtopping the dam or levee fails or is washed out, the water behind it is released and becomes a flash flood. Failed dams or levees can create floods that are catastrophic to life and property because of the tremendous energy of the released water.
- *Debris, Landslide, and Mudflow Flooding* is created by the accumulation of debris, mud, rocks, and/or logs in a channel, forming a temporary dam. Flooding occurs upstream as water becomes stored behind the temporary dam and then becomes a flash flood when the dam is breached and rapidly washes away. Landslides can create large waves on lakes or embankments and can be deadly.
- Most lives are lost when people are swept away by flood currents, whereas most property damage results from inundation by sediment-laden water. Flood currents also possess tremendous destructive power as lateral forces can demolish buildings and erosion can undermine bridge foundations and footings leading to the collapse of structures.

Facts

The community should be informed that:

- 80% of flood deaths occur in vehicles, and most happen when drivers try to navigate through flood waters.
- Only six inches of rapidly moving flood water can knock a person down.
- A mere two feet of water can float a large vehicle.
- One-third of flooded roads and bridges are so damaged by water that any vehicle trying to cross stands only a 50% chance of making it to the other side.
- 95% of those killed in a flash flood tried to outrun the waters along their path rather than climbing rocks or going uphill to higher grounds.
- Most flood-related deaths are due to flash floods.
- Homeowners' insurance policies do not cover floodwater damage.
- Six to eight million homes are located in flood-prone areas.
- Flooding has caused the deaths of more than 10,000 people since 1900.
- More than \$4 billion is spent on flood damage in the U.S. each year.
- On average, there are about 145 deaths each year due to flooding.
- About one-third of insurance claims for flood damages are for properties located outside identified flood hazard areas.
- Under normal conditions floods do not cause damage. Damage occurs when structures are built in flood-prone areas.

Common Flood-Related Terms

- *100-Year Flood Plain.* The area that has a 1% chance, on average, of flooding in any given year. (Also known as the Base Flood.)
- *500-Year Flood Plain.* The area that has a 0.2% chance, on average, of flooding in any given year.
- *Base Flood.* Represents a compromise between minor floods and the greatest flood likely to occur in a given area. The elevation of water surface resulting from a flood that has a 1% chance of occurring in any given year.
- *Floodplain.* The land area adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. This area, if left undisturbed, acts to store excess floodwater. The floodplain is made up of two sections: the floodway and the flood fringe.
- *Floodway.* The NFIP floodway definition is "the channel of a river or other watercourse and adjacent land areas that must be reserved, in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot." The floodway carries the bulk of the floodwater downstream and is usually the area where water velocities and forces are the greatest. NFIP regulations require that the floodway be kept open and free from development or other structures that would obstruct or divert flood flows onto other properties. Floodways are not mapped for all rivers and streams but are generally mapped in developed areas. Unlike floodplains, floodways do not reflect a recognizable geologic feature.
- *Flood Fringe.* The flood fringe refers to the outer portions of the floodplain, beginning at the edge of the floodway and continuing outward. The fringe land area is outside of the stream or river floodway but is subject to inundation by regular flooding.

4.7.2 Profile: Flood

Flood Profile Risk Table	
Period of occurrence	Year-round
Campbell County Number of Events	52 (Recorded by NCEI) (includes "Flood" and "Flash Flood") for Campbell County. 23 years (1996-2019)
Campbell County Probability of Events	2.26
Campbell County Past Damages	Recorded Losses - \$296,000.00 + \$1,118,131.10 in Repetitive Loss and Severe Repetitive Loss (Northern Kentucky 2017 Regional Natural Hazard Mitigation Plan) Annualized Losses - \$61,483.96
NKU Number of Events	0
NKU Damages Claimed	\$0.00
Warning Time	River flooding - 3 to 5 days Flash flooding - minutes to several hours
Potential Impact	Impacts human life, health, and public safety. Utility damages and outages, infrastructure damage (transportation and communication systems), structural damage, fire, damaged or destroyed critical facilities, and hazardous material releases. Can lead to economic losses such as unemployment, decreased land values, and agribusiness losses. Floodwaters are a public safety issue due to contaminants and pollutants.
Potential of Injury or Death	Injury and risk of multiple deaths
Potential Duration of Facility Shutdown	Weeks to months
Extent	Flood 7/4/2013 \$50,000 in Damages, 0 deaths, 0 injuries

Historical Impacts

NKU does not have any record of flood events impacting university property. Buildings have experienced water damage from broken pipes or malfunctioning drains, but none of the events were actual floods. A small portion of the main campus is in the 1% annual chance floodplain, however there are no university buildings or structures on the main campus located in the floodplain. The Biology Field Station, located off-campus near the Ohio River, is located within the 1% annual chance floodplain, but the university does not have records of flood damage to the building.

Though an NKU asset has yet to receive a flooding event that has affected it and, consequently, from which an anecdote illustrating extent can be derived, that the Biology Field Station sits near the Ohio River and within a 1% annual chance floodplain implies that citing peak streamflow from United States Geological Survey (USGS) stream gages within the Ohio River near Campbell County, Highland Heights, and NKU (or within the Northern Kentucky region) is illustrative for identifying the extent of flooding for the university and its asset near the Ohio River. Thus, it is relevant that the only USGS stream gage in the Ohio River within the Northern Kentucky region shows that:

- Peak Streamflow in the Ohio River at Markland Dam near Warsaw, Kentucky (in Gallatin County) is 407.26 feet above NGVD29 and this peak streamflow has occurred 47 times between February 23, 1971 and March 3, 2017.

Repetitive-Loss (RL) and Severe Repetitive-Loss (SRL) for Northern Kentucky University (NKU)

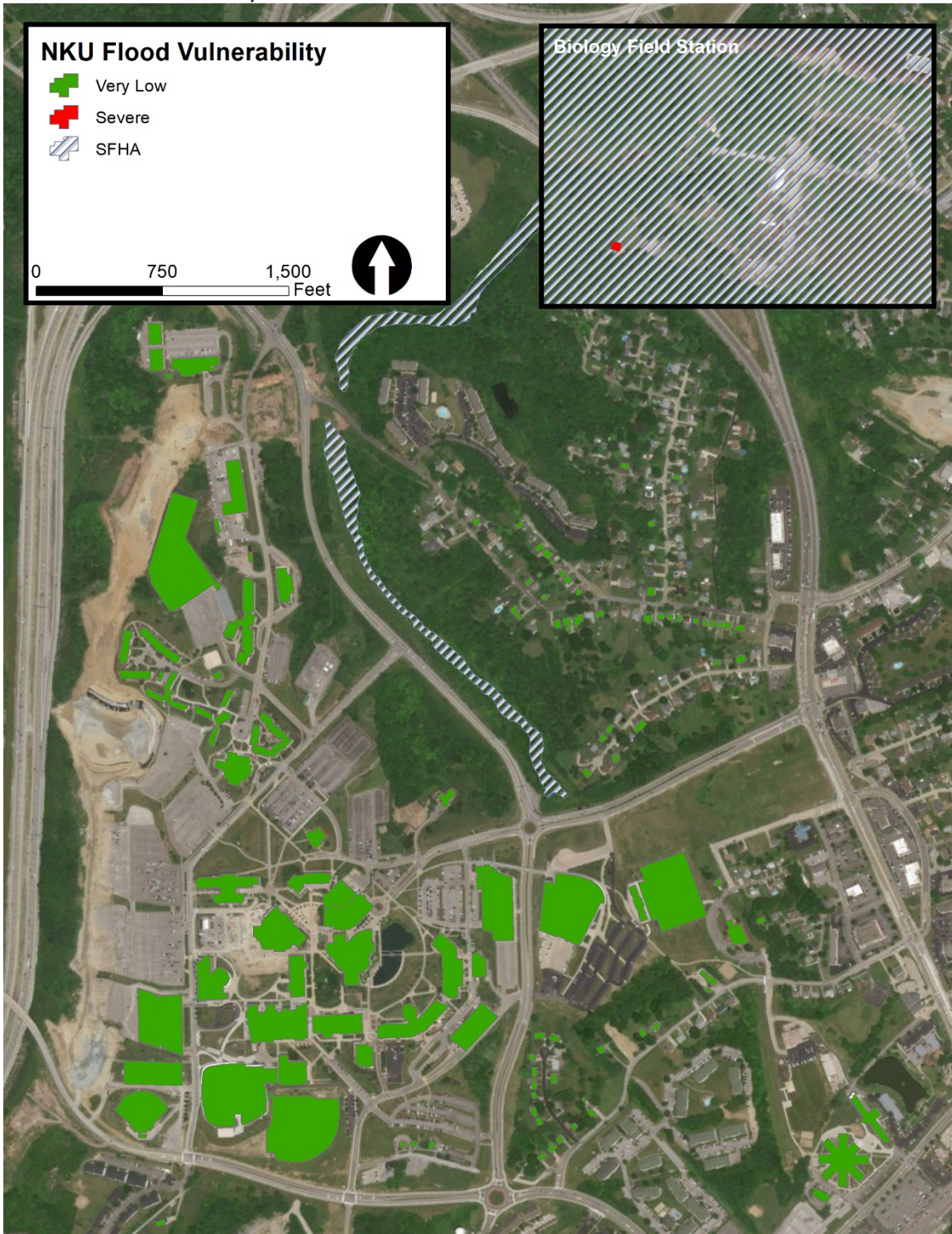
While the county within which Northern Kentucky University (NKU) resides (Campbell County) and the city within which its campus buildings are located (City of Highland Heights) both are participating members of the National Flood Insurance Program (NFIP) in good standing, NKU is considered a state-owned property and, thusly, follows state NFIP protocols. For additional information, see “5.2 Conducting the Capability Assessment” on pages 86 through 87. As a state-owned property, NKU does not have designated Repetitive-Loss or Severe Repetitive-Loss within its jurisdiction.

4.7.3 Assessing Vulnerability: Flood

$$*Flood Vulnerability Score = Exposure Score + Hazard Score*$$

The Flood Vulnerability Score was calculated by combining the Exposure Score and the Hazard Score. The Flood Hazard score was calculated using the geographic extent of the 1% annual chance floodplain. Areas within the floodplain received a score of 1 and those outside received a score of 0. The Flood Hazard Score was added to the Exposure Score and the sum was rescored on a 0 to 1 scale, resulting in the Flood Vulnerability Score. Buildings and structures located outside the floodplain have a flood vulnerability score of 0.

Figure 4.5: Flood Vulnerability



Sources: NKU, FEMA, ESRI

4.8 Hail

4.8.1 Identify: Hail

Hail is showery precipitation in the form of irregular pellets or balls of ice more than 5 mm in diameter, falling from a cumulonimbus cloud ([NOAA Glossary](#)).

Hail is a somewhat frequent occurrence associated with severe thunderstorms. Hailstones grow as ice pellets and are lifted by updrafts and collect super-cooled water droplets. As they grow, hailstones become heavier and begin to fall. Sometimes, they are caught by successively stronger updrafts and are re-circulated through the cloud growing larger each time the cycle is repeated. Eventually, the updrafts can no longer support the weight of the hailstones. As hailstones fall to the ground, they produce a hail-streak (i.e. area where hail falls) that may be more than a mile wide and a few miles long.

Types

Hail is a unique and common hazard capable of producing extensive damage from the impact of these falling objects. Hailstorms occur more frequently during the late spring and early summer months. Most thunderstorms do not produce hail, and ones that do normally produce only small hailstones not more than one-half inch in diameter. However, hailstones can grow larger than the size of a golf ball before falling to the ground.

Facts

- Hailstones can fall at speeds of up to 120 mph.
- Hail is responsible for nearly \$1 billion in damage to crops and property each year in the U.S.
- The largest hailstone ever recorded fell in Vivian, South Dakota in 2010. It measured 8 inches in diameter and weighed almost two pounds.

TORRO Hail Intensity Scale

Intensity categories range from H0 to H10, with H10 being the most destructive indicating structural damage possible.

TORRO Hailstorm Intensity Scale				
	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy, J-m2	Typical Damage Impacts
H0	Hard Hail	5	0-20	No damage
H1	Potentially Damaging	5 - 15	>20	Slight general damage to plants, crops
H2	Significant	10 - 20	>100	Significant damage to fruit, crops, vegetation
H3	Severe	20-30	>300	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	>500	Widespread glass damage, vehicle bodywork damage
H5	Destructive	30-50	>800	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60		Bodywork of grounded aircraft dented, brick walls pitted
H7	Destructive	50-75		Severe roof damage, risk of serious injuries
H8	Destructive	60-90		Severe damage to aircraft bodywork
H9	Super Hailstorms	75-100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

4.8.2 Profile: Hail

Hail Profile Risk Table	
Period of occurrence	Year-round
Campbell County Number of Events	54 (Recorded by NCEI) 57 years (1962-2019)
Campbell County Probability of Events	.95
Campbell County Past Damages	Recorded Losses: \$10,000.00 Annualized Losses: \$175.44
NKU Number of Events	0
NKU Damages Claimed	\$0.00
Warning Time	Predicting hail is difficult. Most advance warning comes from knowledge of conditions present that could produce hail; it is minutes to an hour at best.
Potential Impact	Impacts to human life, health and public safety are possible. Utility damage and failure, infrastructure damage, structural damage, fire, damaged or destroyed critical facilities, and hazardous material releases are additional impacts.
Potential of Injury or Death	Injury and slight chance of deaths
Potential Duration of Facility Shutdown	Days
Extent	6/23/2016 - Size: 1.75 inches in Highland Heights

Historical Impacts

NKU does not have records of any hail damage on campus. Because may occur across a wide area, hail occurrences from Campbell County that produced damage as recorded by NCEI are described here.

2003 – On May 1, Campbell County experienced hail .75 inch in diameter resulting in \$2,000 in reported damages.

2007 – Campbell County experienced 4 different hail events in 2007 with \$7,000 in reported damage.

2009 – On May 30, Campbell County experienced hail .75 inch in diameter resulting in \$1,000 in reported damages. This storm also produced two tornadoes.

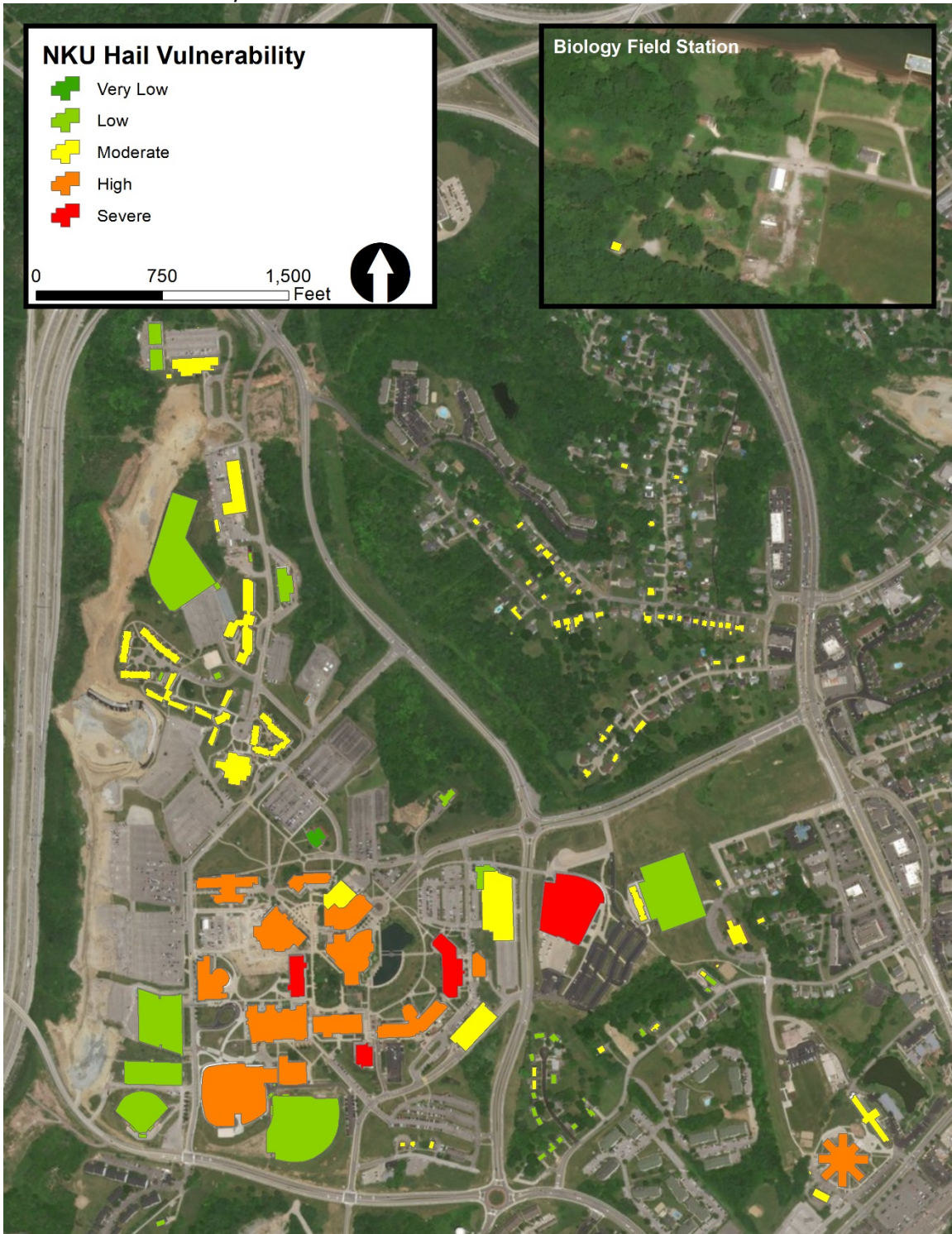
In total, Campbell County experienced 54 hail events from 1962 through 2019, with hail ranging in size from .75 inch to 2.5 inches. 1962 represents the first data point for “Hail” recorded by NCEI.

4.8.3 Assessing Vulnerability:

$$\text{Hail Vulnerability Score} = \text{Hazard Score} + \text{Exposure Score}$$

Variations in hail occurrences are difficult to identify at the county level, and even more difficult at the campus level. Because hail is assumed to impact all NKU buildings and structures equally and the university does not have occurrence data, the Hail Hazard Score is assumed to be the same for all university buildings. Therefore, the Exposure Score represents the Hail Vulnerability Score.

Figure 4.6: Hail Vulnerability



Sources: NKU, NCEI, ESRI

4.9 HazMat

4.9.1 Identify: HazMat

A hazardous material (HazMat) is a dangerous or potentially harmful substance that will impact human health or the environment. Hazardous materials can be found in the form of liquids, solids, or gasses. A HazMat release can range in impact by the very nature of the diversity of products in existence that are hazardous to humans. This hazard is not just a direct impact on health but can also cause secondary impacts in the form of making daily activities hazardous. An example of this would be a lubricant, such as hydraulic fluid, spill causing slick road conditions resulting in vehicular accidents. Hazardous materials generally fall into one of the following categories: chemical, biological, radiological, or nuclear. These four groups are known collectively as CBRNs.

The small capability for handling these types of events by the general public leads these events to be greatly dangerous and possibly deadly. Unlike a flood or winter storm, that generally has a warning time associated with it that allows citizens to escape safely from an event with a planned evacuation, HazMat releases do not follow this trend. They happen suddenly due to an infrastructure failure, facilities failure, or transportation accident. They are also usually very capable of initially being airborne due to an explosion or become airborne shortly after releasing due to interactions and fire. The airborne nature of many HazMat spills and the possibility of Toxic Inhalation Hazard (TIH) exposure makes this hazard unique to other hazards due to a reliance on special equipment when responding. In a case that the general population does not have access to Personal Protective Equipment (PPE) that would be vital for surviving a HazMat release, the damage to the population could be extensive.

For the reasons outlined above, it is imperative for the officials to respond quickly and efficiently to these types of hazards when they occur. The first reference guide that should be utilized by HazMat Teams is the 2016 Emergency Response Guidebook. This is “A Guidebook for First Responders during the Initial Phase of a Dangerous Goods/ Hazardous Materials Transportation Incident.”

4.9.2 Profile: HazMat

HazMat Profile Risk Table	
Period of occurrence	Year-round
Campbell County Number of Events	7 (Recorded by PHMSA) ⁷ 46 years (1971-2017)
Campbell County Probability of Events	.15
Campbell County Past Damages	\$61,573
NKU Number of Events	0
NKU Damages Claimed	\$0
Warning Time	None
Potential Impact	Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage, fire, damaged or destroyed critical facilities, and hazardous material releases.
Potential of Injury or Death	Injury and risk of multiple deaths
Potential Duration of Facility Shutdown	Days to Months
Extent	8500 liquid gallons (LGA) of gasoline spilled on I-275 at Route 9 on 12/11/1993. Reported damages = \$40,609

Historical Impacts

The most common occurrences of hazardous material leaks involve gas line breaks that supply homes with natural gas for heating and cooking. Gasoline tanks below ground at refueling stations also pose a risk of leakage and water contamination. Roadways and railways are also common places where HazMat incidents occur.

NKU does not have any recorded HazMat incidents, however because the campus is located near a railway and an interstate highway, HazMat incidents are a concern. Seven HazMat incidents are recorded for Campbell County in the Pipeline and Hazardous Materials Safety Administration's Hazardous Materials Incident Database.

⁷ Pipeline and Hazardous Materials Safety Administration, <https://www.phmsa.dot.gov/hazmat-program-management-data-and-statistics/data-operations/incident-statistics>

HazMat Incidents

Date	Incident Route	Transportation Phase	Commodity Short Name	Hazardous Class	Quantity Released	Unit of Measure	Total Amount of Damages
9/29/1989	I-471 Exit 3	In Transit	Naphtha Petroleum	Combustible Liquid	330	LGA	9300
12/13/1991	State Route 9	Unloading	Fuel Oil No. 1 2 4 5	Combustible Liquid	10	LGA	7
5/28/1993	9th & Lowell St	Unloading	Orm-B N.O.S.	Miscellaneous Hazardous Material	1	LGA	0
12/11/1993	I-275 & Rt 9	In Transit	Gasoline Includes Gasoline	Flammable - Combustible Liquid	8510	LGA	40609
4/25/1995	Ninth And Lowell	N/A	Hazardous Waste Solid	Miscellaneous Hazardous Material	6300	SLB	4000
10/29/1997	Highway 9 (Aa Highway)	In Transit	Adhesives Containing A	Flammable - Combustible Liquid	5	LGA	3600
8/8/2002	724 Covert Run Pike Lot 9	Unloading	Petroleum Gases Liquefied	Flammable Gas	80	LGA	4057

LGA = liquid gallon, SLB = solid pound

Source: Pipeline and Hazardous Materials Safety Administration’s Hazardous Materials Incident Database

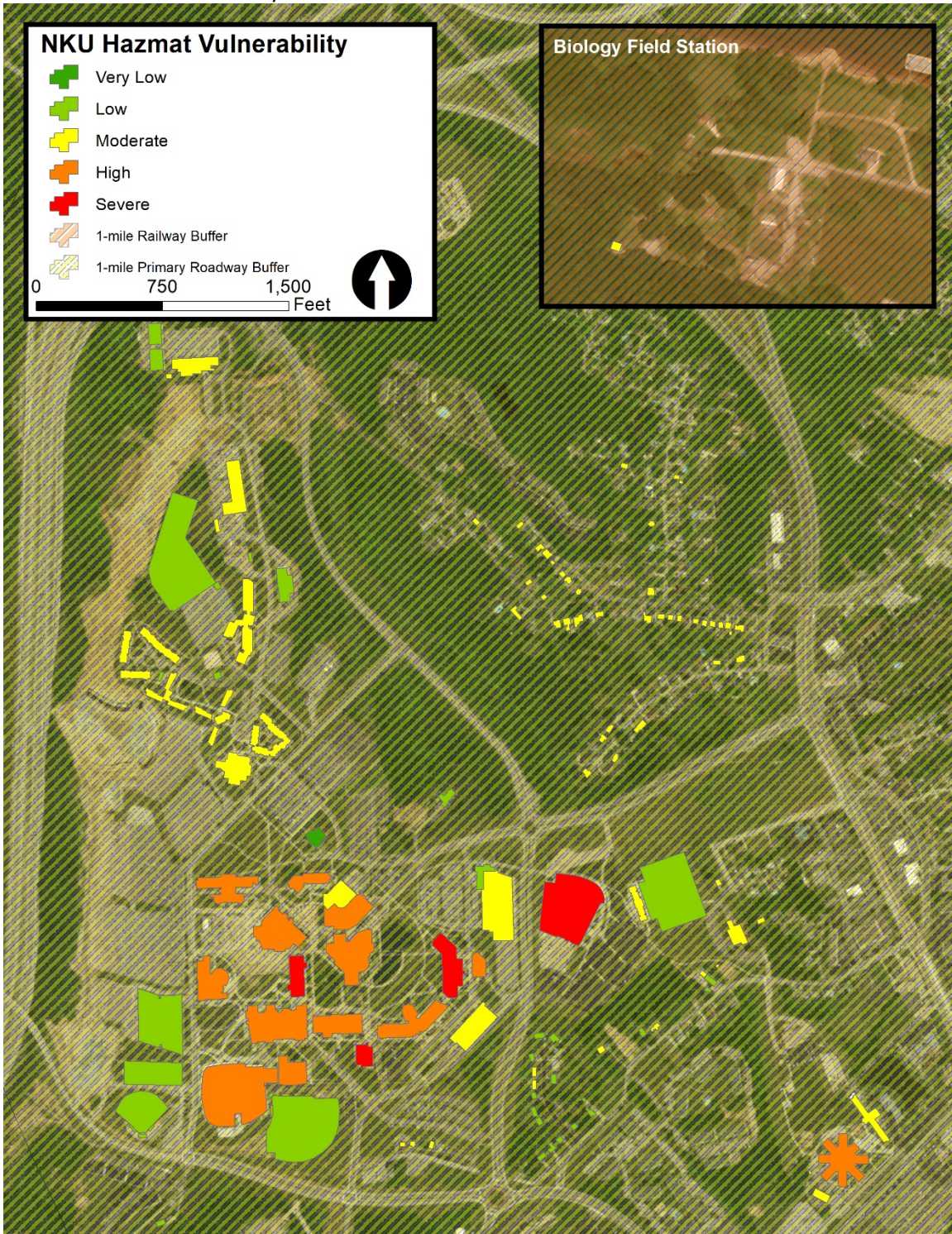
4.9.3 Assessing Vulnerability: HazMat

HazMat Vulnerability Score = Exposure Score + Hazard Score

The HazMat Hazard Score was calculated by creating 1-mile buffer areas around railways, interstates, and major arterials. All the main campus is within the 1-mile buffer of I-275 and US 27. The Biology Field Station is within the 1-mile buffer area of the CSX railway. Because all NKU buildings/structures are within a 1-mile buffer of either a highway or railway, they all have the same HazMat Hazard Score, making the Exposure Score the determining factor in HazMat vulnerability.

The Hazard Score and the Exposure Score were added together and an overall HazMat Vulnerability Score (0-1) was calculated for each building. The HazMat Vulnerability Scores are displayed in Figure 4.7.

Figure 4.7: HazMat Vulnerability



Sources: NKU, US Census Bureau, ESRI

4.10 Karst/Sinkhole

4.10.1 Identify: Karst/Sinkhole

Karst is a terrain, generally underlain by limestone or dolomite, in which the topography is chiefly formed by the dissolving of rock and which may be characterized by sinkholes, sinking streams, closed depressions, subterranean drainage, and caves ([Kentucky Geological Survey](#)).

Karst refers to a type of topography formed in limestone, dolomite, or gypsum by dissolution of these rocks by rain and underground water. It is characterized by closed depressions or sinkholes and underground drainage. During the formation of Karst terrain, water percolating underground enlarges subsurface flow paths by dissolving the rock. As some subsurface flow paths are enlarged over time, water movement in the aquifer changes character from one where ground water flow was initially through small, scattered openings in the rock, to one where most flow is concentrated in a few, well-developed conduits. As the flow paths continue to enlarge, caves may be formed, and the ground water table may drop below the level of surface streams. Surface streams may then begin to lose water to the subsurface. As more of the surface water is diverted underground, surface streams and stream valleys become a less conspicuous feature of the land surface and are replaced by closed basins. Funnels or circular depressions called sinkholes often develop at some places in the low points of these closed basins.

Karst Landscape

A karst landscape has sinkholes, sinking streams, caves, and springs. The term "karst" is derived from a Slavic word that means barren, stony ground. It is also the name of a region in Slovenia near the border with Italy that is well known for its sinkholes and springs. Geologists have adopted karst as the term for all such terrain. The term "karst" describes the whole landscape, not a single sinkhole or spring.

A karst landscape most commonly develops on limestone, but can develop on several other types of rocks, such as dolostone (magnesium carbonate or the mineral dolomite), gypsum, and salt. Precipitation infiltrates into the soil and flows into the subsurface from higher elevations and generally toward a stream at a lower elevation. Weak acids found naturally in rain and soil water slowly dissolve the tiny fractures in the soluble bedrock, enlarging the joints and bedding planes.

Fifty-five percent of Kentucky sits atop carbonate rocks that are prone to developing karst. Karst hazards include sinkhole flooding, sudden cover collapse, and leakage around dams. The estimated damage caused by karst hazards every year in Kentucky is between \$0.5 million and \$1 million.

Karst as Geologic Hazard

A geologic hazard is a naturally occurring geologic condition that may result in property damage or is a threat to the safety of people. Many hazards to man-made structures can be associated with the type of bedrock, the presence of faults, and other earth processes that occur in Kentucky. Earthquakes get the most press coverage and are the most notorious. Annually, landslides, shrink-swell soils, and flooding cause more damage than earthquakes in Kentucky because they happen more often. Karst hazards cause less damage than earthquakes or landslides, perhaps \$500,000 to \$2,000,000 of economic loss annually, but can still have devastating effect on properties, infrastructures and people.

Four geologic hazards are associated with karst.

- Two common karst-related geologic hazards -- cover-collapse sinkholes and sinkhole flooding -- cause the most damage to buildings.
- A third karst hazard is relatively high concentrations of radon, sometimes found in basements and crawl spaces of houses built on karst.
- Finally, the hydrogeology of karst aquifers makes the groundwater vulnerable to pollution, and this vulnerability may also be considered a type of geologic hazard.

Sinkhole Types

1. **Cover-Collapse Sinkholes** occur in the soil or other loose material overlying soluble bedrock. Sinkholes that suddenly appear form in two ways:
 - a. In the first way, the bedrock roof of a cave becomes too thin to support the weight of the bedrock and the soil material above it. The cave roof then collapses, forming a bedrock-collapse sinkhole. Bedrock collapse is rare and the least likely way a sinkhole can form, although it is commonly incorrectly assumed to be the way all sinkholes form.
 - b. The second way sinkholes can form is much more common and much less dramatic. The sinkhole begins to form when a fracture in the limestone bedrock is enlarged by water dissolving the limestone. As the bedrock is dissolved and carried away underground, the soil gently slumps or erodes into the developing sinkhole. Once the underlying conduits become large enough, insoluble soil and rock particles are carried away too.
 - c. Cover-collapse sinkholes can vary in size from 1 or 2 feet deep and wide, to tens of feet deep and wide. The thickness and cohesiveness of the soil cover determine the size of a cover-collapse sinkhole.
2. **Solution sinkholes** result from increased groundwater flow into higher porosity zones within the rock, typically through fractures or joints within the rock. An increase of slightly acidic surface water into the subsurface continues the slow dissolution of the rock matrix, resulting in slow subsidence as surface materials fill the voids.
3. **Raveling sinkholes** form when a thick overburden of sediment over a deep cavern caves into the void and pipes upward toward the surface. As the overlying material or “plug” erodes into the cavern, the void migrates upward until the cover can no longer be supported and then subsidence begins.

Sinkhole Flooding

Sinkhole flooding is a naturally occurring event that usually follows the same storms that cause riverine flooding, so it is often not recognized as Karst-related. Flood events will differ not only because of the amount of precipitation, but also because the drainage capacity of individual sinkholes can change, sometimes very suddenly, as the Karst landscape evolves. Sinkholes can also flood when their outlets are clogged, preventing water from being carried away as fast as it flows in. Trash thrown into a sinkhole can clog its throat, as can soil eroded from fields and construction sites, or a natural rock fall near the sinkhole’s opening. Sometimes the conduit itself is too narrow because it has recently (in the geologic sense) captured a larger drainage basin. The reach of a conduit downstream from constriction could carry a higher flow than it is receiving were it not for this restriction.

Sinkholes flood more easily around development (roofs, parking lots, highways), which increases both the total runoff and the rapidity of runoff from a storm. Another reason that sinkholes flood is back-flooding, the outcome when the discharge capacity of the entire Karst conduit network is exceeded. Some up-gradient sinkholes that drain normally during the short, modest accumulation of storms may become springs that discharge water during prolonged rainfall.

Land Surface Indicators of Sinkhole Collapse

- Circular and linear cracks in soil, asphalt, and concrete paving and floors
- Depressions in soil or pavement that commonly result in ponds of water
- Slumping, sagging, or tilting of trees, roads, rails, fences, pipes, poles, sign boards, and other vertical or horizontal structures
- Downward movement of small-diameter vertical or horizontal structures
- Fractures in foundations and walls, often accompanied by jammed doors and windows
- Small conical holes that appear in the ground over a relatively short period of time
- Sudden muddying of water in a well that has been producing clear water
- Sudden draining of a pond or creek

4.10.2 Profile: Karst/Sinkhole

Karst/Sinkhole Profile Risk Table	
Period of occurrence	Year-round
Campbell County Number of Events	3 confirmed sinkholes; 42+ sinkholes in Campbell County and nearby City of Covington in Kenton County in 2015
Campbell County Probability of Events	Given 2015, 100% likely that a sinkhole will occur somewhere in Campbell within five-year mitigation plan cycle.
Campbell County Past Damages	From 2015, \$3,000.00 to \$15,000.00 per sinkhole to fix
NKU Number of Events	1 unconfirmed sinkhole; 2 unconfirmed threats to become sinkhole
NKU Damages Claimed	\$0
Warning Time	None to weeks or months, depending on monitoring and maintenance
Potential Impact	Economic losses such as decreased land values and Agro-business losses. May cause minimal to severe property damage and destruction. May cause geological movement, causing infrastructure damages.
Potential of Injury or Death	Injury and slight chance of death
Potential Duration of Facility Shutdown	Days to months
Extent	Typical sinkholes in the area range from 1 foot to 10 foot in width, and cause destruction to small sections of roadways or part of structures.

Historical Impacts

Kentucky contains one of the world's largest Karst-ridden topographies. Springs and wells in Karst areas supply water to tens of thousands of homes. Much of Kentucky's prime farmland is underlain by Karst, as is a substantial amount of the Daniel Boone National Forest with its important recreational and timber resources.

Caves are also important Karst features, providing recreation and unique ecosystems. Mammoth Cave is the longest surveyed cave in the world, with more than 350 miles of passages. Two other caves in the state stretch more than 30 miles, and nine Kentucky caves are among the 50 longest caves in the U.S.

The most noticeable hazards in Kentucky are sinkhole flooding and cover collapse. Soil collapses are common in karst terrain, where water drains to caves through fissures in the bedrock. Over time, domes of soil form over these fissures and new development increases the drainage into these fissures, forming a sinkhole. Unfortunately, collapses are seldom reported to any central agency. Damage to infrastructure from sinkhole flooding and cover collapse is so common in Kentucky that it is typically dealt with by local authorities as a routine matter. To exemplify this latter statement is public record of a series of "events" that affected Campbell County (nearer to Cincinnati, Ohio than to the Northern Kentucky University (NKU) campus) that was reported in April of 2015. Citing this public record satisfies impacts, location, extent, and previous occurrences for the risk assessment as it pertains the karst terrain/sinkhole hazard for NKU within Campbell County: Cited as one of nine "infamous" sinkhole incidents in Kentucky that "will leave you terrified of Earth" according to the "Only In Your State" website, in April of 2015, three entire counties in northern Kentucky (i.e., Campbell, Boone, and Kenton Counties) had a "virtual plague of sinkholes"⁸. Two weeks later, the Cincinnati Enquirer⁹ provided details relevant to Campbell County's "virtual plague of sinkholes": The City of Covington (that is about six miles from Highland Heights and the Northern Kentucky University campus) experienced "...at least 42 sinkholes – so many that the city has run out of steel sheets to cover them." The city feared that "...we're going to have a bus or a big truck fall into one of these roads." This signifies the extent of a sinkhole event: Some of the over 42 sinkholes during April 2015 in very nearby Kenton County a mere six miles from Northern Kentucky University were wide and deep enough that "a bus or a big truck" could fall into the road. Regarding impact, this particular "plague of sinkholes" was intended to be fixed through property owners. The impacts were estimated between a range of \$3,000 to \$15,000 per property owner to fix the sinkhole and its underlying infrastructure.

The NKU main campus and most of Campbell County are in an area of moderate karst risk. The Biology Field Station is located in an area of low karst risk. There are three Kentucky Geological Survey (KGS) confirmed sinkholes in Campbell County and one on the NKU campus. During the Risk Assessment Workshop, stakeholders identified two suspected sinkholes between Faren Drive and Sunset Drive, behind a few of the NKU-owned rental houses. NKU has not recorded any damage to university property caused by sinkholes.

⁸ Shockley, Jenn. (July 6, 2015). "Here Are 9 Sinkholes in Kentucky That Will Leave You Terrified of Earth." *Only In Your State*. Website found: <https://www.onlyinyourstate.com/kentucky/9-sinkholes-in-ky/>.

⁹ DeMio, Terry. (April 30, 2015). "Campbell Mayors Hope to End Sinkhole Saga." *The Cincinnati Enquirer*. Website found: <https://www.cincinnati.com/story/news/local/northern-ky/2015/04/30/campbell-county-mayors-seek-sinkhole-solution/26655641/>.

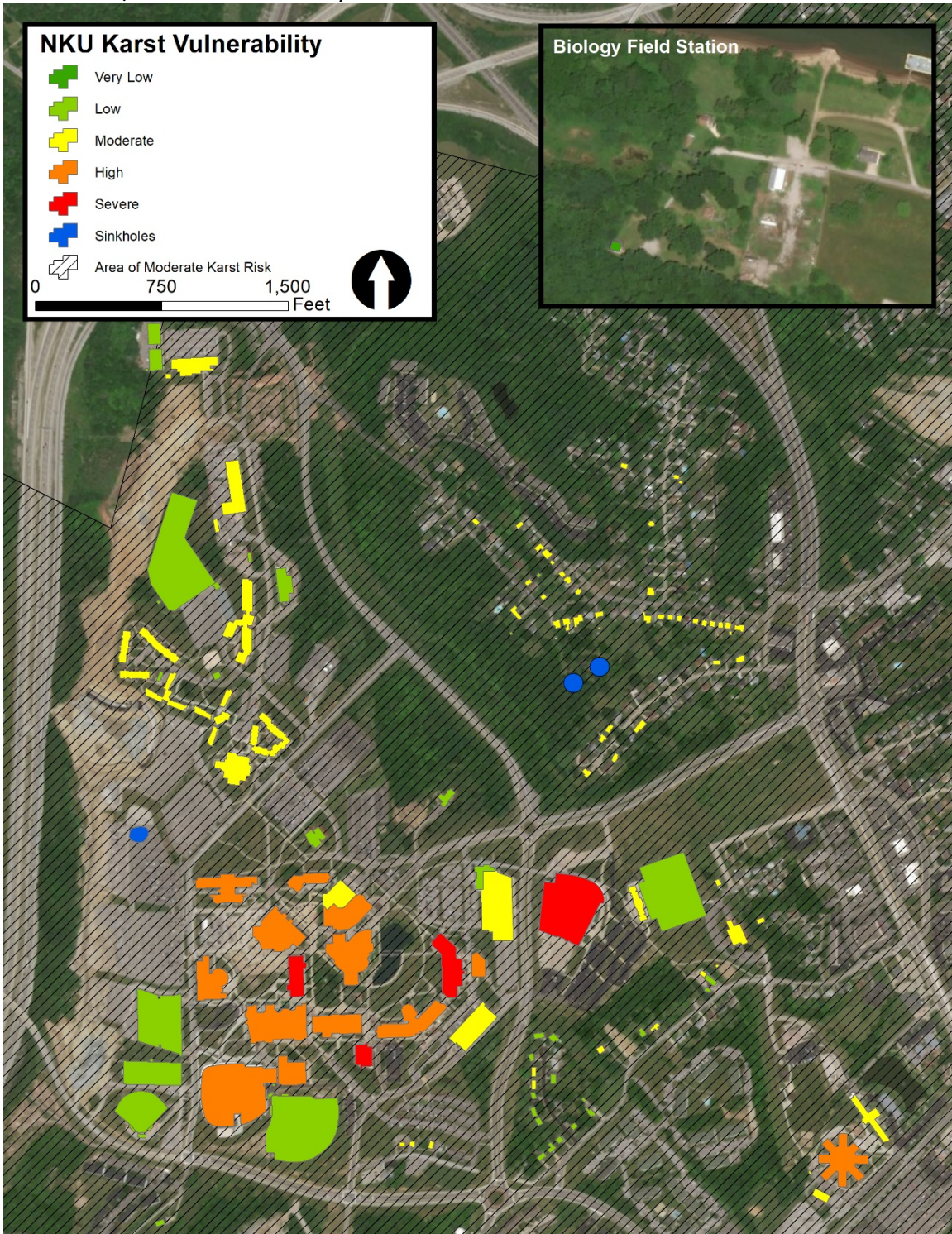
4.10.3 Assessing Vulnerability: Karst/Sinkhole

$$\text{Karst Vulnerability Score} = \text{Exposure Score} + \text{Hazard Score}$$

The Karst/Sinkhole Hazard Score was determined by the building's or structure's location, either in an area of moderate karst risk or not. All main campus buildings and structures are in the area of moderate karst risk and received a Karst Hazard Score of 1, while the Biology Field Station is in an area of low risk and received a score of 0.

The Hazard Score and the Exposure Score were added together and an overall Karst/Sinkhole Vulnerability Score (0-1) was calculated for each building. The Karst/Sinkhole Vulnerability Scores are displayed in Figure 4.8.

Figure 4.8: Karst/Sinkhole Vulnerability



Sources: NKU, KGS, ESRI

4.11 Landslide

4.11.1 Identify: Landslide

Landslides occur when masses of rock, earth, or debris move down a slope. Landslides may be very small or very large and can move at slow to very high speeds. Many landslides have been occurring over the same terrain since prehistoric times. They are activated by storms and fires and by human modification of the land. New landslides occur as a result of rainstorms, earthquakes, volcanic eruptions, and various human activities.

Mudflows or debris flows are rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, such as during heavy rainfall or rapid snowmelt, changing the earth into a flowing river of mud or "slurry." A slurry can flow rapidly down slopes or through channels and can strike with little or no warning at avalanche speeds. A slurry can travel several miles from its source, growing as it picks up trees, cars, and other materials along the way.

Most of the landslide damage does not occur in rugged mountain country. Most losses from landslides and soil creep occur in cities developed on gently sloping hillsides. Although a landslide may occur almost anywhere, from man-made slopes to natural, pristine ground, most slides often occur in areas that have experienced sliding in the past. All landslides are triggered by similar causes. These can be weaknesses in the rock and soil, earthquake activity, the occurrence of heavy rainfall or snowmelt, or construction activity changing some critical aspect of the geological environment. Landslides that occur following periods of heavy rain or rapid snow melt worsen the accompanying effects of flooding.

Landslides pose a hazard to nearly every state in the country by causing \$2 billion in damages and 25 to 50 deaths a year. There is a concentration of losses in the Appalachian, Rocky Mountain and Pacific Coast regions. It has been estimated that about 40 percent of the U.S. population has been exposed to the direct and indirect effects of landslides.

Public and private economic losses from landslides include not only the direct costs of replacing and repairing damaged facilities, but also the indirect cost associated with lost productivity, disruption of utility and transportation systems, reduced property values, and costs for any litigation. Some indirect costs are difficult to evaluate; thus, estimates are usually conservative or simply ignored. If indirect costs were realistically determined, they likely would exceed direct costs.

Much of the economic loss is borne by federal, state, and local agencies responsible for disaster assistance, flood insurance, and highway maintenance and repair. Private costs involve mainly damage to land and infrastructures. A severe landslide can result in financial ruin for the property owners because landslide insurance (except for debris flow coverage) or other means of spreading the costs of damage are unavailable.

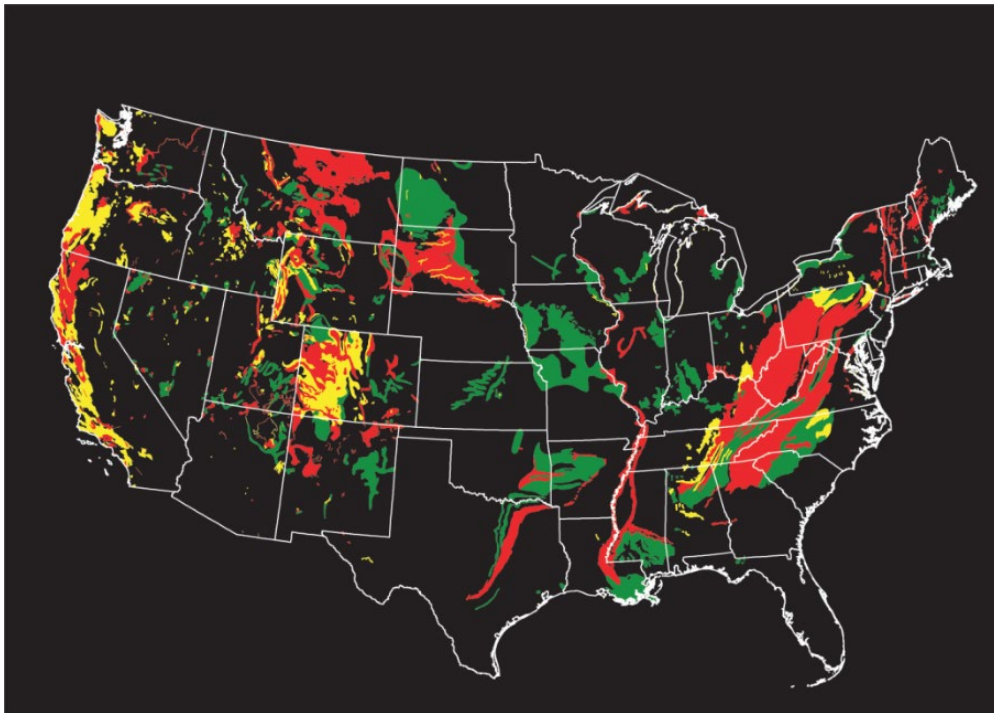
Types

- *Slides* of soil or rock involve downward displacement along one of more failure surfaces. The material from the slide may be broken into several pieces or remain a single, intact mass. Sliding can be rotational, where movement involves turning about a specific point. Sliding can be translational, where movement is down slope on a path roughly parallel to the failure surface.

The most common example of a rotational slide is a slump, which has a strong, backward rotational component and a curved, upwardly-concave failure surface.

- *Flows* are characterized by shear strains distributed throughout the mass of material. They are distinguished from slides by high water content and distribution of velocities resembling that of viscous fluids. Debris flows are common occurrences in much of North America. These flows are a form of rapid movement in which loose soils, rocks, and organic matter, combined with air and water, form slurry that flows downslope. The term “debris avalanche” describes a variety of very rapid to extremely rapid debris flows associated with volcanic hazards. Mudflows are flows of fine-grained materials, such as sand, silt, or clay, with high water content. A subcategory of debris flows, mudflows contains less than 50 percent gravel.
- *Lateral spreads* are characterized by large elements of distributed, lateral displacement of materials. They occur in rock, but the process is not well-documented, and the movement rates are very slow. Lateral spreads can occur in fine-grained, sensitive soils such as quick clays, particularly if remolded or disturbed by construction and grading. Loose, granular soils commonly produce lateral spread through liquefaction. Liquefaction can occur spontaneously, presumably because of changes in pore-water pressures, or in response to vibrations such as those produced by strong earthquakes.
- *Falls and Topples*. Falls occur when masses of rock or other material detach from a steep slope or cliff and descend by free fall, rolling, or bouncing. These movements are rapid to extremely rapid and are commonly triggered by earthquakes. Topples consist of forward rotation of rocks or other materials about a pivot point on a hill slope. Toppling may culminate in abrupt falling, sliding, or bouncing, but the movement is tilting without resulting in collapse. Data on rates of movement and control measures for topples is sparse.

USGS United States Landslide Susceptibility Map



Source: U.S. Geological Survey. 2005. <http://pubs.usgs.gov/fs/2005/3156/2005-3156.pdf>

Facts

- Steep slopes are more susceptible to landslides and should be avoided when choosing a building site.
- Slope stability decreases as water moves into the soil. Springs, seeps, roof runoff, gutter down spouts, septic systems, and site grading that cause ponding or runoff are sources of water that often contribute to landslides.
- Changing the natural slope by creating a level area where none previously existed adds weight and increases the chance of a landslide.
- Poor site selection for roads and driveways.
- Improper placement of fill material.
- Removal of trees and other vegetation. Plants, especially trees, help remove water and stabilize the soil with their extensive root systems.

4.11.2 Profile: Landslide

Landslide Profile Risk Table	
Period of occurrence	Anytime, but chance increases after heavy rain, snow/ice melt, or construction activities
Campbell County Number of Events	177 (Kentucky Geological Survey-confirmed) 46 years (1973-2019)
Campbell County Probability of Events	3.85
Campbell County Past Damages	\$950,128.00 (not including most county roads) Annualized \$24,632.00 (Source: 2017 Northern Kentucky Area Development District hazard mitigation plan)
NKU Number of Events	0
NKU Damages Claimed	\$0
Warning Time	None, but chance increases after heavy rain, snow/ice melt, or construction activities.
Potential Impact	Economic losses such as decreased land values, infrastructure damage, and agro-business losses. May cause minimal to severe property damage and destruction.
Potential of Injury or Death	Injury and chance of death
Potential Duration of Facility Shutdown	Days to months
Extent	No current measurement to compare severity of events. Some small slides cause a lot of property damage, while some large slides cause minimal damage. As contributed during the planning process by Sanitation District 1, the largest slide in Campbell County was on an unspecified date in City of Alexandria on Sheridan Drive that cost about \$275,000 (Source: Sanitation District 1).

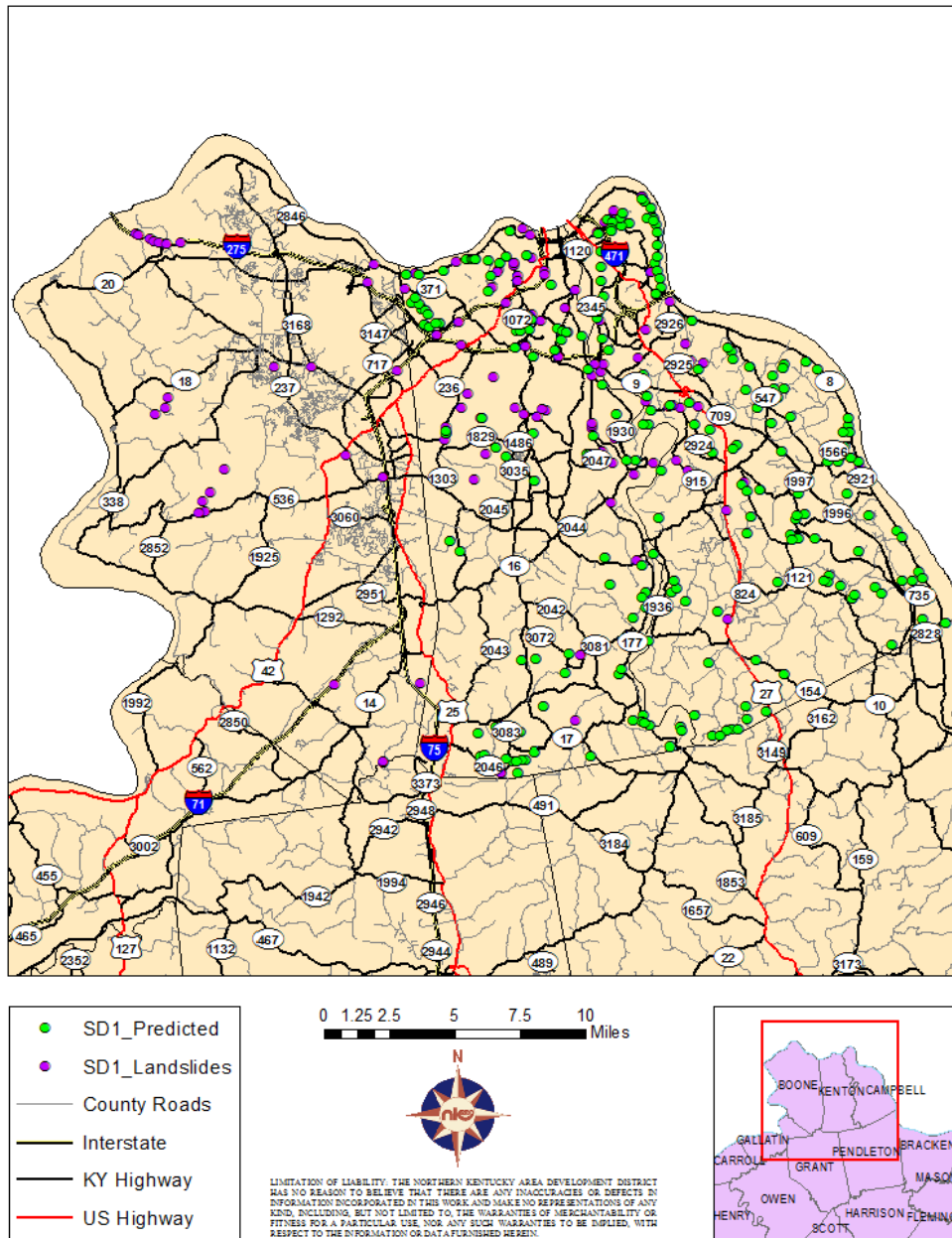
Historical Impacts

Kentucky’s landslides have occurred in all regions of the state, mostly in the Ohio River Valley, the Knobs, the Outer Bluegrass, and the Eastern Kentucky Coal Field. Since the early 1970’s the Kentucky Transportation Cabinet and the Kentucky Transportation Center have received reports of approximately 3,000 landslides. Landslide problems in Kentucky are usually related to certain rock formations on yield soils which are unstable on moderate to steep slopes. Often, slopes are cut into or over-steeped to create

additional level land for development. Costs for repair of landslides exceed \$2 million annually. Thousands of slides are unrelated to transportation, however, and many are unreported. These also pose significant hazards to people and infrastructure. Kentucky has experienced at least 10 Presidentially declared disasters that included landslides. Only the most recent, DR-4361 in 2018 included Campbell County.

Northern Kentucky experiences a large number of landslides, with 177 confirmed by Kentucky Geological Survey (KGS) in Campbell County (and 176 confirmed by KGS in very nearby Kenton County). Additionally, Sanitation District 1 (SD1), northern Kentucky's sanitary and storm sewer provider, monitors past and predicted landslide events (Figure 4.9). There have been no confirmed landslides on the NKU campus.

Figure 4.9: SDI Monitored Landslides



Source: Northern Kentucky 2017 Regional Natural Hazard Mitigation Plan

The most landslide prone road in Campbell County is KY 8. There are multiple sections in Campbell County that frequently experience slides. Some of these slides are due to repeated flooding, but often it is due to the geography and soil types on which the road is located. The Campbell County Road Department and Planning Office estimate the County will need to spend about \$100,000 each year for the next 10 years on slide related repairs on county roads (Source: Northern Kentucky 2017 Regional Natural Hazard Mitigation Plan).

4.11.3 Assessing Vulnerability: Landslide

Landslide Vulnerability Score – Exposure Score + Hazard Score

The Landslide Hazard Score was derived from the Landslide Susceptibility hazard map created for the 2018 Commonwealth of Kentucky Hazard Mitigation Plan. This map was created by KGS and incorporates geology and slope. The geology and slope maps (raster images) were reclassified based on a matrix of weighted scores that were assigned to particular geologic formations and ranges of slope values. The weighted score for slope doubled with each increasing slope range. The weighted score for the geology ranged from 10 to 40 depending on the rock type. Using the ArcGIS Weighted Sum tool, the newly reclassified values of both raster map layers were multiplied by an assigned weight and then values for both layers were added together (Eq. 2-1). In order to have slope be a greater influence on the susceptibility model, a 70 percent weight was assigned for slope and a 30 percent weight was assigned for geology.

$$\text{Landslide Hazard Score (susceptibility value)} = \text{geology reclass value} \times 0.30 + (\text{slope reclass value} \times 0.70)$$

The Landslide Hazard Score and Exposure Score were added together and an overall Landslide Vulnerability Score (0-1) was calculated for each building. The Landslide Vulnerability Scores are displayed in Figure 4.10.

Figure 4.10: Landslide Vulnerability



Sources: NKU, KGS, ESRI

4.12 Severe Storm

4.12.1 Identify: Severe Storm

A thunderstorm is formed from a combination of moisture, rapidly rising warm air, and a force capable of lifting air such as a warm and cold front, a sea breeze or a mountain. All thunderstorms contain lightning and may occur singly, in clusters or in lines. Thus, it is possible for several thunderstorms to affect one location in the course of a few hours. Some of the most severe weather occurs when a single thunderstorm affects one location for an extended period time. The NWS considers a thunderstorm as severe if it develops $\frac{3}{4}$ inch hail or 50-knot (58 mph) winds.

Lightning is an electrical discharge that results from the buildup of positive and negative charges within a thunderstorm. When the buildup becomes strong enough, lightning appears as a "bolt". This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning reaches a temperature approaching 50,000 degrees Fahrenheit in a split second. The rapid heating and cooling of air near the lightning causes thunder.

Additional types of severe storms include *straight line winds*. There are several terms that mean the same as straight-line winds and they are convective wind gusts, outflow and downbursts. Straight-line wind is wind that comes out of a thunderstorm. If these winds meet or exceed 58 miles per hours, then the storm is classified as severe by the National Weather Service. These winds are produced by the downward momentum in the downdraft region of a thunderstorm.

Radar observers use the intensity of the radar echo to distinguish between rain showers and thunderstorms. Lightning detection networks routinely track cloud-to-ground flashes, and therefore thunderstorms.

Thunderstorms occur when clouds develop sufficient upward motion and are cold enough to provide the ingredients (ice and super cooled water) to generate and separate electrical charges within the cloud. The cumulonimbus cloud is the perfect lightning and thunder factory, earning its nickname, "thunderhead". All thunderstorms are dangerous and capable of threatening life and property in localized areas. While thunderstorms and lightning can be found throughout the U. S., they are most likely to occur in the central and southern states. Thunderstorms can also produce large, damaging hail, which causes nearly \$1 billion in damage to property and crops annually. Thunderstorms are also capable of producing tornadoes, wind, and heavy rain that can lead to flash flooding. hail, floods, and tornado hazards are addressed as individual hazards in this section of the plan.

Types of Thunderstorms

- *Single Cell* (pulse storms). Typically, last 20-30 minutes. Pulse storms can produce severe weather elements such as downbursts, hail, some heavy rainfall, and occasionally weak tornadoes. This storm is light to moderately dangerous to the public and moderately to highly dangerous to aviation.
- *Multicell Cluster*. These storms consist of a cluster of storms in varying stages of development. Multicell storms can produce moderate size hail, flash floods, and weak tornadoes. This storm is moderately dangerous to the public and moderately to highly dangerous to aviation.
- *Multicell Line*. Multicell line storms consist of a line of storms with a continuous, well-developed gust front at the leading edge of the line. Also known as squall lines, these storms can produce

small to moderate size hail, occasional flash floods, and weak tornadoes. This storm is moderately dangerous to the public and moderately to highly dangerous to aviation.

- *Supercell*. Even though it is the rarest of storm types, the supercell is the most dangerous because of the extreme weather generated. Defined as a thunderstorm with a rotating updraft, these storms can produce strong downbursts, large hail, occasional flash floods, and weak to violent tornadoes. This storm is extremely dangerous to the public and aviation.
- *Straight-line winds*, which in extreme cases have the potential to exceed 100 miles per hour, are responsible for most thunderstorm wind damage. One type of straight-line wind, the downburst, can cause damage equivalent to a strong tornado and can be extremely dangerous to aviation.

Thunderstorm Facts

The NWS estimates more than 100,000 thunderstorms in the U. S. each year. In the last 25 years, severe storms have been involved in over 300 federal disasters.

4.12.2 Profile: Severe Storm

Severe Storm Profile Risk Table	
Period of occurrence	Spring, Summer, Fall
Campbell County Number of Events	109 events (Recorded by NCEI ¹⁰) 64 years (1955-2019)
Campbell County Probability of Events	1.7
Campbell County Past Damages	Recorded Losses: \$10,750,000.00 Annualized Losses: \$167,969.00
NKU Number of Events	3 (2014-2019)
NKU Damages Claimed	\$15,884.00
Warning Time	Minutes to hours
Potential Impact	Impacts to human life, health and public safety are possible. Utility damage and failure, infrastructure damage, structural damage, fire, damaged or destroyed critical facilities, and hazardous material releases are additional impacts.
Potential of Injury or Death	Injury and chance of deaths
Potential Duration of Facility Shutdown	Days to Weeks
Extent	4/3/2015 – Lightning Strike to BB&T Arena, \$10,569 in damages

Historical Impacts

Since the NCEI began tracking severe storm events in 1950, there have been 99 recorded events in Campbell County. Because severe storms are not typically contained in a specific location, it is assumed the Campbell County events could have similar impact on the NKU campus.

In 2014 and 2015, NKU experienced 3 severe storm events with recorded damages:

- 2014 – Lightning strike to Founders Hall (date not recorded) causing \$560 in damages
- 3/24/2015 – Roof damage to 13 Clearview Drive causing \$4,754.95 in damages
- 4/3/2015 – Lightning strike to BB&T Arena causing \$10,569 in damages

¹⁰ "Severe Storm" "events" were defined using the National Centers for Environmental Information (NCEI) Storm Events Database and its "High Wind," "Strong Wind," "Thunderstorm Wind," and "Lightning" categories for Campbell County, Kentucky.

Campbell County's more significant severe storm events include:

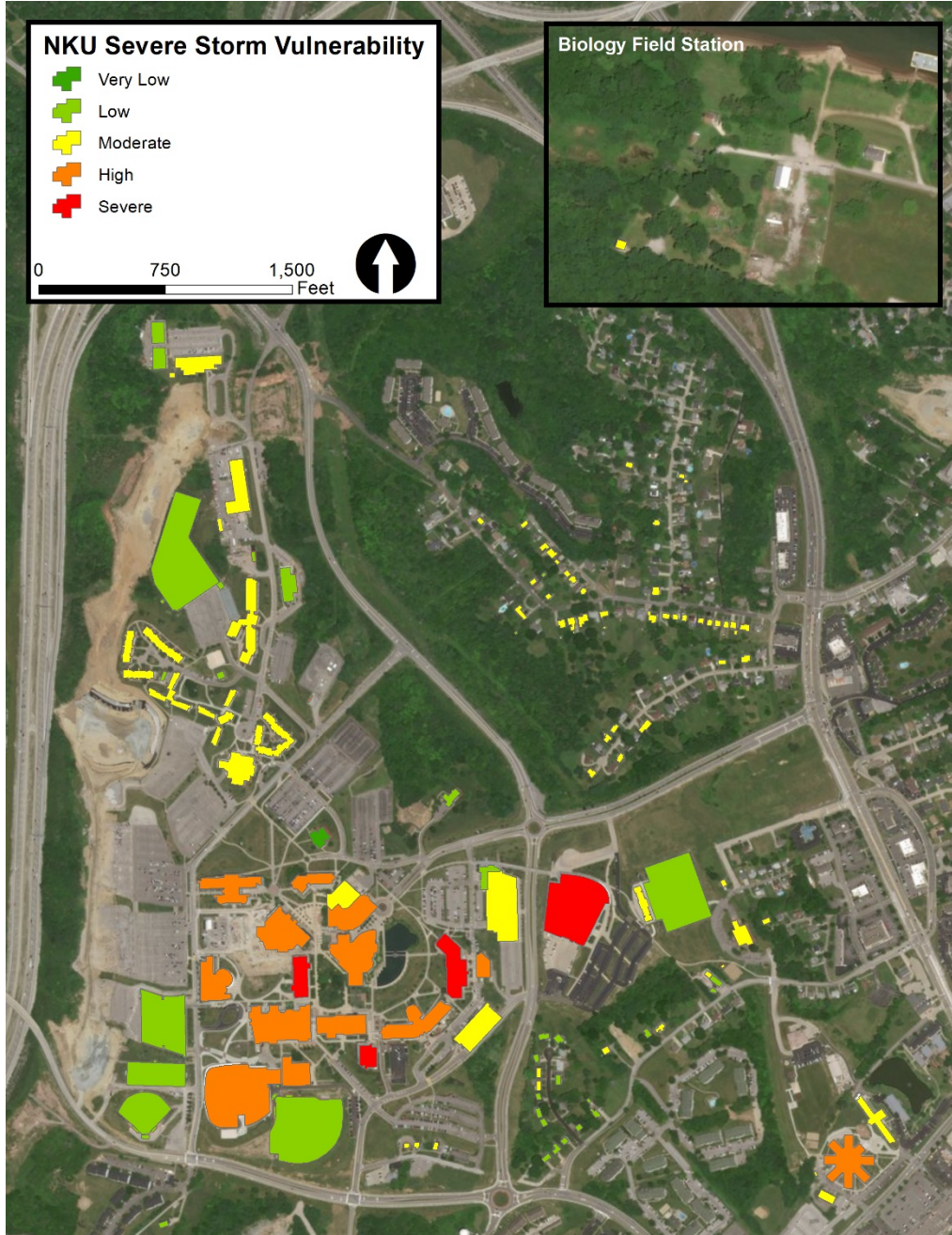
- High Wind (Straight Line Wind), 9/14/2008: The remnants of Hurricane Ike raced northeast through the mid-west and merged with a frontal boundary across the lower Ohio Valley Sunday morning. Abundant sunshine promoted deep mixing of the atmosphere, and warm, dry air aloft translated down to the surface. Gusty winds in excess of 70 mph persisted for a period of several hours, causing significant damage. Over 700,000 power outages occurred for Duke energy customers in the Cincinnati area, some taking over a week to be restored. Strong winds of 40 to 50 miles per hour were sustained for several hours. Gusts over 60 mph were common. Widespread damage occurred across the region, from trees being blown down on power lines to significant structural damage.
- High Wind (Straight Line Wind), 2/11/2009: A cold front crossed the Ohio Valley on the evening of the 11th. A very tight pressure gradient behind this front in the cold air created damaging winds during the late evening of the 11th. Several trees were downed in Fort Thomas.
- High Wind (Straight Line Wind), 12/9/2009: A strong center of low pressure tracked out of the plain's states to the Great Lakes region. Ahead of this low in the Ohio Valley, southwest winds of 30 to 40 mph with gusts to 50 and 60 mph were common throughout the day. These strong winds peaked in the early afternoon with the passage of a cold front and diminished later in the evening. A few trees and large limbs were blown down across the county.
- Thunderstorm, 1/30/2013: An organized line of storms developed ahead of a cold front during the overnight hours. Some of these storms along the line produced severe weather. The main threat from these storms was damaging winds. Trees were reported down along Stonehouse Road due to damaging thunderstorm winds.
- Thunderstorm, 6/26/2013: Thunderstorms developed in an unstable air mass ahead of an approaching disturbance. Some of these storms became severe. The main threat from these storms was damaging winds. Trees and branches were downed near Mook road and Canterbury Apartments due to thunderstorm winds.
- Thunderstorm, 8/31/2013: Disturbances moving along a stalled frontal boundary interacted with an unstable air mass to produce numerous showers and thunderstorms across the area. Some of these storms organized and became severe. The main threat from these storms was damaging winds. A tree fell on a house near Alexandria due to thunderstorm winds.
- Thunderstorm, 11/17/2013: A strong low-pressure system combined with an unseasonably warm airmass to produce organized storms across the region. These storms were tornadic across Illinois and western Indiana and began to transition to non-tornadic storms as they entered northern Kentucky. The main threat from these storms when they moved across northern Kentucky was damaging thunderstorm winds. Roof and fascia damage occurred to a shopping plaza due to thunderstorm winds.
- Thunderstorm, 12/21/2013: Low pressure drew an unseasonably warm and moist air mass across the region. Convection organized ahead of the low and brought heavy rainfall and damaging winds to the area from the evening of the 21st into the morning of the 22nd. Numerous large trees were down in Alexandria and surrounding areas due to thunderstorm winds.
- Thunderstorm, 5/10/2014: A disturbance moving east across the region produced thunderstorms during the afternoon. Isolated severe weather was possible with damaging winds being the primary threat. A few large limbs were blown down due to thunderstorm winds.

4.12.3 Assessing Vulnerability: Severe Storm

$$\text{Severe Storm Vulnerability Score} = \text{Exposure Score} + \text{Hazard Score}$$

Variations in severe storm occurrences are difficult to identify at the county level, and even more difficult at the campus level. Because NKU only has three recorded occurrences and the campus is relatively small, the Severe Storm Hazard Score is assumed to be the same for all university buildings. Therefore, the Exposure Score represents the Severe Storm Vulnerability Score.

Figure 4.11: Severe Storm Vulnerability



Sources: NKU, NCEI, ESRI

4.13 Severe Winter Storm

4.13.1 Identify: Severe Winter Storm

A winter storm can range from moderate snow over a few hours to blizzard conditions with blinding wind-driven snow, sleet and/or ice and extreme cold that lasts several days. A severe winter storm is defined as an event that drops four or more inches of snow during a 12-hour period or six or more inches during a 24-hour span. Severe winter storms are fueled by strong temperature gradients and an active upper-level cold jet stream. Some winter storms may be large enough to affect several states while others may affect only a single community. Most winter storms are accompanied by low temperatures and blowing snow, which can severely reduce visibility.

Snow and ice are threats to most of the U. S. during the northern hemisphere's winter, which begins December and ends in Spring. During the early and late months of the winter season, snow becomes warmer, giving it a greater tendency to melt on contact or stick to the surface. The beginning and end of the winter season also brings a greater chance of freezing rain and sleet.

Types

Blizzards are by far the most dangerous of all winter storms. They are characterized by temperatures below twenty degrees Fahrenheit and winds of at least 35 miles per hour. In addition to the temperatures and winds, a blizzard must have a sufficient amount of falling or blowing snow. The snow must reduce visibility to one-quarter mile or less for at least three hours. With high winds and heavy snow, these storms can punish residents throughout much of the U.S. during the winter months each year. In mid-March of 1993, a major blizzard struck the Eastern U.S., including parts of Kentucky.

Ice storms occur when freezing rain falls from clouds and freezes immediately on impact. Ice storms occur when cold air at the surface is overridden by warm, moist air at higher altitudes. As the warm air advances and is lifted over the cold air, precipitation begins falling as rain at high altitudes then becomes super cooled as it passes through the cold air mass below, and, in turn, freezes upon contact with chilled surfaces at temperatures of 32° F or below. In extreme cases, ice may accumulate several inches thick, though just a thin coating is often enough to do severe damage.

Winter Storm Facts

- Winter storms have been known to occur in the time period between the end of October and the end of March.
- Every state in the continental U.S. and Alaska has been impacted by severe winter storms.
- The super-storm of March 1993 caused over \$2 billion in property damage in twenty states and Washington D.C. At least 79 deaths and 600 injuries were attributed to the storm.

Possible Effects

Freezing rain can result in extensive damage to utility lines and buildings while making any type of travel extremely dangerous. The results are sometimes devastating: entire states can be almost entirely without electricity and communication for several weeks. Winter storms can paralyze a community by shutting down normal day-to-day operations. Heavy snow can also lead to the collapse of weak roofs or unstable structures. Storm effects can cause hazardous conditions and hidden problems, including the following:

- *Power outages* result when snow and ice accumulate on trees causing branches and trunks to break and fall onto power lines. Blackouts vary in size from one street to an entire city. Loss of electric power means loss of heat for some residents, which poses a significant threat to human life, particularly the elderly.
- *Flooding* may occur after precipitation has accumulated and then temperatures rise once again, which melts snow and ice. In turn, as more snow and ice accumulate the threat of flooding increases.
- *Snow and ice accumulation on roadways* can cause severe transportation problems in the form of extremely hazardous roadway conditions.
- *Extreme cold* temperatures may lead to frozen water mains and pipes, damaged car engines, and prolonged exposure to cold resulting in frostbite.

Everyone is potentially at-risk during winter storms. In terms of death due to severe winter storms, 70% of the deaths are related to automobile accidents. 25% of those deaths occur when people are caught out in the storm and die from exposure. Of all the deaths related to exposure to cold, 20% occur at home.

4.13.2 Profile: Severe Winter Storm

Severe Winter Storm Profile Risk Table	
Period of occurrence	October through April
Campbell County Number of Events	63 events (Recorded by NCEI) 23 years (1996-2019)
Campbell County Probability of Events	2.74
Campbell County Past Damages	Recorded Losses: \$300,000.00 Annualized Losses: \$13,043.47
NKU Number of Events	0 recorded
NKU Damages Claimed	\$0 recorded
Warning Time	Days for snow, Minutes to hours for ice
Potential Impact	Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage, and damaged or destroyed critical facilities Can cause severe transportation problems and make travel extremely dangerous. Power outages, which results in loss of electrical power and potentially loss of heat, and human life. Extreme cold temperatures may lead to frozen water mains and pipes, damaged car engines, and prolonged exposure to cold resulting in frostbite.
Potential of Injury or Death	Injury and slight chance of deaths
Potential Duration of Facility Shutdown	Days
Extent	Blizzard of 1996. Over 14 inches of snow and \$300,000 in recorded damages in Campbell County

Historical Impacts

Since the NCEI began tracking winter storm events in 1996, there have been 63 recorded events in Campbell County. Using the NCEI Storm Events database, “severe winter storm” is defined as a combination of “Winter Storm,” “Ice Storm,” “Winter Weather,” and “Heavy Snow” categories. Because severe winter storms are not typically contained in a specific location, it is assumed the Campbell County events could have similar impact on the NKU campus.

Campbell County’s more significant severe winter storm events include:

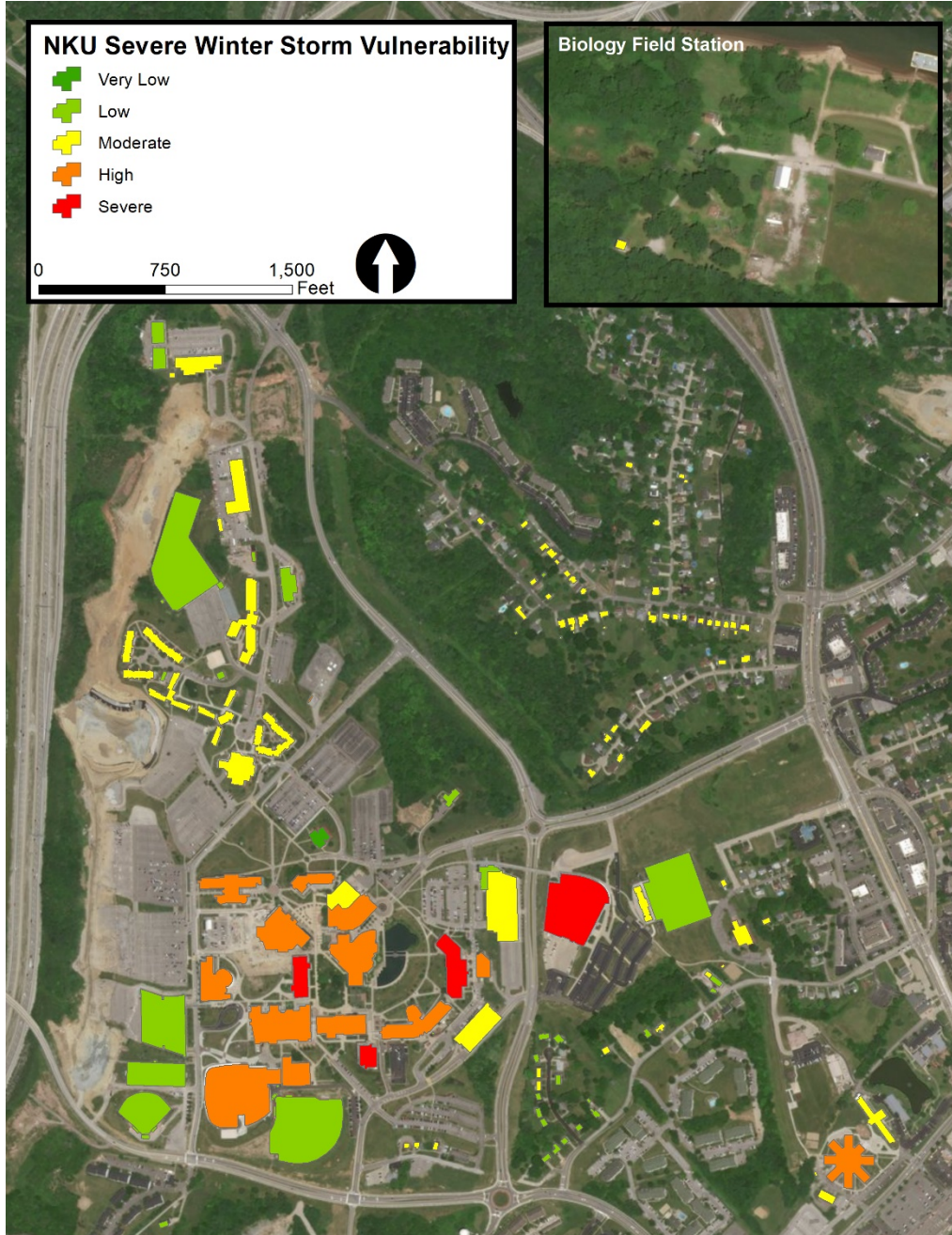
- Ice Storm, 1/27/09: A frontal boundary was stalled over the Tennessee Valley for the early part of the week. Upper level disturbances crossed through the Ohio Valley during this time and accumulating snowfall began on Tuesday. Warmer air aloft on Tuesday afternoon brought a significant amount of freezing rain to Kentucky. Almost eight inches of snow accumulated over northern portions of the county. Significant sleet and freezing rain caused icy accumulation of almost an inch, which cut down on the total snow amounts.
- Heavy Snow, 1/20/11: A low pressure system moved across the Tennessee Valley during the day of Thursday, January 20th. Widespread snow developed across the region in the morning and continued through the afternoon, tapering off in the evening. Snow became heavy at times during the afternoon. The county garage in Alexandria measured 4.5 inches of snowfall.
- Winter Storm, 2/4/14: A fast moving winter storm moved across the Ohio Valley on Tuesday evening, February 4th. Locations across northern Kentucky and southern Ohio started with heavy snow and transitioned to sleet and freezing rain. Significant ice accumulations caused tree damage and power outages to 5-10,000 people. Further north, snow mixed briefly with sleet, before changing to freezing rain as precipitation tapered off. The resulting 5 to 10 inches of snow and sleet accumulation in west-central and central Ohio. This storm brought widespread travel impacts with many schools and businesses being closed on Wednesday, February 5th. Snow, sleet, and freezing rain caused a large disruption to the region. Two to three inches of snow were found across the county before the mixed precipitation cut snowfall totals significantly.
- Winter Storm, 2/14/14: A strong upper-level disturbance moved through the Ohio Valley Friday evening, February 14th, ending on Saturday morning, February 15th. Surface low pressure crossed east across the state of Kentucky at the same time, allowing for an extended period of snow to develop. The Fort Thomas Fire Department measured 4 inches of snow.
- Winter Storm, 3/2/14: A low pressure system moving through the Tennessee Valley combined with a cold front dropping down across the Ohio Valley to produce widespread freezing rain, sleet and snow across the area. The precipitation remained mainly snow along and north of Interstate 70. However, to the south, the precipitation began as rain and freezing rain before changing to sleet and then snow through the afternoon and evening hours of March 2nd. Snow then continued along and south of the Ohio River through much of the night and on into the morning hours of March 3rd. Snow and ice caused numerous wrecks were across the region, and Interstate 275 was closed for several hours due to the adverse conditions.
- Winter Storm, 11/16/14: A surge of cold air worked into the Ohio Valley with an upper level disturbance pivoting through the region on Sunday night, November 16th. This cold surge changed any rain that was in the area to snow overnight for areas west of the I-75 corridor. East of this line, the changeover to snow did not occur until Monday and there were significantly lower snowfall amounts recorded here. Based on nearby surrounding observations, it is estimated that 4 to 5 inches of snow had fallen over much of Campbell County.

4.13.3 Assessing Vulnerability: Severe Winter Storm

$$\text{Severe Winter Storm Vulnerability Score} = \text{Exposure Score} + \text{Hazard Score}$$

Variations in severe storm occurrences are difficult to identify at the county level, and even more difficult at the campus level. Because NKU does not have any recorded occurrences and the campus is relatively small, the Severe Winter Storm Hazard Score is assumed to be the same for all university buildings. Therefore, the Exposure Score represents the Severe Winter Storm Vulnerability Score.

Figure 4.12: Severe Winter Storm Vulnerability



Sources: NKU, NCEI, ESRI

4.14 Tornado

4.14.1 Identify: Tornado

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm (or sometimes as a result of a hurricane) and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. The damage from a tornado is a result of the high wind velocity (up to 250 mph) and wind-blown debris with paths that can be in excess of one mile wide and fifty miles long. They have been known to blow off roofs of houses, move cars and tractor trailers, and demolish homes. Peak months of tornado activity for Kentucky and south-central Indiana are usually April, May and June. However, tornadoes have occurred in every month and at all times of the year. They tend to occur in the afternoons and evenings; over 80 percent of all tornadoes strike between noon and midnight.

Types

The magnitude of a tornado is categorized by its damage pattern (i.e. path) and its wind velocity, according to the Fujita-Pearson Tornado Measurement Scale. This scale is the only widely used rating method. Its aim is to validate classification by relating the degree of damage to the intensity of the wind.

The Fujita-Pearson Tornado Measurement Scale		
Fujita Scale	Estimated Wind Speed (mph)	Typical Damage
F0	< 73	Light Damage - Some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; signboards damaged.
F1	73 - 112	Moderate Damage - Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos blown off roads.
F2	113 - 157	Considerable Damage - Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light object missiles generated; cars lifted off ground.
F3	158 - 206	Severe Damage - Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
F4	207 - 260	Devastating Damage - Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
F5	261 - 318	Incredible Damage - Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yards); trees debarked; incredible phenomena will occur.

Facts

- World-wide, about 1,000 tornadoes are generated by severe thunderstorms each year.
- Earthquake-induced fires and forest fires may also produce tornadoes.
- A tornado can move as fast as 125 mph with internal winds speeds exceeding 300 mph.
- Powerful tornadoes have lifted and moved objects weighing more than 300 tons a distance of thirty feet and have tossed homes greater than 300 feet away from their foundations.
- During an outbreak from May 4-10 of 2003, 334 tornadoes were recorded.

- In the entire month of May 2003, 559 tornadoes were reported.
- On April 3, 1974, 148 tornadoes in 13 states killed 315 people.
- The path of a tornado can be many miles long, but tornadoes rarely last longer than 30 minutes.

4.14.2 Profile: Tornado

Tornado Profile Risk Table	
Period of occurrence	Spring, Summer, Fall, Winter
Campbell County Number of Events	3 events (NCEI) 69 years (1950-2019)
Campbell County Probability of Events	.043
Campbell County Past Damages	Recorded Losses: \$1,275,000.00 Annualized Loss \$18,478.26
NKU Number of Events	0 recorded
NKU Damages Claimed	\$0.00 recorded
Warning Time	Minutes to hours
Potential Impact	Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage, fire, damaged or destroyed critical facilities, and hazardous material releases. Impacts human life, health, and public safety.
Potential of Injury or Death	Injury and slight chance of deaths
Potential Duration of Facility Shutdown	Days to months
Extent	3/2/2012 - EF3 tornado, \$1,000,000 in recorded damages in Campbell County

Historical Impacts

Since the NCEI began tracking tornado events in 1950, there have been 3 recorded events in Campbell County. Because the exact locations of tornadoes are difficult to predict, it is assumed the Campbell County events could have similar impact on the NKU campus. Campbell County's tornado events include:

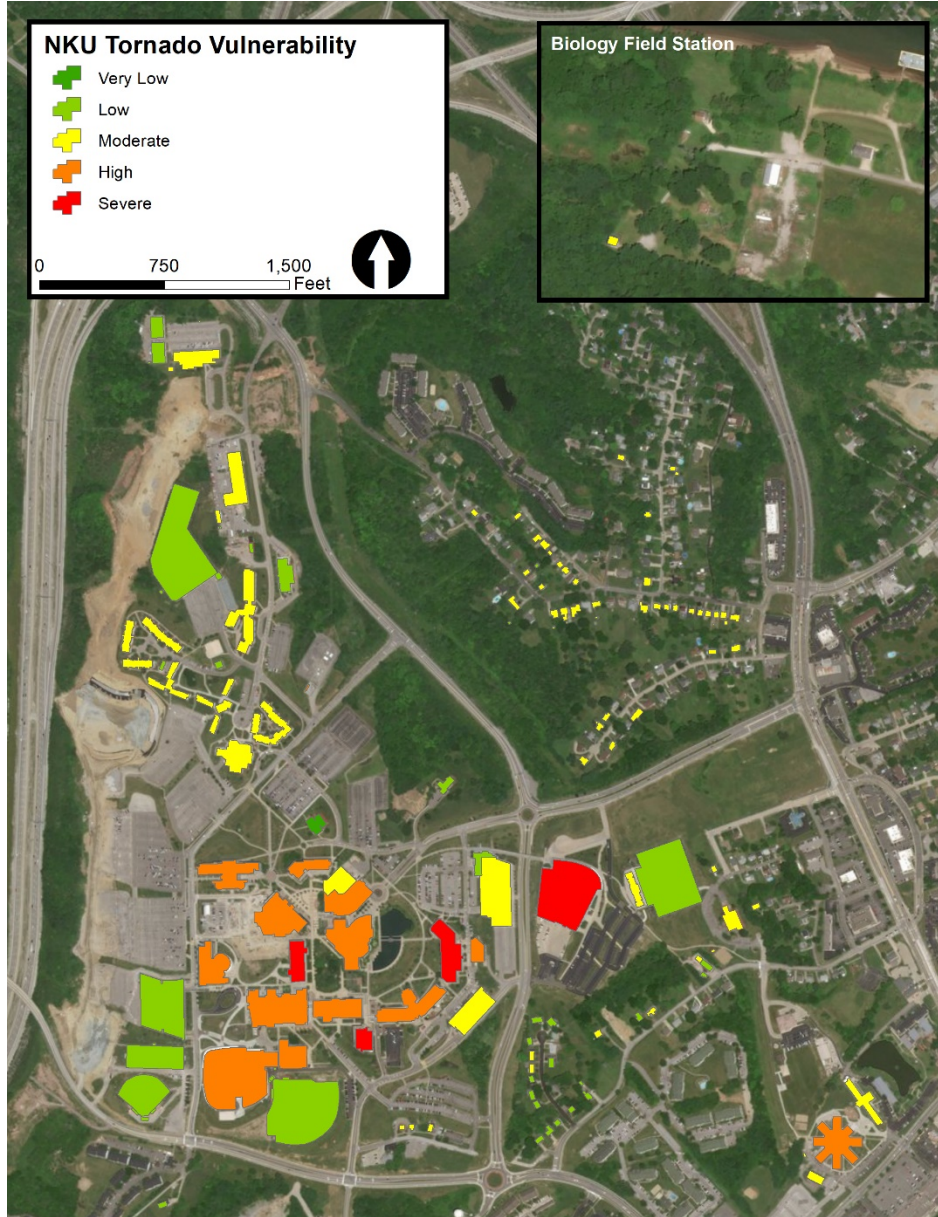
- 7/11/1958: An F2 tornado touched down in northern Campbell County. Eight injuries were recorded as well as \$250,000 in damages.
- 11/25/1973: An F1 tornado touched down in southern Campbell County and "Skipped for some 4 miles through farm country damaging several homes and barns." Two injuries were reported as well as \$25,000 in damages.
- 3/2/2012: An F3 tornado touched down in southern Campbell County. Multiple tornadoes were recorded in the region associated with the same storm system. The tornado initially touched down near Peach Grove Road and crossed Fisher Road northwest of Peach Grove. Based on the damage surveyed, the maximum wind speed of the tornado was estimated to be 160 miles per hour in Campbell County and 140 miles per hour in Pendleton County. The tornado traveled a total of 2.68 miles in Campbell County, and 4 miles in Pendleton County. This tornado caused extensive damage to structures and trees along its entire path on both sides of the Ohio River. Numerous homes were very heavily damaged or destroyed. Many homes lost their roofs, having complete exterior wall failure. Some modular homes were completely removed from their foundations, lifted, and thrown in excess of 100 yards where they were destroyed. Estimated damages from the tornado were \$1,000,000.

4.14.3 Assessing Vulnerability: Tornado

$$\text{Tornado Vulnerability Score} = \text{Exposure Score} + \text{Hazard Score}$$

Locations of tornado touch downs are difficult to predict at the county level, and even more difficult at the campus level. Because NKU does not have any recorded occurrences and the campus is relatively small, the Tornado Hazard Score is assumed to be the same for all university buildings. Therefore, the Exposure Score represents the Tornado Vulnerability Score.

Figure 4.13: Tornado Vulnerability



Sources: NKU, NCEI, ESRI

5. Capability Assessment

5.1 Introduction

The purpose of conducting the capability assessment is to determine the ability of NKU to implement a comprehensive mitigation strategy and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects. As in any planning process, it is important to try to establish which goals, objectives, and/or actions are feasible based on an understanding of the organizational capacity of those departments tasked with their implementation. A capability assessment helps to determine which mitigation actions are practical, and likely to be implemented over time, given the university's planning and regulatory framework, level of administrative and technical support, amount of fiscal resources, and current political climate.

The capability assessment has two components: 1) an inventory of the university's relevant plans, ordinances, or programs already in place and 2) an analysis of its capacity to carry them out. Careful examination of university capabilities will detect existing gaps, shortfalls, or weaknesses with ongoing university activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. A capability assessment also highlights the positive mitigation measures already in place or being implemented by the university, which should continue to be supported and enhanced through future mitigation efforts.

The Capability Assessment completed for the NKU HMP serves as a critical planning step and an integral part of an effective hazard mitigation strategy. Coupled with the Risk Assessment, the Capability Assessment helps identify and target meaningful mitigation actions for incorporation in the Mitigation Strategy portion of this plan. Any potential shortcomings in the ability of the university to implement hazard mitigation is tied to the mitigation strategy in the form of actions selected by the planning team. It not only helps establish the goals and objectives for the university to pursue under this plan, it also ensures that those goals and objectives are realistically achievable under given local conditions. Specific recommendations for actions that will improve NKU's ability to implement the hazard mitigation plan and increase resilience are offered at the conclusion of this section.

5.2 Conducting the Capability Assessment

The Capability Assessment began with a request of pertinent plans from the Planning Team and NKU Stakeholder Group. The request asked for existing local plans, policies, programs, or ordinances related to hazard mitigation or emergency management. In addition, the Planning Team conducted interviews and conversations with key university stakeholders (Safety & Emergency Management, Facilities Management, Student Affairs, University Police, Campus Planning) to determine if there are any policies or programs that contribute to and/or hinder the university's ability to implement hazard mitigation. Understanding general university procedures is an important consideration with respect to hazard mitigation implementation.

At a minimum, results provide an extensive inventory of existing campus plans, policies, programs, and resources that are in place or under development in addition to their overall effect on hazard loss reduction. However, the information can also serve to identify gaps, weaknesses, or conflicts that the university can recast as opportunities for specific actions to be proposed as part of the mitigation strategy.

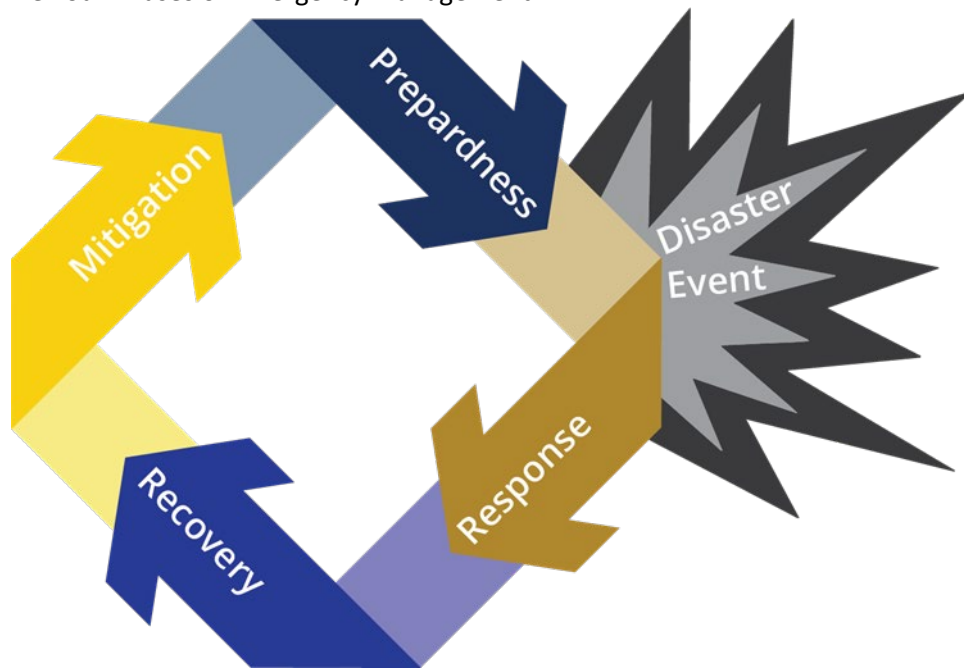
The results of this Capability Assessment provide critical information for developing an effective and meaningful mitigation strategy.

Emergency Management

Hazard mitigation is widely recognized as one of the four primary phases of emergency management. The three other phases include preparedness, response, and recovery. Each phase is interconnected, as Figure 5.1 illustrates. Opportunities to reduce potential losses through mitigation practices are often implemented before a disaster event strikes, such as flood-proofing of flood prone structures, installing back-up power sources, or enhancing security measures. Mitigation opportunities will also be presented during immediate preparedness or response activities, such as activating emergency response teams prior to severe storms, and certainly during the long-term recovery and redevelopment process following a hazard event.

Planning for each phase is a critical part of a comprehensive emergency management program and a key to the successful implementation of hazard mitigation actions. As a result, the Capability Assessment will assess the university's willingness to plan and their level of technical planning proficiency.

Figure 5.1: The Four Phases of Emergency Management



Hazard Mitigation Plan - A hazard mitigation plan represents a community's blueprint for how it intends to reduce the impact of natural and human-caused hazards on people and the built environment. The essential elements of a hazard mitigation plan include a Risk Assessment, Capability Assessment, and Mitigation Strategy. This plan is NKU's first stand-alone hazard mitigation. In previous years, the university participated in and was included in the Northern Kentucky Regional Natural Hazard Mitigation Plan. Because the universities are classified as a local government, they are eligible for all hazard mitigation funding and education programs administered by the State.

Disaster Recovery Plan - A disaster recovery plan serves to guide the physical, social, environmental, and economic recovery and reconstruction process following a disaster. In many instances, hazard mitigation principles and practices are incorporated into local disaster recovery plans with the intent of capitalizing on opportunities to break the cycle of repetitive disaster losses. Disaster recovery plans can also lead to the preparation of disaster redevelopment programs and projects to be enacted following a hazard event. The university has not yet adopted a disaster recovery plan.

Emergency Operations Plan - The Emergency Operations Plan (EOP) provides a framework which the university will use to respond to events creating major disruptions to the ordinary operations of the university. The purpose of the plan is to guide university officials in their efforts to minimize the impact of such events and return to routine operations as soon as possible. Activation of the plan is at the direction of the University President, or his designee.

In addition to the EOP, NKU publishes an Emergency Guide on its website. The Emergency Guide includes information on who to contact and where to get information during a variety of emergency events, as well as guidance on what to do in case of an event. The Guide also includes an overview of building evacuation and shelter in place procedures.

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Emergency Communication - NKU uses NORSE ALERT, an email, phone and text message service to communicate with the campus community in the event of an emergency or campus closing. All NKU students, staff, and faculty are automatically registered in NORSE ALERT with their official university e-mail address. Students, staff, and faculty are encouraged to add other contact information, such as mobile numbers and personal e-mails, to their NORSE ALERT accounts. The campus is also equipped with a public address system comprised of speaker systems throughout the buildings and five outdoor speaker arrays. The system uses tones and pre-recorded announcements and is activated by University Police in the event an immediate threat to the campus community.

Norse Alert and the public address system are tested twice a year on the second Wednesday of the spring and fall semesters. During the most recent test, conducted on January 23, 2019, there were approximately 20,500 users registered. Ninety percent of the messages were delivered within two minutes and 55 seconds.

Planning and Regulatory Capability

Planning and regulatory capability is based on the implementation of plans, policies, and programs that demonstrate the university's commitment to guiding and managing growth, while maintaining the general welfare of the community. It includes emergency response and mitigation planning, master planning, capital planning, and enforcement of design and construction standards. Although conflicts can arise, these planning initiatives present significant opportunities to integrate hazard mitigation principles into the university decision making process.

This assessment is designed to provide a general overview of key planning tools and programs at NKU along with their potential effect on hazard mitigation. This information will help identify opportunities to

address existing gaps, weaknesses, or conflicts with other initiatives in addition to integrating the implementation of this Plan with existing planning mechanisms where appropriate.

The implementation of hazard mitigation activities often involves departments and individuals beyond the emergency management profession. Stakeholders may include department chairs/directors, building managers, and administrators. In many instances, concurrent planning efforts will help to achieve or complement hazard mitigation goals, even though they are not designed as such. Therefore, the Capability Assessment also included general planning capabilities and the degree to which hazard mitigation is integrated into other on-going planning efforts.

Campus Master Plan - A campus master plan establishes the overall vision for what a university wants to be and serves as a guide for future campus facilities. Typically, a master plan determines the need for and location of new facilities and open space. The current NKU Master Plan was completed in 2009. The plan provides a comprehensive framework for achieving a distinctive and desirable learning environment with ample future physical growth capacity. Northern Kentucky University considers storm water management a very important issues since the campus is growing. This growth translates into more impervious surfaces. The plan sets aside a significant amount of land to accommodate rain water runoff. The techniques recommended include rain gardens, swales, drainage ways, and retention basis. For the retention stormwater there are natural ponds and wetlands as designated areas distributed across campus. Swales are to be located along road edges and parking lots. The areas of Academic Core, North Village, South Campus, and South Village are the areas of major human and building density.

Capital Improvements – On a biennial basis, NKU is required to prepare a Six Year Capital Plan and from that document, a Biennial Capital Budget. Both documents are submitted to the Council on Postsecondary Education as well as state government and represent the university’s state funding request for capital improvements.

Currently, the 2018-2020 project list includes several projects that relate to hazard mitigation that could possibly receive full or partial funding from FEMA Hazard Mitigation Assistance programs.

- Replace Underground Gas Mains
- Replace Water and Sewer Mains
- Enhance/Upgrade Cyber Security System
- Campus Telecommunications Upgrade

Other projects may receive FEMA funding for portions of the project that directly relate to hazard mitigation.

Building Design Guidelines – In 2014, NKU adopted version six of its Design and Construction Standards to apply to all renovation and new construction projects. The guidelines include a requirement that all new buildings will meets LEED certification standards and that they follow the design guidelines outlines in the NKU Master Plan, which address energy use and stormwater management.

National Flood Insurance Program (NFIP) - Reviewing NKU’s NFIP compliance and participation within the NFIP program took a few steps to figure out. All of the NKU campus facilities are located within Campbell County, KY which is a NFIP participating community, however the majority of the campus buildings are located within the city of Highland Heights, KY. Highland Heights recently resumed compliance and participation within the NFIP. However, after discussions with officials from NKU and the Kentucky Division of Water (KDOW) it was recognized that NKU is a state-owned property and therefore they follow

State NFIP protocols, which the state of Kentucky through KDOW is a participating community within the NFIP program.

Fiscal Capability

The ability of a university to act is closely associated with the amount of fiscal resources available to implement policies and projects. This may take the form of outside grant funding awards or university-based revenue and financing. The cost of mitigation policy and project implementation vary widely. In some cases, policies are tied primarily to staff time or administrative costs associated with creation and monitoring of a given program. In other cases, direct expenses are linked to an actual project, such as installing back-up power generators or storm shelters, which can require a substantial commitment from university, state, and federal funding sources. The university has made fiscal commitments to the mitigation of hazards and security of the population to date. This hazard mitigation plan provides a foundation to plan for future needs as well.

Political Capability

One of the most difficult capabilities to evaluate involves the political will of a university to enact meaningful policies and projects designed to reduce the impact of future hazard events. The political climate must be considered in designing mitigation strategies as it could be the most difficult hurdle to overcome in accomplishing their adoption and implementation. NKU officials have repeatedly emphasized the need and desire for a safe, secure campus, and their completion of the hazard mitigation plan is one such commitment to this effort.

5.3 Conclusion on Campus Capability

A Capability Assessment examines university capabilities to detect any existing gaps or weaknesses within ongoing activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. A few gaps or weaknesses were identified for NKU through an examination of existing plans and programs and conversations with university staff and administrations. The conclusions of the Risk Assessment and Capability Assessment serve as the foundation for the development of a meaningful hazard mitigation strategy. The list below outlines key capabilities NKU can address in the Mitigation Strategy:

- Conduct annual emergency exercises to make sure EOP is current;
- Develop a formal continuity of operations plan;
- Develop overall campus evacuation plan;
- Create building incident response teams and provide regular training;
- Enhance communications abilities before and during a disaster event; and
- Integrate mitigation actions into capital improvement program.

6. Mitigation Strategy

The intent of the Mitigation Strategy is to provide NKU with the goals that will serve as guiding principles for future mitigation policy and project administration along with an analysis of mitigation actions deemed obtainable to meet those goals and reduce the impact of identified hazards. It is designed to be comprehensive, strategic, and functional in nature:

- In being *comprehensive*, the development of the Mitigation Strategy includes a thorough review of all hazards and identifies extensive mitigation measures intended to not only reduce the future impacts of hazards, but also to help the university achieve compatible economic, environmental, social, and security goals.
- In being *strategic*, the development of the Mitigation Strategy works to align proposed policies and projects with pre-identified, long-term planning goals.
- In being *functional*, each proposed mitigation action is linked to established priorities and assigned to specific divisions, departments, or individuals responsible for their implementation with target completion deadlines. When available, funding sources are identified that can be used to assist in project implementation.

The first step in designing the Mitigation Strategy includes the identification of mitigation goals. Mitigation goals represent broad statements that are consistent with the hazards identified within the plan and achieved through the implementation of more specific mitigation actions. These goals set the blueprint for the Mitigation Strategy and allowed the stakeholders to vision what they wanted to achieve over the next five-year period.

The second step involves the identification, consideration, and analysis of available mitigation measures (i.e., activities, policies, etc.) that lead to identifying mitigation actions that will help achieve the identified mitigation goals. This is a long-term, continuous process sustained through the development and maintenance of this plan. Alternative mitigation measures will continue to be considered as future mitigation opportunities are identified, as data and technology improve, as mitigation funding becomes available, and as this plan is maintained over time.

The third and last step in designing the Mitigation Strategy is the development of the Mitigation Action Plan. The Mitigation Action Plan represents a comprehensive and functional plan for each action and is the most essential outcome of the mitigation planning process. The Mitigation Action Plan includes a prioritized listing of proposed hazard mitigation actions (policies and projects) for the university to complete. Each action has accompanying information, such as those departments or individuals assigned responsibility for implementation, potential funding sources, and an estimated target date for completion. The Mitigation Action Plan provides those departments or individuals responsible for implementing mitigation actions with a clear roadmap that also serves as an important tool for monitoring success or progress over time. The cohesive collection of actions listed in the Mitigation Action Plan can also serve as an easily understood menu of mitigation policies and projects for those local decision makers who want to quickly review the recommendations and proposed actions of the Plan and potentially integrate with other planning documents.

In preparing the Mitigation Action Plan, members of the NKU Stakeholder Group and Planning Team considered the overall hazard risk and capability to mitigate the effects of hazards as recorded through

the risk and capability assessment process. The adopted mitigation goals were also considered when developing each action item.

Developing the 2018 Mitigation Strategy

As this is the university's first hazard mitigation plan, the Mitigation Strategy was developed through a process with the Planning Team and NKU Stakeholder Group in a manner that followed a traditional format.

- Identify Goals
- Identify Actions
- Develop a Mitigation Action Plan

6.1 Mitigation Goals

The NKU Stakeholder Group agreed on the following goals to guide development and implementation of the plan's mitigation actions:

1. *Pursue consistent funding from a variety of sources for prevention, maintenance, and mitigation of disasters;*
2. *Increase public and university awareness through education and support for disaster preparedness practices;*
3. *Enhance staff capacity and collaboration, policies, and technical capabilities that will mitigate and reduce damages from hazard events;*
4. *Protect university property, organizational information, and research assets from hazards and threats;*
5. *Build and sustain partnerships between government, educational institutions, business, and the community; and*
6. *Protect lives and minimize injuries that could be caused by hazard events.*

6.2 Mitigation Actions

A wide range of activities were considered to help advance NKU's new mitigation goals, in addition to addressing any specific hazard concerns. To help the university community and NKU Stakeholder Group understand what mitigation activities to consider, the Planning Team presented the following six broad categories of mitigation techniques: Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, and Public Awareness and Education. Presenting mitigation activities examples under these category types helped the decision makers understand the kinds of activities addressed under a Hazard Mitigation Plan. The following provides example activities presented under each category:

Prevention

Preventative activities are intended to keep hazard problems from getting worse and are typically administered through government programs or regulatory actions that influence the way land is developed and buildings are built. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred, or capital improvements have not been substantial. Examples of preventative activities include:

- Planning and zoning
- Building codes
- Open space preservation
- Floodplain regulations

Property Protection

Property protection activities involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations. Examples include:

- Acquisition
- Relocation
- Building elevation
- Critical facilities protection

Natural Resource Protection

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their protective functions. Such areas include floodplains, wetlands, and steep slopes. Parks, recreation, or conservation agencies and organizations often implement these protective measures. Examples include:

- Floodplain protection
- Watershed management
- Riparian buffers
- Forest and vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.)

Structural Projects

Structural mitigation activities are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event through construction. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- Reservoirs
- Dams / levees / dikes / floodwalls
- Diversions / detention / retention
- Channel modification
- Storm sewers
- Storm Shelters
- Shatter proof windows

Emergency Services

Although not typically considered a “mitigation” technique, emergency service activities do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

- Warning systems
- Evacuation planning and management

- Emergency response training and exercises
- Sandbagging for flood protection
- Installing temporary shutters for wind protection

Public Education and Awareness

Public education and awareness activities are used to advise residents, elected officials, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- Outreach projects
- Speaker series / demonstration events
- Hazard map information
- Real estate disclosure

To develop NKU's Mitigation Action's, a Mitigation Action Workbook was developed and provided to members of the NKU Stakeholder Group. Specific instructions were provided to help committee members generate ideas for new actions. The instructions document may be found in Appendix E.

At the September 27, 2018 Mitigation Strategy meeting the Mitigation Strategy feedback was reviewed and additional comments were captured. After this meeting the Planning Team put together the final 2018 Mitigation Action Workbook and prioritized the actions.

Mitigation Action Prioritization

Mitigation action prioritization emphasizes the extent to which benefits are maximized, according to a review of the proposed projects potential benefits and their associated costs. Through the Benefit-Cost Prioritization Matrix (Figure 6.1), the higher the action's benefit, and the lower the cost, the more cost beneficial and higher priority the action was determined to be for the LFUCG community.

The benefit scale is based on using a simplified version of FEMA's Mitigation Action Evaluation Worksheet (see Appendix F). For each Action, the Planning Team identified the potential benefits using the following criteria as laid out in the Mitigation Action Evaluation Worksheet.

- Enhance Life Safety
- Protect Property
- The Action is Technically Feasible
- The Action is Political Feasible
- The Action is Legal
- Positive Environmental Impacts
- Positive Social Impact
- Administrative Capability
- Local Champion
- The Action Advances Other Community Objectives

The Planning Team using the criteria described above ranked each action’s potential benefit as “very high,” “high,” “moderate,” or “low”. This information provided the benefit variable for the Benefit Cost Prioritization Matrix and methodology.

Next, the Planning Team using information captured at the Mitigation Strategy meeting and the Mitigation Action Workbook exercise determined rough cost estimates that were scored based on which category they fell within.

- Low Estimated Cost (\$0 - \$4,999)
- Moderate Estimated Cost (\$5000 - \$49,999)
- High Estimated Cost (\$50,000 - \$249,999)
- Very High Estimated Cost (\$250,000 - Above)

Once the general benefit and cost of the project was determined, the Planning Team determined the priority of each action item based on a Benefit Cost Prioritization Matrix (Figure 6.2). This simplified decision-making chart, uses rough cost estimations and the mitigation benefit evaluation variables to assign a prioritization ranking for each action item. Action items that receive a higher-ranking signal projects that could need special attention. Inversely, projects that are estimated to be higher in cost with a lower benefit receive a lower ranking. It is important to note that this Benefit Cost methodology is to be used as a first pass screening tool. This methodology provides a simplistic Benefit-Cost model and depending on the action item a more detailed Benefit-Cost model maybe needed in the future.

Figure 6.2: Benefit-Cost Prioritization Matrix

Prioritization Matrix					
		Benefit			
		D (Low)	C (Moderate)	B (High)	A (Very High)
Estimated Cost	Very High	Low	Low	Medium	High
	High	Low	Medium	Medium	Very High
	Moderate	Low	High	High	Very High
	Low	Medium	High	Very High	Very High

The NKU Stakeholder Group identified 41 mitigation actions that address all 11 identified hazards. Several actions address multiple hazards and some address all identified hazards. Within the Action Workbook each hazard is categorized under the six (6) “Step 7 Categories” of the Community Rating System: Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, and Public Awareness and Education. (It should be noted, understandably, that no “Natural Resource Protection” actions were identified.) Each mitigation action is also numbered under those categories (Emergency Services 1.1, 1.2; Prevention 2.1,2.2 etc.).

The following key elements are captured within the 2019 Mitigation Action Workbook to help NKU track each action over the next five years.

- Action Number
- Action Description
- Hazard(s) Addressed
- Type of Action
- Estimated Cost
- Benefits
- BC Prioritization
- Potential Funding Sources/Considerations¹¹
- Lead implementor and other Partners
- Timeframe

¹¹ Please note that where NKU itself intends to be (at least partially) a potential funding source, NKU defines three distinct relationships: "Internal" means that NKU as a body or as a state agency is a potential funding source; "Departmental" means that one of NKU's colleges or a specific department within a college would be expected to fund the action; and "External" means that NKU would anticipate funding the action through an informal or formal relationship with the local economy or with private sector.

6.3 Mitigation Action Plan

Action Number	Action Description	Hazard(s) Addressed	Type	Estimated Cost	Benefits	BC Prioritization	Potential Funding Sources	Lead Implementer and Other Partners	Timeframe
1.1	Maintain equipment and supplies for the Data Center and Building Data Closets	All Identified Hazards	Emergency Services	\$50,000 - \$249,999 (High)	High	Moderate	Departmental	Information Technology (IT)	Annually
1.2	Maintain redundant fiberoptic communication infrastructure	All Identified Hazards	Emergency Services	\$50,000 - \$249,999 (High)	High	Moderate	Internal; Departmental	Information Technology (IT)	Annually
1.3	Develop cellular-based wireless connectivity for each building	All Identified Hazards	Emergency Services	\$50,000 - \$249,999 (High)	High	Moderate	Internal; Departmental; Grant (FCC e-Rate)	Information Technology (IT)	2-4 years
1.4	Install infrastructure at critical buildings to allow quick connect to mobile generators if needed	All Identified Hazards	Emergency Services	\$250,000 – Above (Very High)	Moderate	Low	Grant (DOE, DOD); Internal	Facilities Management	5 years
1.5	Install signs identifying evacuation routes and emergency shelter areas	Earthquake; Flooding; Severe Storms; Severe Winter Storms; Tornadoes; HAZMAT	Emergency Services	\$0 - \$4,999 (Low)	Moderate	High	Internal; Grant (FEMA HMA)	Facilities Management	1 year
1.6	Establish satellite phone service for key personnel to use as backup communications in event a disaster disables normal phone services	All Identified Hazards	Emergency Services	\$0 - \$4,999 (Low)	Moderate	High	Grant (KOHS, DHS); Internal	Safety and Emergency Management	5 years
1.7	Develop university business continuity contingency plan	All Identified Hazards	Emergency Services	\$5,000 – \$49,999 (Moderate)	Moderate	High	Departmental	Safety and Emergency Management	2-3 years

Action Number	Action Description	Hazard(s) Addressed	Type	Estimated Cost	Benefits	BC Prioritization	Potential Funding Sources	Lead Implementer and Other Partners	Timeframe
1.8	Purchase and install emergency generator for at least one food service location	All Identified Hazards	Emergency Services	\$50,000 - \$249,999 (High)	Moderate	Moderate	Grant (FEMA HMA); Internal	Business Auxiliary Services; Facilities Management	2 years
1.9	Provide emergency generator power to IT infrastructure and IT closets	All Identified Hazards	Emergency Services	\$50,000 - \$249,999 (High)	Moderate	Moderate	Grant (FEMA HMA); Internal	Information Technology (IT); Facilities Management	3 years
1.10	Provide backup HVAC units for maintaining building habitability in event of power outage or damage to physical heating plant	Extreme Heat; Extreme Cold; Severe Storms; Severe Winter Storms; Tornadoes	Emergency Services	\$50,000 - \$249,999 (High)	Moderate	Moderate	Grant (USDA Community Facilities Grant, DOE); Internal	University Housing; Facilities Management	5 years
1.11	Develop Building Emergency Action Plans for all university buildings.	All Identified Hazards	Emergency Services	Staff Time (Low)	Moderate	High	Internal; External	Safety and Emergency Management	2 years
1.12	Upgrade and maintain DR equipment at off-site location	All Identified Hazards	Emergency Services	\$250,000 – Above (Very High)	Very High	High	Internal; Grant (NRCS, HHS)	Information Technology (IT)	1 year
1.13	Reinforce and maintain the area around the core network	Earthquake; Flooding; Karst; Landslides; Tornadoes	Emergency Services	\$250,000 – Above (Very High)	Very High	High	Internal; Departmental	Information Technology (IT)	Annually

Action Number	Action Description	Hazard(s) Addressed	Type	Estimated Cost	Benefits	BC Prioritization	Potential Funding Sources	Lead Implementer and Other Partners	Timeframe
1.14	Provide necessary food, water, and first-aid supplies to campus buildings for shelter-in-place events	Earthquake; Severe Storms; Severe Winter Storms; Tornadoes; HAZMAT	Emergency Services	\$5,000 – \$49,999 (Moderate)	Very High	Very High	Internal; Grant (DHS; HHS; USDOJ)	Safety and Emergency Management	Annually
1.15	Maintain equipment and supplies for the Emergency Operations Center	All Identified Hazards	Emergency Services	\$50,000 - \$249,999 (High)	Very High	Very High	Internal; Grant (DHS; KOHS)	Information Technology (IT)	1 - 2 years
2.1	Information Security Incident Response Policy	Protection of Data	Prevention	\$0 - \$4,999 (Low)	High	Very High	Departmental	Information Technology (IT)	1 year
2.2	Protect data/communications network from various cyberthreats to ensure integrity and usefulness during natural disaster event	Protection of Data	Prevention	\$5,000 – \$49,999 (Moderate)	High	High	Internal	All Network Users; IT Lead	Annually
2.3	Ensure "bring-your-own-devices" connecting to NKU network are protected with anti-virus software	Protection of Data	Prevention	Staff Time (Low)	High	Very High	Internal	All Network Users; IT Lead	1 year
2.4	Complex passwords/Combine as a Data Security	Protection of Data	Prevention	Staff Time (Low)	High	Very High	Internal; Departmental	Information Technology (IT)	Annually
2.5	Provide emergency generator power to IT infrastructure	All Identified Hazards	Prevention	Staff Time (Low)	High	Very High	Grant (FEMA HMA); Internal	Information Technology (IT)	2 years

Action Number	Action Description	Hazard(s) Addressed	Type	Estimated Cost	Benefits	BC Prioritization	Potential Funding Sources	Lead Implementer and Other Partners	Timeframe
2.6	Investigate whether upgrades to the existing CCTV system would improve campus security and communications in the event of a natural disaster	All Identified Hazards	Prevention	Staff Time (Low)	Low	Very High	Grant (DHS, KOHS); Internal	Safety and Emergency Management	2 years
2.7	Leverage "SafeColleges" Tool for Information Security Training and Accessibility	Protection of Data; HAZMAT	Prevention	\$5,000 – \$49,999 (Moderate)	Very High	Very High	Grant (ED); Internal	HR/IT/Facilities	Annually
2.8	External Security Audit	Protection of Data	Prevention	\$50,000 - \$249,999 (High)	Very High	Very High	Departmental	Information Technology (IT)	Annually
3.1	Biannual Tabletop DR Exercises	All Identified Hazards	Property Protection	\$0 - \$4,999 (Low)	High	Very High	Internal	Information Technology (IT)	Bi-annual
3.2	External WAPs in protective enclosures	All Identified Hazards	Property Protection	\$5,000 – \$49,999 (Moderate)	High	High	Internal	Information Technology (IT)	1 year
3.3	Develop and implement procedures for protecting/relocating research animals and materials which will preserve data and maintain applicable grant and research protocols	All Identified Hazards	Property Protection	\$5,000 – \$49,999 (Moderate)	High	High	Internal; Departmental	Facilities Management	2 years
3.4	Develop and implement protocols and storage facilities for hazardous materials involved in laboratory research	HAZ/MAT	Property Protection	\$5,000 – \$49,999 (Moderate)	High	Moderate	Internal; Departmental; Grant (HHS; CDC; NIH)	Facilities Management	1-2 years

Action Number	Action Description	Hazard(s) Addressed	Type	Estimated Cost	Benefits	BC Prioritization	Potential Funding Sources	Lead Implementer and Other Partners	Timeframe
3.5	Improve system infrastructure to limit vulnerabilities (up to date on patches, removal of login credentials when staff leave positions, etc.)	All Identified Hazards	Property Protection	Staff Time (Low)	High	Very High	Internal	Information Technology (IT)	Ongoing, or As Needed
3.6	Have faculty and staff use OneDrive for storage.	Earthquakes; Extreme Heat; Flooding, Severe Storms; Severe Winter Storms; Tornadoes	Property Protection	Staff Time (Low)	High	Very High	Departmental; Internal	All Departments; IT Lead	1 year
3.7	Business Academic Center "core network" needs redundant/backup power supply and other protection similar to Admin data center	All Identified Hazards	Property Protection	\$5,000 – \$49,999 (Moderate)	Moderate	High	Internal; Grant (DOE, NSF)	Business Auxiliary Services; Facilities Management	2-4 years
4.1	Develop additional educational programs to inform students, faculty and staff on what to do during emergencies.	All Identified Hazards	Public Education and Awareness	\$0 - \$4,999 (Low)	High	Very High	Grant (FEMA HMGP 5% Initiative); Internal	Safety and Emergency Management; Human Resources; Provost	1 year
4.2	Integrate existing digital signs to communicate hazard warnings	All Identified Hazards	Public Education and Awareness	\$5,000 – \$49,999 (Moderate)	High	High	Internal	IT; Emergency Management	1 year

Action Number	Action Description	Hazard(s) Addressed	Type	Estimated Cost	Benefits	BC Prioritization	Potential Funding Sources	Lead Implementer and Other Partners	Timeframe
4.3	Increase website or IT Service Catalog presence for Security and Disaster Recovery information	All Identified Hazards	Public Education and Awareness	Staff Time (Low)	High	Very High	Internal	Information Technology (IT)	Ongoing, or As Needed
4.4	Improve IT crisis communication and emergency response plan	All Identified Hazards	Public Education and Awareness	Staff Time (Low)	High	Very High	Departmental; Internal	All Departments; IT Lead	1 year
4.5	Develop campaign for awareness of NKU's "Norse Alert"/emergency education and awareness	All Identified Hazards	Public Education and Awareness	\$0 - \$4,999 (Low)	Moderate	High	Internal; Grant (FEMA HMGP 5% Initiative); External	MarCom, Safety and Emergency Management	2 years
5.1	Secure funding for new police department and emergency operations center	All Identified Hazards	Structural Projects	\$250,000 – Above (Very High)	High	Very High	Grant (USDOJ); Internal; External	University Police; Facilities Management	2 years
5.2	Upgrade data backup equipment and infrastructure to ensure continued service/safety of data	All Identified Hazards	Structural Projects	\$5,000 – \$49,999 (Moderate)	High	High	Internal; Departmental	All Network Users; IT lead	1-2 years
5.3	Stormwater and water management improvements across campus including flooding alarms, system maintenance protocols, and emergency pumps for vulnerable manholes and underground facilities	Flooding; Landslides; Karst	Structural Projects	\$50,000 - \$249,999 (High)	High	Very High	Internal; Grant (FEMA HMA); External	Facilities Management	5 years

Action Number	Action Description	Hazard(s) Addressed	Type	Estimated Cost	Benefits	BC Prioritization	Potential Funding Sources	Lead Implementer and Other Partners	Timeframe
5.4	Install alternate fire suppression system in archives storage	All Identified Hazards	Structural Projects	\$50,000 - \$249,999 (High)	Moderate	Moderate	Grant (DHS, NSF); Internal	Facilities Management; Library	5 years
5.5	Install EMP lightning protection on campus	Severe Storms; Tornadoes	Structural Projects	\$250,000 – Above (Very High)	Very High	High	Internal; Grant (DOD, DOE, FEMA HMGP 5% Initiative)	Facilities Management	5 years
5.6	Install storm protection rooms or safe rooms in Housing facilities and other designated buildings	Severe Storms; Tornadoes	Structural Projects	\$50,000 - \$249,999 (High)	Very High	Very High	Grant (FEMA HMA)	University Housing; Facilities Management	5 years

7. Plan Maintenance

Per DMA 2000 guidance, hazard mitigation plans must layout a plan maintenance process that highlights how the jurisdiction will monitor and evaluate the plan over the next five years. One must also consider how the plan will be incorporated into existing and future planning mechanisms and finally consider how the jurisdiction will continue public involvement.

The process of maintaining the HMP will provide NKU the opportunity to document progress in achieving mitigation goals. The planning team agreed that it is imperative to have stakeholder involvement for continuing the plan maintenance process and to ensure the mitigation strategy is implemented through university programs and regulations.

7.1 Monitoring, Evaluation, and Updates

NKU Safety and Emergency Management will be the primary point of contact and will coordinate all university efforts to monitor and evaluate the plan. NKU proposes an attainable and standardized process for maintaining the plan document through the annual monitoring of the Mitigation Action Plan, and annual progress reporting with the NKU Stakeholder Group and Planning Team. The annual progress monitoring will also assist with the incorporation of plan maintenance procedures into other planning mechanisms at the university. Annually tracking of the implementation of the plan and the mitigation actions will be the lead responsibility of NKU Safety and Emergency Management.

In order to allow NKU Safety and Emergency Management to track and monitor plan maintenance a set schedule of annual meetings will be put into place. The first meeting will be held one year from the adoption of the HMP.

In addition, NKU will use several tools to manage the monitoring and evaluation of the HMP. To track annual progress the Planning Team has developed two plan maintenance forms/reports (Appendix G). The first one is an individual project progress report form that will be completed by the appropriate NKU Stakeholder Group members and appropriate agencies and submitted to NKU Safety and Emergency Management on an annual basis. These reports are designed to allow responsible agencies and organizations the ability to list successes and/or potential issues with implementing responsible action items within the Mitigation Action Plan. In addition, a plan amendment form was developed to track potential changes to the plan itself, prior to the next 5-year update. These forms will be used by the NKU Safety and Emergency Management to help maintain the progress of the plan over the next 5-years and be used when updating the 2024 Hazard Mitigation Plan. The continuous monitoring and formalized annual review will serve as the basis for a brief annual report, which will be completed one-year post plan adoption.

Plan Maintenance Procedures

Requirement §201.6(c)(4) requires a formal plan maintenance process to ensure that the Mitigation Plan remains an active and relevant document. The plan maintenance process must include a method and schedule for monitoring, evaluating, and updating the plan at least every five years.

This section must also include an explanation of how local governments intend to incorporate their mitigation strategies into any existing planning mechanisms they have, such as comprehensive or capital improvement plans, or zoning and building codes. Lastly, this section requires that there be continued public participation throughout the plan maintenance process.

Furthermore, the NKU Safety and Emergency Management will use the Mitigation Action Workbook to evaluate the status of the mitigation actions identified in Section 6.3. The Mitigation Action Workbook will be a live document living outside of the plan and being tracked through an excel spreadsheet format. The Mitigation Action Workbook Excel file looks just like the table found in Section 6.3 but has one additional column that allows the NKU Safety and Emergency Management office to add comments into the spreadsheet for mitigation action monitoring and evaluation purposes.

Through the completion of annual meetings with the NKU Stakeholder Group and the tools described above the NKU Safety and Emergency Management office will have the tools to create an annual report that will help make the plan update process run more smoothly.

Lastly, NKU Safety and Emergency Management will also utilize Kentucky's Community Hazard Assessment and Mitigation Planning System (CHAMPS) to track mitigation strategies and apply for HMGP funding when it becomes available.

7.2 Incorporation into Existing Planning Mechanisms

NKU will integrate the 2019 NKU HMP into relevant university policies, plans, or mechanisms, where feasible. This includes integrating the requirements of the HMP into other university planning documents, processes, or mechanisms, such as capital improvement plans, emergency operation plans, IT disaster plans, and others when appropriate. Many of the planning mechanisms into which this hazard mitigation plan will be integrated were articulated in Section 5.2 (pp. 84-87).

During the review, updating, and standard enforcement of the existing university authorities and programs, mitigation actions listed in this plan will be incorporated, implemented, and enforced. NKU houses a Facilities Management Team that employs a Director of Safety and Emergency Management. The Facilities Management Team and Director of Safety and Emergency Management will ensure that the hazard mitigation plan is integrated into relevant university planning mechanisms. In addition, the members of the NKU Stakeholders Group will ensure the goals and mitigation actions of new and updated university planning documents for their offices and departments are consistent, or do not conflict with, the goals and actions of the NKU HMP.

7.3 Continued Public Involvement

NKU Safety and Emergency Management and the NKU Stakeholder Group are dedicated to continuing public involvement in the plan and the mitigation actions that will be implemented. This plan has been created with significant input with representation across and beyond the university and the main goal is to provide opportunities on a regular basis to facilitate continued university community involvement.

During the annual reporting process, NKU Safety and Emergency Management will engage the public and give the chance to provide feedback. The annual Hazard Mitigation Plan Maintenance meeting will be advertised through the NKU Safety and Emergency Management website and be open to the public.

In addition to public involvement in the annual progress report process, NKU Safety and Emergency Management will continually inform and reach out to the public through social media and by participating in university events to share the message of mitigation. The NKU Hazard Mitigation Plan will be placed on NKU's Hazard Mitigation website¹² for continued sharing of the plan.

¹² <https://inside.nku.edu/safety/emergencymanagement/hazardmitigation.html>

8. Plan Adoption

Adoption by the local governing body demonstrates a commitment to fulfilling the hazard mitigation goals and actions outlined in the plan. The local jurisdiction submitting the plan must satisfy the plan adoption prerequisite before the plan can be approved by FEMA.

The plan was formally adopted by the Northern Kentucky President on xxx (Appendix A). The endorsement of this plan demonstrates Northern Kentucky University's commitment to fulfilling the mitigation objectives outlined in the plan. It also legitimizes the plan and authorizes the responsible agencies identified in the plan to execute their responsibilities.

The plan submittal process began with NKU Safety and Emergency Management submitting the plan to the Kentucky Emergency Management (KyEM) for review and comment and then incorporating any revisions. KyEM then submitted the plan to FEMA Region IV for approval, pending local adoption status. Please see Appendix H for approved Local Mitigation Plan Review Tool.

Local Mitigation Plan Prerequisites

§201.6(c)(5): [The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).

9. Appendices

Appendix A: Plan Adoption Letter

Appendix B: Stakeholder/Public/Planning Team Meeting Materials

The following information is broken down for each of the four Stakeholder Meetings:

- Agendas
- Invites
- Sign-In
- Notes

Stakeholder Kick-Off Meeting

March 20, 2018

1:00pm - 3:00pm

Agenda

Welcome	Jeff Baker, Safety & Emergency Management
Hazard Mitigation Planning 101	Josh Human, Stantec
Hazard Identification & Ranking Exercises	John Bucher, Stantec
Data Needs	Josh Human, Stantec

The hazard mitigation planning process is required under federal law to help communities better prepare for disaster events and to ensure communities are eligible for federal grants to support mitigation actions. Plans must be updated and approved every five years to maintain eligibility. This will be NKU's first hazard mitigation plan.

The completed plan will be submitted to the Kentucky Division of Emergency Management and the Federal Emergency Management Agency for approval prior to being submitted to Board of Regents for adoption.

Contacts

Jeff Baker, Director
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859.572.6522

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502.618.5873

John Bucher
Stantec
john.bucher@stantec.com
502.212.5044

NKU 2018 Hazard Mitigation Plan

Data Needs - Capability and Vulnerability Assessments

The list below includes examples of the types of data we will need to complete the capability and vulnerability assessments for the Hazard Mitigation Plan. Where applicable, data should be in a GIS format.

1. Past Presidential Disaster Declarations

Any information on their past presidential declarations. When they happened, what hazards were involved, how many people were affected etc....

2. Past Significant Hazard Events

- With estimated losses
- With estimated recovery costs
- With estimated non-recovered costs
- Locations of past hazard events

3. Community Profile & Capabilities

- Population composition
- Community history
- Population growth trends/rates
- Land area and Geography
- Climate
- Land Use trends
- Housing composition
- Economic makeup
- Transportation corridors (HAZ/MAT)
- Related plans, initiatives, and policies
- Staff with related responsibilities
- Completed mitigation actions and related projects (planning, development, capital improvement)

4. Critical or Vulnerable Facilities

- Residence Halls
- Student Health
- University Police
- Emergency Operations Center
- Storm Shelters
- Dining Hall
- Research labs & Haz/Mat sites
- Academic and Administration buildings
- Assembly areas
- IT and Data centers
- Library and archives
- Fuel storage

5. Infrastructure & Property Data

- University property & structures
- Building values/replacement costs
- Building content values
- Building occupancy
- Building condition
- Back-up power generation
- Roads
- Utilities
 - Sewer treatment sites
 - Water pumping stations
 - Electric generation and/or transmission
 - All lines/pipelines

Stakeholder Invite:



YOU ARE INVITED TO ATTEND

STAKEHOLDER GROUP MEETING ON MARCH 20, 2018

NORTHERN KENTUCKY UNIVERSITY DEVELOPMENT OF ALL HAZARDS MITIGATION PLAN

NKU Safety and Emergency Management will host the first stakeholder group meeting to create an All Hazards Mitigation Plan. This process will help the university better prepare for natural and man-made disaster events.

The meeting will be held at

Student Union

Room 109

1:00 p.m. to 3:00 p.m. on Tuesday, March 20, 2018

Presentations and handouts will be provided to attendees to explain the planning process and how the university community and local agencies can aid in data collection and hazard identification. Safety and Emergency Management has hired Stantec Consulting to assist with the creation of the university plan and has convened a Steering Committee to oversee plan development during a 9-month timeframe.

To help us be better prepared for a university disaster, it is important that our community develop a strategy to mitigate losses. The plan will outline areas that are at-risk on campus and determine vulnerabilities. The objective is to develop a program of activities to mitigate the university's vulnerability to natural and man-made hazards that NKU will adopt.

For More Information Contact:
Jeff Baker at NKU Safety and Emergency Management
(859)572-6522, bakerje@nku.edu



Sign-In Sheet:

Instructors/Facilitators MUST sign each page of the Event Roster

Kentucky Division of Emergency Management Event Roster

Name of Event: NKU HMP Stakeholder Kickoff
 Location: NKU Student Union 109
 Address: _____
 City/Community: Highland Heights
 EDBS#/NEXS#: _____

Is This An Exercise? Yes No
 If so, what type:
 Seminar Workshop TTX Game
 Drill Functional Full-Scale

Event Start Date: 3/20/18 12:30 p
 Event End Date: 3/20/18 3:00 p
 Instructor/Facilitator (1): Jack Human
 Instructor/Facilitator (2): Jeff Baker
 Total Event Hours: 2.5
 Event Hours: Day 1: 2.5 Day 2: _____ Day 3: _____ Day 4: _____ Day 5: _____

If registering day-of, please print your name and email address legibly. The name on your certificate will appear as written.

Initials Only, Each Day

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Are you being Paid to attend?					Total Hrs.
																										Day 1	Day 2	Day 3	Day 4	Day 5	
	John	Q	Doe	SAR Coordinator	XYZ County	Yes	Local	JQD@xyzcorporation.bus	SAR Supervisor																		0				
	Jeff	P	Baker	Director	NKU	Yes	Local	jbaker@nku.edu																							
	Lori	M	McMullin	Business Manager	NKU	Yes	Local	lmcMullin@nku.edu																							
	Jim	M	Kaufman	Director	NKU	Yes	Local	jkaufrman@nku.edu																							
	Kate	M	Lovold	Sc President	NKU	Yes	Local	lovoldk1@nku.edu																							
	Dan	G	Schultz	Fire Chief	Central Campbell Fire	Yes	FD	Dan.Schultz@cccfd.org																							
	Patricia	D	Lanter	Director	NKU	Yes	Local	planter@nku.edu																							
	Blaine	A	Gimreke	Director	NKU	Yes	Local	blaine@nku.edu																							
	Greg	P	Haignis	Lieutenant	H.H.P.D.	Yes	Local	ghaignis@hhky.com																							
	Steve	Z	Lehman	Public Works Director	A.H.P.W.	Yes	Local	stlehman@ahky.com																							
	Steve	S	Zaidi	NVP-FM @ NKU	NKU	Yes	NKU	zaidi@nku.edu																							
	Tim	C	Ferguson	SAR Coordinator	NKU	Yes	NKU	fergust@nku.edu																							
	Ryan	D	Daly	AVP Enrollment	NKU	Yes	NKU	pdaly@nku.edu																							
	Anita	R	Schiffman	Asst Research Coordinator	NKU	Yes	NKU	schiffman@nku.edu																							
	Chris	L	Tamblyn	Assoc. Director Student Union	NKU	Yes	Local	ctamblyn@nku.edu																							
	Ray	A	Tamblyn	Assoc. Director Public Health	NKU	Yes	Local	rtamblyn@nku.edu																							
	Darren	J	Stearns	Asst. Dir. Public Health	NKU	Yes	Local	dstearns@nku.edu																							
	Darren	A	Meier	Director	NKU	Yes	Local	dmeier@nku.edu																							

Instructor/Facilitator Signature: [Signature]

Page: 1 of 1
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Co-Instructor/Facilitator Signature: _____



NKU 2018 Hazard Mitigation Plan Stakeholder Kick-Off Meeting Notes:

NKU 2018 Hazard Mitigation Plan / Stakeholder Kick-Off Meeting

Date/Time: March 20, 2017 / 1:00 pm
Place: NKU Campus -
Next Meeting: Next Meeting Date
Attendees: 29
Absentees: Absentees
Distribution: Distribution List

Jeff Baker, NKU Safety and Emergency Manager started the meeting by briefly explaining the benefits of having a Hazard Mitigation Plan in place. The emphasis was placed on the availability of federal funds through a federal grant where the federal government offers 75 %, the state offers 13% and the university is responsible for 12% for hazard mitigation projects. Jeff Baker mentioned that in December NKY put out a Request for Proposal to present Stantec as the selected consulting firm to update and develop the NKU 2018 Hazard Mitigation Plan. Jeff Baker introduced Josh Human, John Bucher and Luisa Trujillo from Stantec.

Josh Human, Senior Hazard Mitigation and Resilience Leader at Stantec proceeded to give a presentation about Hazard Mitigation Planning. First, he emphasized the importance for a university to have a Hazard Mitigation Plan in place especially at the present time with the amount of disasters that have happened and the government fund availability. Josh asked the audience to introduce themselves.

Among the attendants, there were a group of campus key figures including the Manager for Research Compliance and Biosafety, the Student Enrollment Coordinator, the Business and IT Manager, the Facilities Manager, the Sustainability Coordinator, and the Insurance Claims Assessor. Additionally, some authorities of the City of Highland Heights Public were also present including the Public Works Director, the Fire Chief, and the Police and First Response Lead.

Josh Human's presentation included a Hazard Mitigation 101 description, a clarification of the difference between risk and mitigation, and a detailed step by step explanation of the planning steps to complete the Hazard Mitigation Plan including Planning Process, Risk Assessment, Mitigation Strategy, Plan Maintenance and Plan Adoption. Josh Human also explained the Vulnerability Score and the tools used during the planning process.

Josh Human continued to go over each one of the hazards and ask the audience for input. Forest Wildfires, Drought and Mine Subsidence were dropped from the original list of hazards because they don't represent a risk for NKU Campus.

The Student Enrollment Coordinator inquired about how to identify sinkholes on campus. The Stantec team explained that through data analysis, it was possible to determine that NKY campus is not in a sinkhole prone area. Another attendant addressed the existence of a sinkhole on campus.

Another member of the audience asked if biohazard materials such as viruses are part of the Hazard Mitigation Plan. Josh Human addressed the question by saying that this was not part of the HMP, but that some data collected and produced by the plan can be useful in biohazard projects.

Break at 2:00 pm.

After the break, Stantec's Senior Planner John Bucher introduced an activity to let the audience vote on how concerned they felt with each of the hazards. After voting, members were invited to look at three different maps where they could pinpoint exact risk locations. Voting results concluded that Severe Storms, Severe Winter Storms and Hazardous Materials are the hazards that represent the highest risk on NKU Campus.

To conclude the meeting, the Stantec team asked the audience for resources to acquire data for the risk assessment map. The meeting ended by announcing that the Public Survey is available online.

The meeting adjourned at 4:02pm

Public Kick-Off Meeting

March 20, 2018

4:00pm - 6:00pm

Agenda

Welcome

**Jeff Baker, Safety & Emergency
Management**

Hazard Mitigation Planning 101

Josh Human, Stantec

Hazard Identification

John Bucher, Stantec

The hazard mitigation planning process is required under federal law to help communities better prepare for disaster events and to ensure communities are eligible for federal grants to support mitigation actions. Plans must be updated and approved every five years to maintain eligibility. This will be NKU's first hazard mitigation plan.

The completed plan will be submitted to the Kentucky Division of Emergency Management and the Federal Emergency Management Agency for approval prior to being submitted to Board of Regents for adoption.

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502.618.5873

John Bucher
Stantec
john.bucher@stantec.com
502.212.5044

Public Meeting Notice:

From: nkunews-bounces@listserv.nku.edu [mailto:nkunews-bounces@listserv.nku.edu] **On Behalf Of** ThisWeek@nku.edu
Sent: Monday, March 12, 2018 10:10 AM
To: NKUNews@listserv.nku.edu
Subject: [NKUNews] THIS WEEK AT NKU: March 12, 2018

A publication from NKU Marketing and Communications.



SUBMIT: thisweek@nku.edu **DEADLINE:** Noon on Friday

MONDAY, MARCH 12

OTHER ANNOUNCEMENTS

All Hazards Mitigation Plan Meeting March 20

Safety and Emergency Management will host a public meeting on Tuesday, March 20, at 4 p.m., to inform the campus community about the development of an All Hazards Mitigation Plan for the university. This plan will help the university better prepare for natural and man-made disaster events. The meeting will be hosted in Student Union Room 109. Presentations and literature will be provided to attendees explain the planning process and how the university community and local agencies can aide in data collection and hazard identification. The plan will outline areas that are at-risk on campus and determine vulnerabilities. The objective is to develop a program of activities and plans NKU may adopt to mitigate the university's vulnerability to natural and man-made hazards. For more information contact [Jeff Baker](#) at X-6522.

Sign-In Sheet:

Instructors/Facilitators MUST sign each page of the Event Roster

Kentucky Division of Emergency Management Event Roster

Name of Event: NKUA HMP Public Meeting
 Location: NKUA Student Union 105
 Address: _____
 City/Community: Highland Heights
 EDBS#/NEXS#: _____

Is This An Exercise? Yes No
 If so, what type:
 Seminar Workshop TTX Game
 Drill Functional Full-Scale

Event Start Date: 3/20/18 3:30p
 Event End Date: 3/20/18 5:30p
 Instructor/Facilitator (1): Josh Hansen
 Instructor/Facilitator (2): Jeff Baker
 Total Event Hours: 2.0
 Event Hours: Day 1: 2.0 Day 2: _____ Day 3: _____ Day 4: _____ Day 5: _____

If registering day-of, please print your name and email address legibly. The name on your certificate will appear as written.

Initials Only, Each Day

0	FirstName	MI	Last Name	Title	Agency	Are you being Paid to attend?		Email	Job Category	Day	Day	Day	Day	Total Hrs.
						Yes	By Whom?			1	2	3	4	
0	John	Q	Doe	SAR Coordinator	XYZ County	Yes	Local	JQD@xyzcorporation.bus	SAR Supervisor					0
1	James	M	Wilkinson	Teaching Lab Coord.	chemistry	NO		wilkinsonj@nkua.edu						32
2	Jeff	P	Baker	Director	NKUA	Yes	NKUA	bakerj@nkua.edu						32
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Instructor/Facilitator Signature: [Signature]

Page: 1 of 1
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Co-Instructor/Facilitator Signature: _____

NKU 2018 Hazard Mitigation Plan / Public Kick-Off Meeting Notes:

Date/Time: March 20, 2017 / 4:00 pm
Place: NKU Campus -
Next Meeting: Next Meeting Date
Attendees: 1
Absentees: Absentees
Distribution: Distribution List

Safety Moment: Enter safety moment here

Jeff Baker, NKU Safety and Emergency Manager started the meeting by briefly explaining the benefits of having a Hazard Mitigation Plan in place. The emphasis was place of the availability of federal funds through a federal grant where the federal government offers 75 %, the state offers 13% and the university is responsible for 12% for hazard mitigation projects. Jeff Baker mentioned that in December NKY put out a Request for Proposal to presented Stantec as the selected consulting firm to update and develop the NKU 2018 Hazard Mitigation Plan. Jeff baker Introduced Josh Human, John Bucher and Luisa Trujillo from Stantec.

Josh Human, Senior Hazard Mitigation and Resilience Leader at Stantec proceeded to give a presentation about Hazard Mitigation Planning. First, he emphasized the importance for a university to have a Hazard Mitigation Plan in place especially at the present time with the amount of disasters that have happened and the government fund availability. Josh asked the audience to introduce themselves.

The only person who attended this meeting was a Chemistry professor who expressed his concern due to the hazardous materials on campus.

Josh Human's presentation included a Hazard Mitigation 101 description, a clarification of the difference between risk and mitigation, and a detailed step by step explanation of the planning steps to complete the Hazard Mitigation Plan including Planning Process, Risk Assessment, Mitigation Strategy, Plan Maintenance and Plan Adoption. Josh Human also explained the Vulnerability Score and the tools used during the planning process.

Josh Human continued to go over each one of the hazards and ask the audience for input. Forest Wildfires, Drought and Mine Subsidence were dropped from the original list of hazards because they don't represent a risk for NKU Campus.

Stantec's Senior Planner John Bucher invited the audience member to look at three different maps to pinpoint exact risk locations.

To conclude the meeting, the Stantec team asked the audience for resources to acquire data for the risk assessment map. The meeting ended by announcing that the Public Survey is available online.

The meeting adjourned at 5:05 pm

Risk Assessment Meeting

June 6th, 2018

12:45pm – 3:45pm

Agenda

Welcome	Jeff Baker, Safety & Emergency Management
Risk Assessment Overview	Josh Human & John Bucher, Stantec
Introducing the Mitigation Strategy	Josh Human, Stantec
Next Steps	Josh Human, Stantec

The hazard mitigation planning process is required under federal law to help communities better prepare for disaster events and to ensure communities are eligible for federal grants to support mitigation actions. Plans must be updated and approved every five years to maintain eligibility. This will be NKU's first hazard mitigation plan.

The completed plan will be submitted to the Kentucky Division of Emergency Management and the Federal Emergency Management Agency for approval prior to being submitted to Board of Regents for adoption.

Contacts

Jeff Baker, Director
Safety & Emergency Management
bakerje@nku.edu
859.572.6522

Josh Human
Stantec
josh.human@stantec.com
502.618.5873

John Bucher
Stantec
john.bucher@stantec.com
502.212.5044

Example Goals from Other University Plans

2013 University of Louisville Hazard Mitigation Plan:

Goal 1: Protect lives and minimize injuries from hazard events.

Goal 2: Protect university property and research data.

Goal 3: Ensure consistent funding sources for prevention, maintenance, and mitigation of disasters.

Goal 4: Enhance existing, or design new, university policies and technical capabilities that will mitigate and reduce damages from hazard events.

Goal 5: Build stronger external partnerships between government, educational institutions, business, and the general public.

Goal 6: Increase public and university awareness of, and support for, disaster preparedness practices

2014 Kentucky State University Hazard Mitigation Plan:

Goal 1: Protect and minimize injuries from hazard events.

Goal 2: Protect university property and research data.

Goal 3: Ensure consistent funding for disaster management.

Goal 4: Increase staff capacity, policies, and technical capabilities for mitigation.

Goal 5: Build external partnerships with government, educational institutions, business, and the community.

Goal 6: Build awareness and educate on disaster preparedness.

2016 University of Kentucky Hazard Mitigation Plan:

Goal 1: Protect lives and reduce injuries from hazards and threats.

Goal 2: Protect university property, organizational information, and research from hazards and threats

Goal 3: Enhance existing or develop new university policies and practices that are designed to reduce damaging effects from hazards and threats.

Goal 4: Build stronger partnerships between government, educational institutions, business, and the community.

Goal 5: Build disaster preparedness through mitigation education and outreach.

2012 KCTCS Hazard Mitigation Plan

Goal 1: Attempt to minimize the loss of life and injuries that could be caused by natural hazards.

Goal 2: Protect KCTCS property and research data from damage that could be caused by natural hazards.

Goal 3: Enhance existing or develop new system-wide policies and technical capabilities that will reduce damaging effects of natural hazards.

Goal 4: Continue to build and strengthen partnerships and synergies among KCTCS agencies, state and local governments, the campus community and the general public to promote effective mitigation strategies in a comprehensive and collaborate effort.

Goal 5: Increase campus community understanding of natural hazard mitigation through the promotion of mitigation education and awareness of natural hazards.

Stakeholder Invite:

NKU Hazard Mitigation Plan
Stakeholders invitation

To: Stakeholder Group
From: Jeff Baker
Subject: NKU Hazard Mitigation Plan Risk Assessment

Greetings All,

Please join us for the Risk Assessment Workshop for the NKU Hazard Mitigation Plan on Wednesday, June 6, 2018 at 1:00pm. The workshop will be held in the NKU Student Union, Room 109.

In the Risk Assessment Workshop, we will present the preliminary results of the risk assessment and ask for your help in identifying additional areas of concern. We will also ask for your help in locating critical facilities and vulnerable areas that deserve attention in the Hazard Mitigation Plan.

Thank you for your participation in this important project. Please feel free to nominate someone else from your department if you are unable to participate. We look forward to seeing you at 1:00pm on June 6.

Sincerely,

Jeff Baker
NKU Safety and Emergency Management
(859)572-6522
bakerje@nku.edu

Bucher, John

From: Jeffrey Baker <bakerje@nku.edu>
Sent: Wednesday, May 23, 2018 3:10 PM
To: Curtis Keller; Timothy Ferguson; Lori Mcmillin; Syed Zaidi; John Gaffin; Arnie Slaughter; Blaine Gilmore; Rose Tempel; Jackson Meeks; Gina Rittinger; Dannie Moore; Anita Southwick; Raymond Mirizzi; Lori Southwood; Benjamin Jager; Christopher Hafling; Francois LeRoy; James Kaufman; Rebecca Lanter; Sarah Aikman; Darren Stearns; Ryan Padgett; Russell Kerdolff; 'wbirkenhauer@hhky.com'; 'slehman@hhky.com'; 'wturner@campbellcountyky.org'; 'trmatl2@uky.edu'; 'dwhibb0@email.uky.edu'; 'dan.schultz@cccfd.org'; Sami Dada; Matthew Zacate; Kathryn Lovold; 'emily.carnahan@nkadd.org'; STEPHEN MEIER; 'Grinstead, Nick (nick.grinstead@uky.edu)'
Cc: Human, Josh; Bucher, John
Subject: RE: Stakeholder Meeting - Save The Date

Good Afternoon,

For those unable to attend the stakeholder meeting on June 6th, I ask that you consider sending an alternate in your place. Input from each of your areas is valuable and ensures that we have the correct data to properly assess our vulnerabilities and prioritize our mitigation efforts. Your time and participation with this process is greatly appreciated.

Kind regards,

Jeff Baker

Jeffrey P. Baker
Director, Safety and Emergency Management
70 Campbell Drive, MA 134
Highland Heights, KY 41099
(859)572-6522

Sign-In Sheet:

Instructors/Facilitators MUST sign each page of the Event Roster

Kentucky Division of Emergency Management Event Roster

Name of Event: NKU Risk Assessment Meeting
 Location: NKU Student Union
 Address: _____
 City/Community: NKU
 EDBS#/NEXS#: _____

Is This An Exercise? Yes No
 If so, what type:
 Seminar Workshop TTX Game
 Drill Functional Full-Scale

Event Start Date: 6-Jun-18
 Event End Date: 6-Jun-18
 Instructor/Facilitator (1): John Human
 Instructor/Facilitator (2): Josh Human
 Total Event Hours: _____
 Event Hours: Day 1: 3 Day 2: _____ Day 3: _____ Day 4: _____ Day 5: _____

If registering day-of, please print your name and email address legibly. The name on your certificate will appear as written.

Are you being Paid to attend?

Initials Only, Each Day

First Name	MI	Last Name	Title	Agency	XYZ County	Yes	Local	Email	Job Category	Day 1	Day 2	Day 3	Day 4	Day 5	Total Hrs.
John	Q	Doe	SAR Coordinator	XYZ County		Yes	Local	JQD@xyzcorporation.bus	SAR Supervisor						0
John	S	STRAUS	SPECIALIST	NKU				stausj@nkun.edu	Program Mgr						
Russell	A	Kendall	Comptroller	NKU				kendallr@nkun.edu	Administrative						
Doreen		STEARNS	GM	BET ARENA				dstearns@stabbtva.com							
Steve		LEHMAN	Publicworks Director	CITY OF H.H.				stehman@h.h.ky.gov							
Bob		MAINTEN	DIRECTOR	NKU				bob.maint@nkun.edu							
William		MAINTEN	Director Eastern	NKU				william.maint@nkun.edu							
David		Berland	Director	NKU				berlandd@nkun.edu							
Kevin	A	FRANZEN	Director HR	NKU				kevin.franzen@nkun.edu							
Lori		PAUSLICK	AVP IT	NKU				lori.pauslick@nkun.edu							
Ryan		PAUSLICK	AVP Enrollment	NKU				ryan.pauslick@nkun.edu							
Gregory		LeRoy	SVI Affairs	NKU				gregory@nkun.edu							
Rose	A	Temple	IT Dir/IT Health Sys	NKU				rose.temple@nkun.edu							
Chris	D	Harting	Assoc. AD	NKU				chris.harting@nkun.edu							
Dannie		Moore	AVP Student Affairs	NKU				dannie.moore@nkun.edu							
Kochelle	W	Shields	ASSOC. DIR. Housing	NKU				kochelle@nkun.edu							
Annie	D	Slawmer	Dean of Students	NKU				annie.slawmer@nkun.edu							
Chris	L	Tembling	Assoc. Dir of Student Union	NKU				tembling@nkun.edu							
Josh		Human	Director, Safety & EM	Stander		Yes		josh.human@stander.com							
Jeff		Reker		NKU		Yes		jeff.reker@nkun.edu							

Instructor/Facilitator Signature: [Signature]

Page: _____ of _____
 Ver 8 Rev 12/2013

Co-Instructor/Facilitator Signature: _____

Instructors/Facilitators MUST sign each page of the Event Roster

Kentucky Division of Emergency Management Event Roster

Name of Event: NKU Risk Assessment Meeting
 Location: NKU Student Union
 Address: _____
 City/Community: NKU
 EDBS#/NEXS#: _____

Is This An Exercise? Yes No
 If so, what type:
 Seminar Workshop TTX Game
 Drill Functional Full-Scale

Event Start Date: 6-Jun-18
 Event End Date: 6-Jun-18
 Instructor/Facilitator (1): John Human
 Instructor/Facilitator (2): Josh Human
 Total Event Hours: _____
 Event Hours: Day 1: 3 Day 2: _____ Day 3: _____ Day 4: _____ Day 5: _____

If registering day-of, please print your name and email address legibly. The name on your certificate will appear as written.

Are you being Paid to attend?

Initials Only, Each Day

First Name	MI	Last Name	Title	Agency	XYZ County	Yes	Local	Email	Job Category	Day 1	Day 2	Day 3	Day 4	Day 5	Total Hrs.
Shawn	A	MEIER	Interim Campus Rec	NKU				meier@nkun.edu							
Pat		McGee	Associate Dir. Campus Rec	NKU				pat.mcgee@nkun.edu							
Anna	K	Smithwick	Mar. Research (Comp)	NKU				anna.smithwick@nkun.edu							
Matthew	C	Zacate	Fac Senate Pres.	NKU				matthew.zacate@nkun.edu							
Gina	L	Rittinger	AVP, Mar Comm	NKU				gina.rittinger@nkun.edu							
Thomas	L	Garstetter	Man Comm	NKU				thomas.garstetter@nkun.edu							
Chris		KELLEY	Director, Parking Service	NKU				chris.kelley@nkun.edu							
Gina	M	Kaufman	Director	NKU				gina.kaufman@nkun.edu							

NKU 2018 Hazard Mitigation Plan Risk Assessment Meeting Notes:

NKU 2018 Hazard Mitigation Plan

Date/Time: June 6, 2017 / 1:00 pm
Place: NKU Campus -
Next Meeting: Next Meeting Date
Attendees: 27

Jeff Baker, NKU Safety and Emergency Manager started the meeting by welcoming the attendees and giving a brief explanation of the project

Josh Human then asked the attendees to introduce themselves and tell the group how their role related to hazard mitigation on campus. Josh gave a brief introduction to hazard mitigation planning, the Disaster Mitigation Act of 2000, and the FEMA Local Mitigation Planning Handbook. He then gave an overview of the risk assessment process and hazard identification.

John Bucher then presented the details of the risk assessment methodology including the exposure score and hazard risk score. He then showed a few examples of the maps created to demonstrate the results of the risk assessment. At that point the attendees were asked to look at the maps to check for accuracy and provide additional details where possible. Feedback included:

- Nunn Hall's content value is too high
- Founders Hall should have a condition score of 1 because of renovation
- Founders content value needs to be updated
- There was a storm/wind incident that caused a tree to fall on the intramural field
- The intramural field replacement value is about \$2million
- The baseball field replacement value is about \$750,000
- The soccer field replacement value is about \$700,000
- The softball field replacement value is about \$150,000
- The tennis courts replacement value is about \$150,000.
- The mapped hazmat sites need to be verified

Josh Human introduced the mitigation strategy, including mitigation goals, mitigation actions and the action plan. He then led the attendees in an exercise to draft NKU's mitigation goals. The group settled on the following goals and will review them prior to the next meeting.

1. Pursue consistent funding from a variety of sources for prevention, maintenance, and mitigation of disasters.
2. Increase public and university awareness through education and support for disaster preparedness practices.
3. Enhance staff capacity and collaboration, policies, and technical capabilities that will mitigate and reduce damages from hazard events.
4. Protect university property, organizational information, and research assets from hazards and threats.
5. Build and sustain partnerships between government, educational institutions, business, and the community.
6. Protect lives and minimize injuries that could be caused by hazard events.

Josh then asked the group if they had any questions.

Question about what was meant by “consistent funding sources”

This means regular grant application (FEMA and other), capital improvements, and operational budgets if available

Question about what type of public awareness and education are intended

These could include websites, trainings, and student orientation

Josh then introduced the mitigation strategy and the mitigation action workbook. He informed the group that he will email the workbook and ask them to add possible mitigation actions.

He told the group that he will be sending another announcement about the survey, because we had very few complete surveys so far.

The meeting ended at 4:00 pm.

Mitigation Strategy Meeting

September 27, 2018

1:00 pm

Agenda

Welcome	Jeff Baker, Safety & Emergency Management
Mitigation Strategy Overview	Josh Human, Stantec
Small Break Out Groups	All
Next Steps	Josh Human, Stantec

The hazard mitigation planning process is required under federal law to help communities better prepare for disaster events and to ensure communities are eligible for federal grants to support mitigation actions. Plans must be updated and approved every five years to maintain eligibility. This will be NKU's first hazard mitigation plan.

The completed plan will be submitted to the Kentucky Division of Emergency Management and the Federal Emergency Management Agency for approval prior to being submitted to Board of Regents for adoption.

Contacts

Jeff Baker, Director
Safety & Emergency Management
bakerje@nku.edu
859.572.6522

Josh Human
Stantec
josh.human@stantec.com
502.618.5873

John Bucher
Stantec
john.bucher@stantec.com
502.212.5044

Goals Identified during our last meeting:

1. Pursue consistent funding from a variety of sources for prevention, maintenance, and mitigation of disasters.
2. Increase public and university awareness through education and support for disaster preparedness practices.
3. Enhance staff capacity and collaboration, policies, and technical capabilities that will mitigate and reduce damages from hazard events.
4. Protect university property, organizational information, and research assets from hazards and threats.
5. Build and sustain partnerships between government, educational institutions, business, and the community.
6. Protect lives and minimize injuries that could be caused by hazard events.

Stakeholder Invite:

Bucher, John

From: Jeffrey Baker <bakerje@nku.edu>
Sent: Monday, September 10, 2018 10:50 AM
To: Curtis Keller; Timothy Ferguson; Lori Mcmillin; Syed Zaidi; John Gaffin; Arnie Slaughter; Blaine Gilmore; Rose Tempel; Jackson Meeks; Gina Rittinger; Dannie Moore; Anita Southwick; Lori Southwood; Benjamin Jager; Christopher Hafling; Francois LeRoy; James Kaufman; Rebecca Lanter; Sarah Aikman; Darren Stearns; Ryan Padgett; Russell Kerdolff; 'wbirkenhauer@hhky.com'; 'slehman@hhky.com'; 'wturner@campbellcountyky.org'; 'trmatl2@uky.edu'; 'dwhibb0@email.uky.edu'; 'dan.schultz@cccfd.org'; Sami Dada; Matthew Zacate; 'emily.carnahan@nkadd.org'; STEPHEN MEIER; 'Grinstead, Nick (nick.grinstead@uky.edu)'; William Moulton; Sue Murphy-Angel
Cc: Human, Josh; Bucher, John
Subject: RE: Hazard Mitigation Actions
Attachments: Mitigation_Action_Questions_Examples.docx;
Mitigation_Action_Workbook_Instructions_NKU.docx;
NKU_Mitigation_Strategy_Workbook.xlsx

Dear Stakeholder Group,

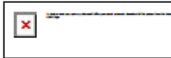
As a reminder, our next meeting is scheduled for September 27th at 1pm. Please note the change in location to University Center Room #135.

Please take some time prior to the meeting to add items to the mitigation strategy workbook and send to Josh.human@stantec.com. There are many projects that can be associated to hazards so do not hesitate to add something you are unsure of. I have attached the tools to help.

We look forward to seeing you and appreciate your continued participation! If you are unable to attend, please send an alternate to represent your area.

Thank you,

Jeffrey P. Baker
Director, Safety and Emergency Management
70 Campbell Drive, MA 134
Highland Heights, KY 41099
(859)572-6522



Sign-In Sheet:

Instructors/Facilitators MUST sign each page of the Event Roster

Kentucky Division of Emergency Management Event Roster

Name of Event: NKU Risk Assessment Meeting
 Location: NKU Student Union
 Address: _____
 City/Community: NKU
 EDBS#/NEXS#: _____

Is This An Exercise? Yes No
 If so, what type:
 Seminar Workshop TTX Game
 Drill Functional Full-Scale

Event Start Date: 27-Sep-18
 Event End Date: 27-Sep-18
 Instructor/Facilitator (1): Josh Human
 Instructor/Facilitator (2): _____
 Total Event Hours: 3.0

Event Hours: Day 1: 3.0 Day 2: _____ Day 3: _____ Day 4: _____ Day 5: _____

If registering day-of, please print your name and email address legibly. The name on your certificate will appear as written.

Initials Only, Each Day

Are you being Paid to attend?

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Day					Total
																										1	2	3	4	5	
John	Q	Doe	SAR Coordinator	XYZ County	Yes	Local	JQD@xyzcorporation.bus	SAR Supervisor																				0			
Jeff	P	Saker	Director	NKU	Yes	NKU	bakerje@nku.edu																								
Josh		Human	PM	Stantec	Yes	Stantec	josh.human@stantec.com																								
Andy		DeBorja	SR. PLANNER	STANTEC	Yes	STANTEC	andy.deborja@stantec.com																								
Jim		Kaufman	Director	NKU	Yes	NKU	Jim.Kaufman@nku.edu																								
Syed	S	Zaidi	Asst. Dir. - PM	NKU	Yes	NKU	syed@nku.edu																								
Jeff		Millidlin	IT	NKU	Yes	NKU	Jeff.Millidlin@nku.edu																								
Bob		Lanter	Director, Energy Mgt	NKU	Yes	NKU	lanterb@nku.edu																								
Mark	C	Straw	SPECIALIST - PRO	NKU	Yes	NKU	strawm@nku.edu																								
Steve		LEHMAN	Public Works Director	HIGHWAY HEIGHTS	Yes	H.H.	Steve.Lehman@hky.com																								
Bill		Moucton	Ass. Dir. - OAM	NKU	Yes	NKU	mouctonbill@nku.edu																								
Sharon		Keel	Director, Camps Rec	NKU	Yes	NKU	keelsh@nku.edu																								
David		Stearns	GM B&T Arena	NKU	Yes	SUNG/NKU	davidstearns@hokkita.com																								
David		Berland	Director of Univ. Housing	NKU	Yes	NKU	berlandd@nku.edu																								
Frank		Scutts	Mgr. Res. Compl.	NKU	Yes	NKU	scuttsfrank@nku.edu																								
Ray		Attahoban	Asst. Assistant	NKU	Yes	NKU	attahobanray@nku.edu																								
Matthew		Zacate		NKU	Yes	NKU																									
Rose		Empert		NKU	Yes	NKU																									
Chris	L	Tambling	Assoc. V.P. Student Union	NKU	Yes	NKU	tamblingc@nku.edu																								
Chris		Hatling	Associate AD	NKU	Yes	NKU	hatlingc@nku.edu																								
Anna		Wright	Director of P.R.	NKU	Yes	NKU	wrighta@nku.edu																								
Tom		Rodriguez	Director of Int. Communication	WISY	Yes	WISY	rodri@nku.edu																								
Franco		LeMay	Exec. Director of Student Engagement	NKU	Yes	NKU	lemayfr@nku.edu																								
John		GAFFIN	CHIEF OF POLICE	NKU	Yes	NKU	gaffinjohn@nku.edu																								

Instructor/Facilitator Signature: R. Human

Page: _____ of _____
 Ver 8 Rev 12/2013

Co-Instructor/Facilitator Signature: _____

NKU 2018 Hazard Mitigation Plan Mitigation Strategy Meeting Notes:

NKU 2018 Hazard Mitigation Plan

Date/Time: September 27, 2018 / 1:00 pm
Place: NKU Campus -
Next Meeting: Next Meeting Date
Attendees: 27

Jeff Baker, NKU Safety and Emergency Manager started the meeting by welcoming the attendees. Josh Human, from Stantec started the Mitigation Strategy reminded the audience about the importance of having a Hazard Mitigation Plan in place. He asked the audience to briefly introduce themselves since new people joined the meeting.

Josh introduced the concept of mitigation strategy and presented examples of mitigation strategy actions plans from the University of Kentucky and the University of Louisville. The following activity was to divide the audience into small groups with a facilitator to discuss current mitigation strategies and come up with new ones.

The facilitators were Andy Dobson, John Bucher, and Luisa Trujillo/ All of them are planners at Stantec. During the activity Josh Human and Jeff Baker went from table to table facilitating the discussion.

The meeting ended at 4:00pm.

Draft Plan Overview Meeting (Stakeholder/Public) March 13, 2019 1:00pm – 4:00pm

Agenda

Welcome	Jeff Baker, Safety & Emergency Management
Hazard Mitigation Plan Draft Overview	Josh Human, Stantec
The Finish Line	Josh Human, Stantec

The hazard mitigation planning process is required under federal law to help communities better prepare for disaster events and to ensure communities are eligible for federal grants to support mitigation actions. Plans must be updated and approved every five years to maintain eligibility. This will be NKU's first hazard mitigation plan.

The completed plan will be submitted to the Kentucky Division of Emergency Management and the Federal Emergency Management Agency for approval prior to being submitted to Board of Regents for adoption.

Contacts

Jeff Baker, Director
Safety & Emergency Management
bakerje@nku.edu
859.572.6522

Josh Human
Stantec
josh.human@stantec.com
502.618.5873

John Bucher
Stantec
john.bucher@stantec.com
502.212.5044

Stakeholder Invite:

Subject: Hazard Mitigation Stakeholder Meeting
Location: Griffin Hall Digitorium

Start: Wed 3/13/2019 1:00 PM
End: Wed 3/13/2019 3:00 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Jeffrey Baker

This is the last Stakeholder meeting. We will review the draft plan by section. Hope to see everyone there.

Best regards,

Jeff Baker

Public Meeting Notice:

A publication from NKU Marketing and Communications.



SUBMIT: thisweek@nku.edu **DEADLINE:** Noon on Friday

You Are Invited: Safety and Emergency Management Stakeholder Meeting

Safety and Emergency Management is holding a stakeholder meeting to review the draft of the All Hazards Mitigation Plan for the university. This meeting is open to the public. The plan, once approved, will identify campus projects that help reduce damage to the university caused by disasters and would allow us to apply for federal grants to fund some of those projects. The meeting will be hosted in the Griffin Hall Digitorium on **Wednesday, March 13**, at 1 p.m. For more information [contact Jeff Baker](#) at X-6522.

NKU 2018 Hazard Mitigation Draft Plan Notes:

NKU 2018 Hazard Mitigation Plan

Date/Time: March 13, 2019 / 1:00 pm
Place: NKU Campus -
Next Meeting: Next Meeting Date
Attendees: 23

Jeff Baker, NKU Safety and Emergency Manager started the meeting by welcoming the attendees. Josh Human, from Stantec started the meeting by reminding the audience about the importance of having a Hazard Mitigation Plan in place. He asked the audience to briefly introduce themselves since new people joined the meeting.

Josh then proceeded to complete a deep dive of each section of the NKU Hazard Mitigation Plan. There were a few questions that popped up about some of the Mitigation Actions and the Plan Maintenance section. Each question was addressed and the meeting was completed with a final overview of what the next steps of the process.

The meeting ended at 4:00pm.

Public Comment Instructions:

From: ThisWeek@nku.edu
Date: Mon, Apr 15, 2019 9:57 AM
To: nkunews@listserv.nku.edu;
Cc:
Subject:[NKUNews] This Week at NKU: Week of April 15, 2019

A publication from NKU Marketing and Communications.



SUBMIT: thisweek@nku.edu **DEADLINE:** Noon on Friday

NKU Hazard Mitigation Plan Draft

Safety and Emergency Management has been working with several stakeholders, both internal and external of the university, over the last year to develop the first Northern Kentucky University Hazard Mitigation Plan. The plan identifies natural hazards that pose a risk to the university and areas of vulnerability on campus. The plan also identifies future projects that would mitigate some of these risks. Once the plan is finalized and adopted by the Board of Regents, the university will be eligible to seek federal grant funds to help pay for specific projects. A draft of the plan is [now available online](#). You may [email your questions or comments](#) or call Jeff Baker at X-6522.

Website Address and link to the Draft for Review:

<https://inside.nku.edu/safety/emergencymanagement/hazardmitigation.html>

HAZARD MITIGATION

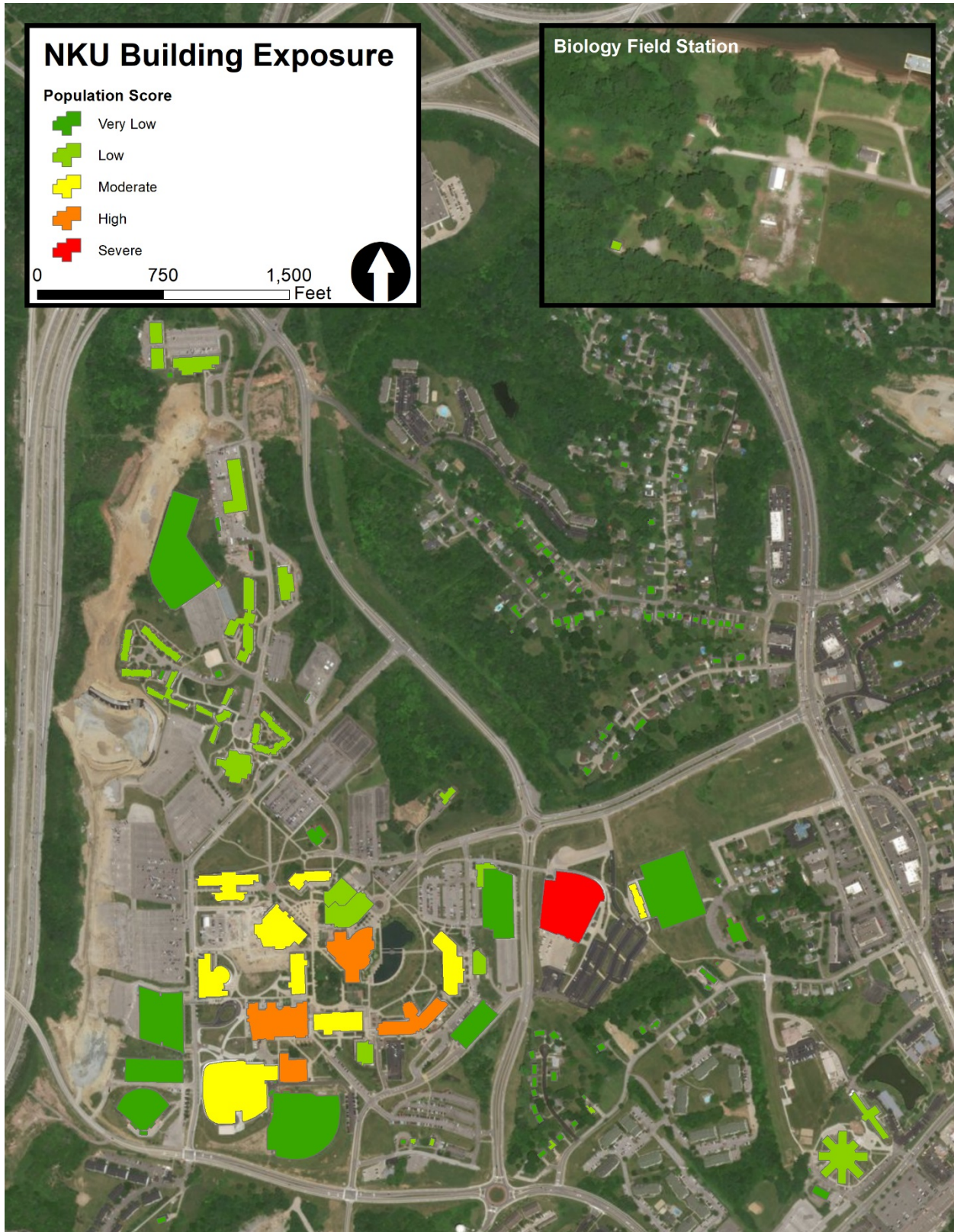
MENU	<p>To help us be better prepared for a university disaster, it is important that our community develop a strategy to mitigate losses. The Northern Kentucky University Hazard Mitigation Plan will outline areas that are at-risk on campus and determine vulnerabilities. The objective is to develop a program of activities to mitigate the university’s vulnerability to natural and man-made hazards that Northern Kentucky University will adopt. Over the next year the University will be developing their first Hazard Mitigation Plan. Please review this website for updates on the process, including opportunities to participate directly via meetings and surveys.</p>
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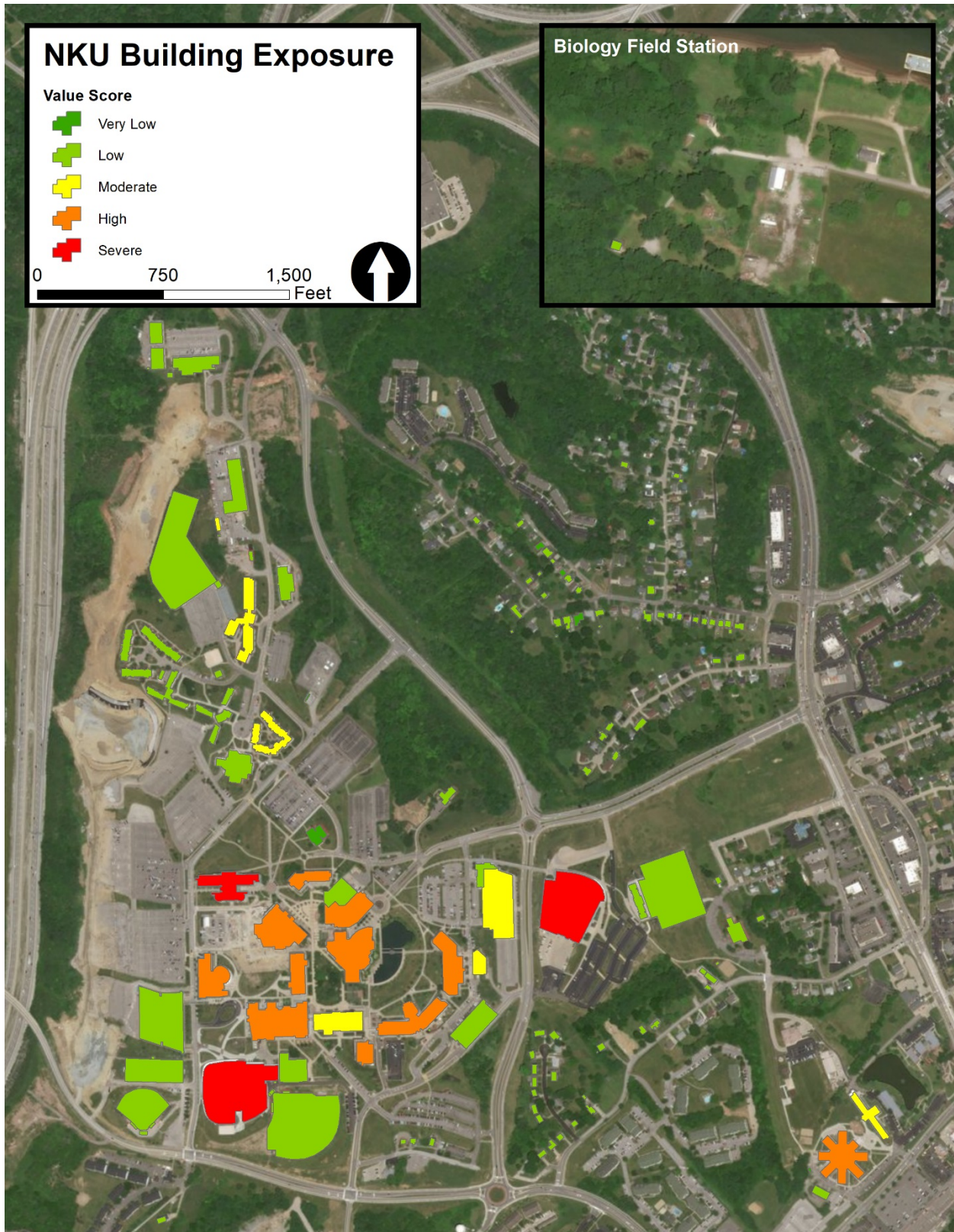
2018 HAZARD MITIGATION PLAN (DRAFT)

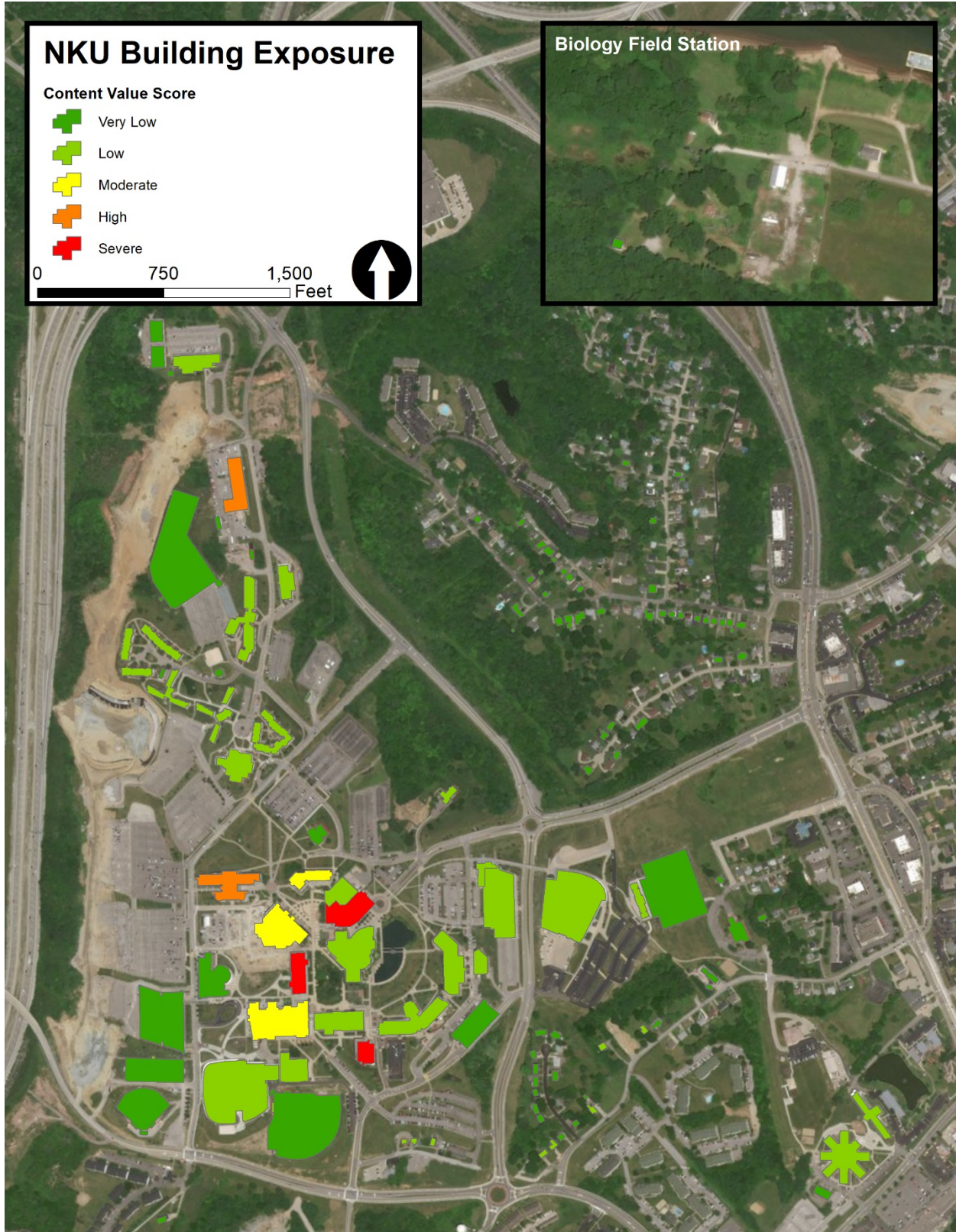
Appendix C: NKU Stakeholder Group List and Attendance

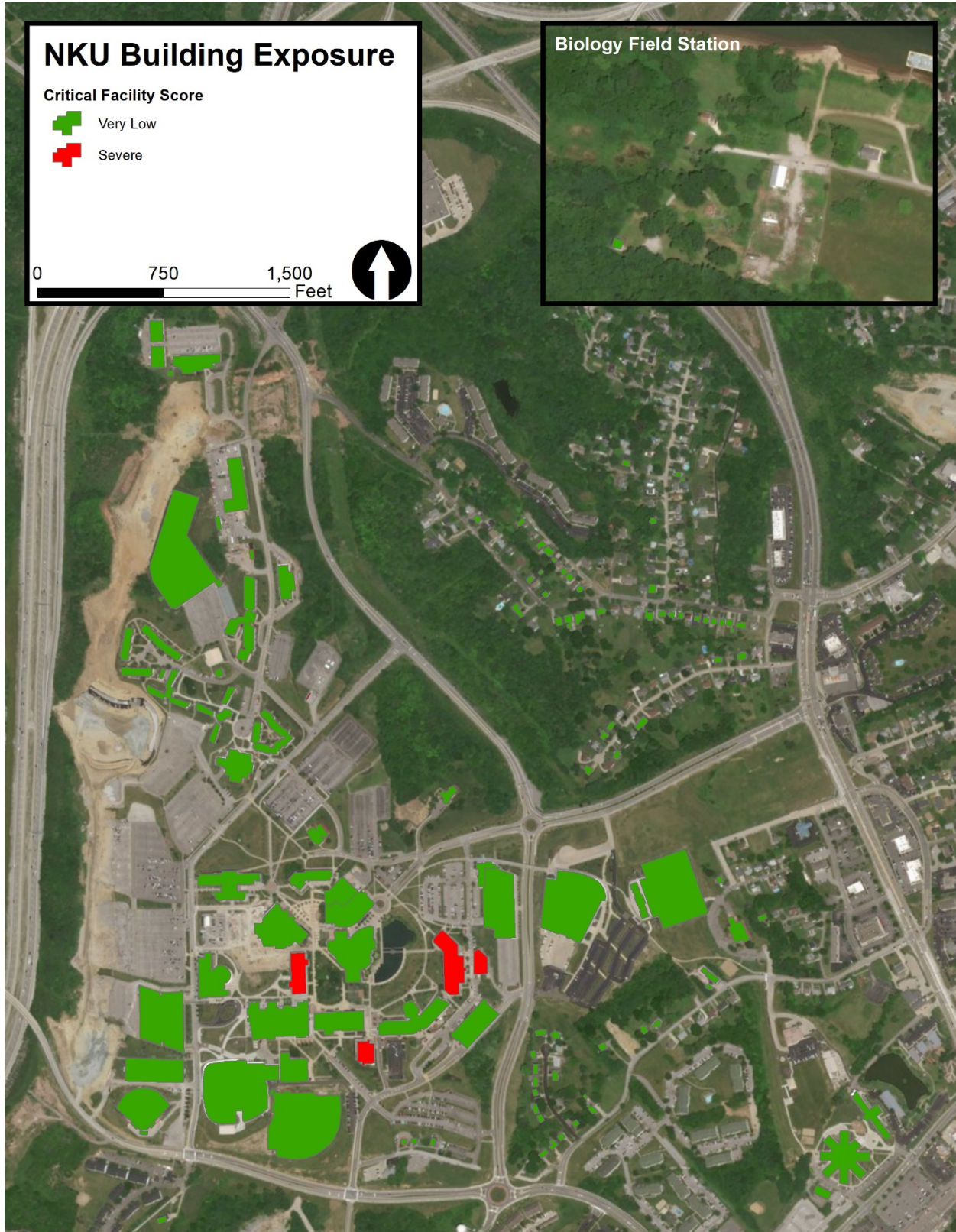
NKU Stakeholder Group						Attendance			
Name	Department	Title	E-Mail	Phone #	03/20/18	06/18/18	09/27/18	03/13/19	
Ryan Straus	Procurement	Specialist	strausr2@nku.edu	8595726605		1	1		
Russell Kerdolff	Comptroller's Office	Comptroller	kerdolff@nku.edu	8595726455		1			
Darren Stearns	BB&T Arena	General Manager	dstearns@thebbtarena.com	8594422652	1	1	1	1	
Steve Lehman	City of Highland Heights	Public Works Director	slehman@hhky.com	8594418575	1	1	1		
Becki Lanter	Operations & Maintenance	Director	lanterr1@nku.edu	8595725493	1	1	1	1	
William Moulton	Operations & Maintenance	Assistant Director	moultonw1@nku.edu	8595725445		1	1	1	
David Berland	University Housing	Director	berlandd1@nku.edu	8595726018		1	1	1	
Lauren Frazen	HR Management Services	Director	franzenla@nku.edu	8595727523		1			
Lori McMillin	Information Technology	Business Manager	mcmillinl1@nku.edu	8595725272	1	1	1	1	
Ryan Padgett	Enrollment and Student Success	Assistant VP	padgettr1@nku.edu	8595721561	1	1		1	
Francois LeRoy	Ctr for Global Engagement/Intl Affairs	Executive Director	leroy@nku.edu	8595727976		1	1	1	
Rose Tempel	Health, Counseling & Student Wellness	Associate Director	tempelr1@nku.edu	8595725650	1	1	1	1	
Christopher Hafling	Athletics Facilities	Associate Director for Internal Ops	haflingc1@nku.edu	8595727665		1	1		
Dannie Moore	Student Affairs	Assistant VP	moored8@nku.edu	8595726692		1			
Rochelle Shields	University Housing	Associate Director	shieldsr3@nku.edu	8595725403		1			
Arnie Slaughter	Student Engagement & Dean of Students	Assistant VP	slaughtera@nku.edu	8595725147		1		1	
Chris Tambling	Student Union & Programming	Associate Director	tamblingc1@nku.edu	8595727775	1	1	1	1	
Jeff Baker	Environmental Safety and Compliance	Director, Safety & Emergency Management	bakerje@nku.edu	8595726522	1	1	1	1	
Stephen Meier	Campus Recreation	Interim Director			1	1			
Patrick McGrath	Campus Recreation	Associate Director	mcgrathp2@nku.edu	8595726024		1			
Anita Southwick	Research, Grants & Contracts	Manager, Research Compliance	southwica1@nku.edu	8595725168	1	1	1		
Matthew Zacate	Physics, Geology & Engineering Technology	Faculty	zacatem1@nku.edu	8595721365		1	1	1	
Gina Rittinger	Marketing & Communications	Assistant VP	rittingerg1@nku.edu	8595726565		1			
Thomas Ramstetter	Marketing & Communications	Director, University Communications	ramstetter@nku.edu	8595721303		1	1		
Curtis Keller	Parking Services	Director	kellerc6@nku.edu	8595727582		1			
Jim Kaufman	Property Management	Director, Real Property Development	kaufmanj2@nku.edu	8595721991	1	1	1	1	
Syed Zaidi	Facilities Management	Assistant Vice President	zaidis1@nku.edu	8595721907	1		1	1	
Shomari Kee	Campus Recreation	Director	kees1@nku.edu	8595725198			1		
Tina Altenhofen	Center for Applied Informatics	Assistant to the Executive Director	altenhof@nku.edu	8595727689			1	1	
Anna Wright	Marketing & Communications	Director, Public Relations	wrighta15@nku.edu	8595725808			1		
John Gaffin	University Police	Chief of Police/Campus Safety	gaffinj@nku.edu	8595726611			1	1	
Katie Lovold	Staff Council	President	lovoldl1@nku.edu		1				
Dan Schultz	Central Campbell Fire District	Chief	dan.schultz@cccfcd.org		1				
Blaine Gilmore	Procurement Services	Associate Director	gilmoreb@nku.edu	8595726449	1			1	
Greg Hiagis	Highland Heights PD	Lieutenant	ghaigis@hhky.com		1				
Tim Ferguson	IT - Information Technology Central	Chief Information Officer	ferguson2@nku.edu	8595727770	1				
Martha Bederman	Public	Public						1	
Will Lowe	University Police	Police Department	lowew1@nku.edu					1	
Jim Wilkinson	Chemistry	Professor	wilkinsonj1@nku.edu					1	
Viola Cooper	Administration	Records Manager	cooperv@nku.edu					1	
					17	26	21	21	

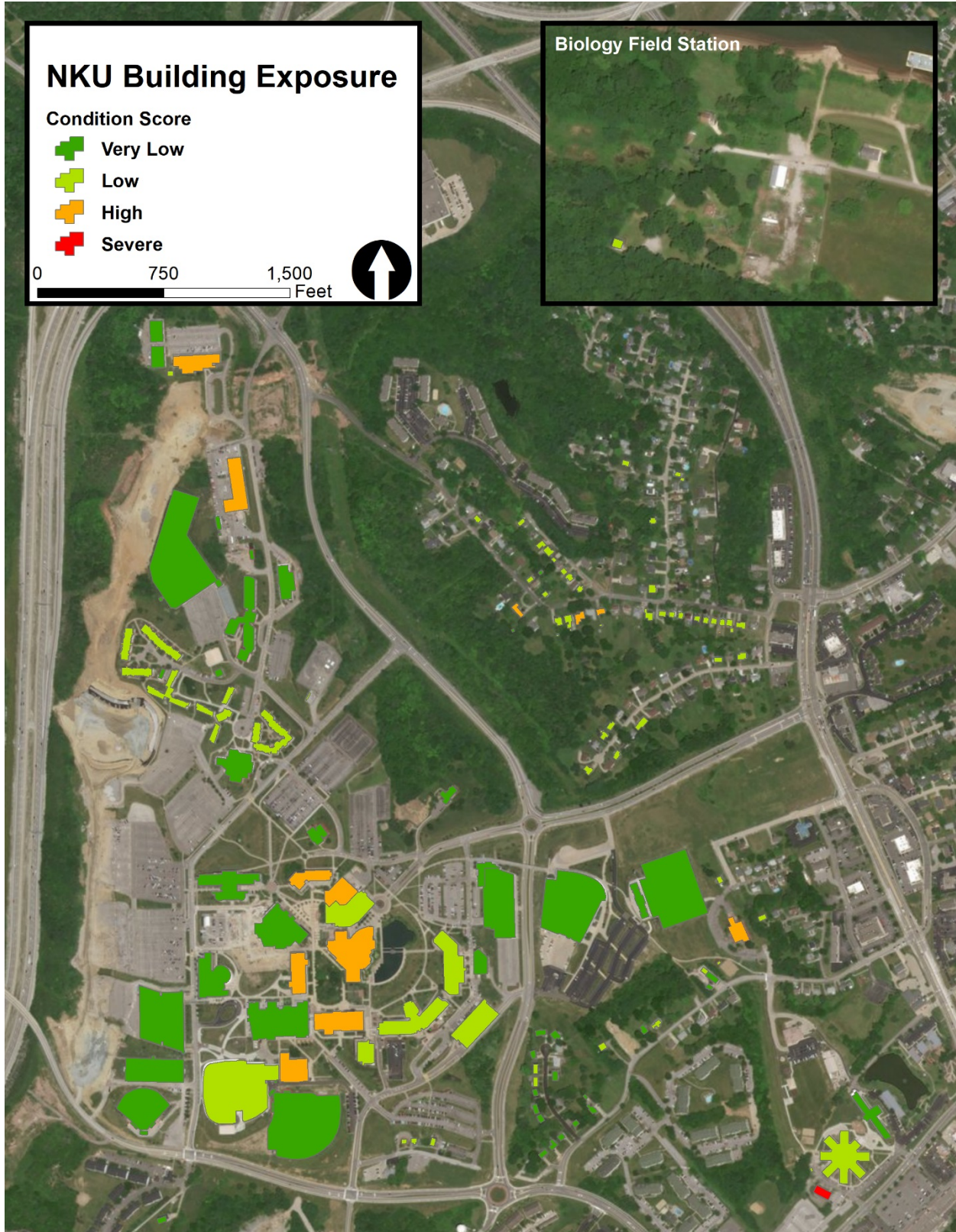
Appendix D: Exposure Maps











Appendix E: Mitigation Action Workbook Instructions

MITIGATION ACTION WORKBOOK OVERVIEW

The following document provides the instructions and definitions for each of the requirement elements to be captured in the 'Mitigation Action Workbook' (excel document). The Mitigation Action Workbook will be used to capture hazard mitigation actions for the university's Hazard Mitigation Plan. The Mitigation Action Workbook is to be used as part of a strategic planning process and are designed to be:

- Completed electronically
- Developed and reviewed with your department
- Returned to contact person identified below

Please return all completed worksheets no later than August 27 to:

Josh Human
Josh.human@stantec.com

INSTRUCTIONS

Use the Mitigation Action Workbook to provide hazard mitigation actions to be included in the plan. Proposed actions should consider any needs that may reduce current and or future impacts of natural and non-natural hazard events. Each mitigation action should be entered as a separate project, policy or program within the spreadsheet. Ultimately, the Mitigation Action Workbook is intended to compile all university hazard mitigation needs into a single section (Mitigation Strategy) and serve as a blue print for reducing the University's overall vulnerability.

Action Description: Identify a specific action that, if accomplished, will reduce campus vulnerability. Actions may be in the form of policies (i.e., regulatory or incentive-based measures), programs and/or structural mitigation projects. Include key details such as site/building/location and any history of damages.

Hazard(s) Addressed: List the hazard(s) the proposed action is designed to mitigate against:

- | | |
|-----------------|-------------------------|
| 1. Earthquake | 7. Karst/Sinkhole |
| 2. Extreme Heat | 8. Landslide |
| 3. Extreme Cold | 9. Severe Storm |
| 4. Flood | 10. Severe Winter Storm |
| 5. Hail | 11. Tornado |
| 6. HAZ/MAT | |

Type: Indicate the mitigation category for the proposed action as discussed during the Kickoff Meeting (Please note a drop-down menu has been provided):

- | | |
|-------------------------------|----------------------------------|
| • Prevention | • Structural Projects |
| • Property Protection | • Emergency Services |
| • Natural Resource Protection | • Public Education and Awareness |

Estimated Cost: Indicate the estimated cost to accomplish this action. If the cost is unknown or not applicable (e.g. creation of a policy), mark as \$0 or "staff time." Please indicate the cost of the action based on the following criteria (Please note a drop-down menu has been provided):

- \$0 - \$4,999 (Low)
- \$5,000 - \$49,999 (Moderate)
- \$50,000 - \$249,999 (High)
- \$250,000 - Above (Very High)

Benefits: Indicate whether the benefit of the action is "very high," "high," "moderate," or "low" based on the following general criteria (Please note a drop-down menu has been provided):

- | | |
|---------------------------------------|---|
| 1. Enhance Life Safety | 7. Positive Social Impact |
| 2. Protect Property | 8. Administrative Capability |
| 3. The Action is Technically Feasible | 9. Local Champion |
| 4. The Action is Politically Feasible | 10. The Action Advances other University Objectives |
| 5. The Action is Legal | |
| 6. Positive Environmental Impacts | |

Potential Funding Sources: Indicate how the cost to complete the action will be funded. For example, funds may be provided from existing operating budgets or general funds, a previously established contingency fund, a cost-sharing federal or state grant program.



Lead Implementer and other Partners: Identify the lead department or organization that is best suited to implement the proposed action, as well as potential partner departments.

Timeframe: Describe a timeframe goal for completion. Please provide as much detail on the timeframe of this action as possible. For example, it could be an Action that is completed annually, or it could have a goal to be done in 2 or 5 years etc.

Edits: Provide your contact information for tracking purposes.



Mitigation Action Evaluation Worksheet

Use this worksheet to help evaluate and prioritize each mitigation action being considered by the planning team. For each action, evaluate the potential benefits and/or likelihood of successful implementation for the criteria defined below.

Rank each of the criteria with a -1, 0 or 1 using the following scale:

- 1 = Highly effective or feasible
- 0 = Neutral
- -1 = Ineffective or not feasible

Example Evaluation Criteria

Life Safety – How effective will the action be at protecting lives and preventing injuries?

Property Protection – How significant will the action be at eliminating or reducing damage to structures and infrastructure?

Technical – Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.

Political – Is there overall public support for the mitigation action? Is there the political will to support it?

Legal – Does the community have the authority to implement the action?

Environmental – What are the potential environmental impacts of the action? Will it comply with environmental regulations?

Social – Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?

Administrative – Does the community have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?

Local Champion – Is there a strong advocate for the action or project among local departments and agencies that will support the action's implementation?

Other Community Objectives – Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of the comprehensive plan?

Appendix G: Plan Maintenance Forms

The below form may be distributed to responsible university departments for the purpose of updating the status of action items. Another method of gathering updates to mitigation action items might be to distribute the "Mitigation Action Workbook" excel workbook to NKU Stakeholder Group to make direct changes.

Subject: Annual Report Status of Mitigation Action Items and Projects

Report Date: MM/DD/YYYY

Purpose of Annual Reporting: On an annual basis the Division of Planning and the Division of Emergency Management (DEM) has committed to tracking and monitoring action items on the Hazard Mitigation Plan (HMP) and the Floodplain Management Plan (FMP). As a responsible agency to the proposed action items, your cooperation in completing the below forms will allow DEM and Planning to conduct a thorough update on each mitigation project and action item.

Updating Your Projects: To find your agency's pre-identified mitigation projects and action items, please refer to the provided spreadsheet which lists mitigation action items and projects from the previous year. If your agency has procured new projects that are not listed and demonstrate the accomplishment of an action item, please provide information on the new project in one of the below forms. Please complete the below forms, save the document with your agency name and return to <name/agency name here> at <email address here>.

Name of Reporter:

Email Address:

Telephone #:

INDIVIDUAL PROJECT PROGRESS REPORT #1

Addressed Action Item: Refer to accompanying spreadsheet with listed action items.

Project Title:

Responsible Department: <Select Agency> **If other, please specify:**

Status of Project: <Select Status>

If stand-alone project, please enter dates:

Start Date: Click here to enter a date.

End Date: Click here to enter a date.

Funding Source:

Cost of Project <Type of Cost> Enter amount here.

If this project is new, please describe: Enter project description here.

Problems/Obstacles & Proposed Corrective Action:

Additional Comments: Enter comments here.

The below form may be utilized for recording needed and anticipated amendments to the plan.

Northern Kentucky University Hazard Mitigation Plan

Plan Amendment Form

Amendment Sponsor: _____

Amendment #: _____

Date: MM/DD/YYYY

Current Text: _____

Section: _____ **Page** _____ **Line** _____

Amended Text: _____

Section: _____ **Page** _____ **Line** _____

Purpose of Amendment: _____

Appendix H: Local Mitigation Plan Review Tool

Appendix I: Landslide Events for Campbell and Kenton Counties as Recorded by Kentucky Geological Survey (KGS) and Published in its Landslide Inventory

Below cites landslide events that have been recorded in the Kentucky Geological Survey (KGS) Landslide Inventory. Generally speaking, landslide events are not recorded systematically and independently like flood events or atmospheric events. The record of events is highly dependent upon anecdotal reporting and subsequent site inspection. Consequently, KGS's Landslide Inventory does not contain information related to all cells for all landslide events. Where cells are blank, the information for that particular event currently is not available and thus is not recorded in the Landslide Inventory.

While the Northern Kentucky University (NKU) hazard mitigation plan has isolated events to the campus and to Campbell County in order to illustrate its risk from and vulnerability to identified hazards, regarding landslide activity, it is relevant to illustrate events from Kenton County that borders mere miles from Northern Kentucky University's campus in the City of Highland Heights in Campbell County. Including events from nearby Kenton County provides two (2) pieces of information relevant for assessing the risk from and vulnerability to landslides by Northern Kentucky University:

One, as already presented, despite the frequency of landslide events in Kentucky generally (and, especially in "Northern Kentucky," i.e., in the region within which NKU resides), landslide activity historically has not been recorded systematically. Meanwhile, particular data points toward a risk assessment for a hazard mitigation plan as codified in 44 CFR §201.6 present a challenge when confronted with unsystematically recorded data. Two such data points involve the requirement to assess risk in terms of a scale or measure for "how bad" a hazard event can become (i.e., the identified hazard's magnitude or *extent*) and citation of damages (i.e., *impacts*) from an identified hazard. That it is understandable that landslide activity has not been collected systematically has much to do with *extent* and with the *impacts* from landslides. Regarding *extent*, landslides either occur incrementally over time or occur suddenly. In either instance, it is not expected that individuals outside of experts would be able to or should measure how many feet the land slid or the dimensions of a landslide. Thus, anything beyond anecdotal citation of a measurement compliant with the definition of *extent* currently is not to be expected. Regarding *impacts*, the incentive to quantify material damages from landslides is heavily reliant upon either public sector job function (e.g., the cost of repairs for public infrastructure) or upon good citizenship. Until there is an incentive for individuals to quantify damages from landslides (e.g., an insurance program), again, it cannot be expected that *impact* recordings will be available beyond the anecdotal. Thus, when presented with the beneficial work of Kentucky Geological Survey in its cataloguing and verifying of what otherwise would be entire reliance on hearsay for past events, it is advantageous to expand the scope of previous occurrence recording in order to maximize examples of, in the mitigation plan's case, *extent* and *impacts* so as to provide a fuller illustration of the risk from and vulnerability to landslides by Northern Kentucky University given its residence within the "Northern Kentucky" region.

Two, the expansion of data points to include those from a jurisdiction within which Northern Kentucky University does not per its postal address immediately reside, of course, depends on the proximity of Northern Kentucky University to said outside jurisdiction (in this case, Kenton County).

Kenton County and its incorporated cities exist within a mere six-mile to 22-mile range from Northern Kentucky University and its Highland Heights within Campbell County site. Further, is an uncontroversial assumption that, at the very least and for example, a significant number of students, faculty, and staff of NKU likely live in Kenton County and its incorporated cities. Thus, it provides a fuller illustration of the utter ubiquity of landslide activity from which Northern Kentucky University is vulnerable given its location within Kentucky. In other words, it is worth including Kenton County previous occurrences particularly for the landslide hazard because Kenton County and its cities are, at most, 22 miles away from Northern Kentucky University's campus. And within the six-mile to 22-mile range of NKU, the number of previous occurrences for landslide events *doubles*. Arguably, it is considerably underestimating the vulnerability of NKU to landslides by truncating landslide activity to within Campbell County only given that Kenton County is literally right up the road from the NKU.

So, this is the environment within which NKU resides: Given a hazard type acknowledged for its understandably unsystematic data collection and its subsequent reliance upon anecdote to illustrate effects from and vulnerability to landslides, NKU still sits geographically within an area that has counted officially over 350 landslides in less than fifty years. The students, faculty, and staff of NKU with an acknowledged underestimation are affected by around 4 landslides per year.

Excluded from the below snapshot of landslide events for Campbell County and its cities and Kenton County and its cities that potentially are recorded Kentucky Geological Survey's Landslide Inventory are latitude/longitudes of event sites, the geologic units comprising the landslide, the lithology and surficial geology comprising the event, the geomorphic position of the event, the geologic unit of the event, whether there was water present in the event, whether there were fractures or faults, and other locational data.

It is also relevant to note that five landslide events recorded in the database were identified and reported to Kentucky Geological Survey by Northern Kentucky University. These events are highlighted in a light blue shade.

Appendix I Table 1. Landslide Events Recorded by Kentucky Geological Survey and Events' Characteristics Where Available and Verified as Published in Kentucky Geological Survey's Landslide Inventory

	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
1	Campbell	Alexandria	KY 915		5/15/2008	Slide							Yes	
2	Campbell	Newport	Bonnie Leslie Ave	10/18/2008	3/1/2008	Landslide					20-30		Yes	
3	Campbell	Newport	Sherry Lane	10/18/2008	3/1/2008	Landslide					15-30		Yes	
4	Campbell	Newport	Sherry Lane	10/18/2008	3/1/2008	Landslide					15-30			
5	Campbell	Alexandria	KY 915	6/15/2010		Landslide							Yes	
6	Campbell	Alexandria	KY 915	6/15/2010		Landslide							Yes	
7	Campbell	Alexandria	KY 915	6/15/2010		Landslide							Yes	
8	Campbell	Alexandria	KY 915	6/15/2010		Landslide							Yes	
9	Campbell	Alexandria	KY 915	6/15/2010		Landslide							Yes	
10	Campbell	Newport	KY 915											
11	Campbell	Newport				Slide								
12	Campbell	Newport	KY 2345								30-35			
13	Campbell	Newport	E 11th St			Slide					30-35			
14	Campbell	Newport	KY 445			Slide					20-25			
15	Campbell	Newport	Overlook Dr	8/4/2010		Landslide					15-30		Yes	
16	Campbell	Newport	Berry Ave	9/21/2006		Landslide	75 ft.	150 ft.			22-27	Continuous-Rapid	Yes	
17	Campbell		Licking Pike	10/30/2010		Landslide						Intermittent	Yes	
18	Campbell	Alexandria	US 27	11/19/2010		Landslide						Continuous-Slow	No	
19	Campbell	Newport	Ule Rd		4/15/2011	Landslide			Up to 1 foot				Yes	
20	Campbell	Newport	Lincoln Rd		4/24/2011	Landslide					<10		Yes	
21	Campbell	Newport	Rosford Run	12/9/2011	12/5/2011	Flow	225 ft.					Fast	Yes	
22	Campbell	Newport	10th St		1/27/2012	Landslide							Yes	
23	Campbell	Newport	I 275	8/28/1973										
24	Campbell	Newport	KY 8											
25	Campbell	Newport	KY 8											
26	Campbell	Alexandria	US 27										Yes	
27	Campbell	Newport	I 471	11/9/1976			70 ft.	50 ft.		8-10 ft.		0.5 ft. in Movement Last Year	Yes	
28	Campbell	Alexandria	KY 709											
29	Campbell	Alexandria	US 27											
30	Campbell	New Richmond	KY 8											

	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
31	Campbell	Newport	KY 8											
32	Campbell													
33	Campbell													
34	Campbell													
35	Campbell													
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	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
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	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
97	Campbell													
98	Campbell													
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	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
130	Campbell													
131	Campbell													
132	Campbell													
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162	Campbell													

	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
163	Campbell													
164	Campbell													
165	Campbell	Alexandria	KY 915		8/28/2012								Yes	
166	Campbell	Alexandria												
167	Campbell	Newport	Jerome Ct			Landslide								
168	Campbell	Newport	KY 445											
169	Campbell	Alexandria	US 27											
170	Campbell	New Richmond	KY 8			Landslide								
171	Campbell		Upper Tug Fork Rd	3/1/2014		Landslide						Intermittent	Yes	
172	Campbell	Newport	KY 8			Landslide								
173	Campbell	Newport	Licking Pike		2/3/2016	Landslide							Soil, Rocks, and Trees in Roadway	
174	Campbell	Newport	KY 9		3/30/2018								One Lane Blocked	
175	Campbell	Newport	Ky 2925 (East Alexandria Pike)	3/1/2018		Landslide		30 ft.				Continuous-Slow	No	
176	Campbell	Newport	Highland Meadows Circle											
177	Campbell	Newport	Dayton Pike											
178	Keaton	Independence	KY 1468											
179	Kenton	Covington	KY 3187		5/20/2008	Slide					25-35		Yes	
180	Kenton	Covington	Church St			Landslide					28-30			
181	Kenton	Covington	Montague Rd			Slide					25-30			
182	Kenton	Covington	KY 1072 (Sleepy Hollow Rd)		10/4/2010	Landslide					25-30		Yes	
183	Kenton		Orphanage Rd	11/1/2010		Landslide						Continuous-Moderate	Yes	
184	Kenton	Walton	Shady Ln	3/2/2011		Landslide							Yes	
185	Kenton	Independence	KY 1486		4/28/2011	Landslide							Yes	
186	Kenton	Independence	Cody Rd		4/21/2011	Landslide							Yes	
187	Kenton	Alexandria	KY 177		5/3/2011	Landslide							Yes	
188	Kenton	Walton	Cruise Creek Rd		5/3/2011	Landslide								
189	Kenton	Walton	Shady Ln		5/3/2011	Landslide							Yes	
190	Kenton	Covington	KY 8		5/3/2011	Landslide					20-25		Yes	
191	Kenton	Alexandria	Conley Rd		5/3/2011	Landslide							Yes	
192	Kenton	Alexandria	Lambs Ferry Rd		5/3/2011	Landslide							Yes	

	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
193	Kenton	DeMossville	Navaho Rd		5/3/2011	Landslide							Yes	
194	Kenton	DeMossville	KY 3081		5/3/2011	Landslide							Yes	
195	Kenton	Alexandria	Porter Rd		5/3/2011	Landslide							Yes	
196	Kenton	Alexandria	Tecumseh Rd		5/3/2011	Landslide							Yes	
197	Kenton	Alexandria	Tecumseh Rd		5/3/2011	Landslide							Yes	
198	Kenton	Alexandria	Tecumseh Rd		5/3/2011	Landslide							Yes	
199	Kenton	Covington	KY 371		6/1/2011	Landslide							Yes	
200	Kenton	Alexandria	KY 536			Landslide							Yes	
201	Kenton	Covington	Carl Ct		4/24/2011	Landslide	115 ft.	107 ft.	10 ft.				Yes	
202	Kenton	Independence	KY 1829	11/9/2011	4/24/2011	Landslide	300 ft.						Yes	
203	Kenton	Independence	KY 1829	11/9/2011		Landslide							Yes	
204	Kenton	Independence		11/9/2011		Landslide	200 ft.						Yes	
205	Kenton	Independence	KY 2047	11/9/2011		Landslide							Yes	
206	Kenton	Independence	KY 2047	11/9/2011		Landslide							Yes	
207	Kenton	Independence	Lambs Ferry Rd	11/9/2011		Landslide							Yes	
208	Kenton	Independence		4/4/2012		Landslide	50 ft.						Yes	
209	Kenton	Independence		4/4/2012		Landslide								
210	Kenton	Independence	KY 1501	4/4/2012		Landslide							Yes	
211	Kenton	Independence	KY 17	4/4/2012		Landslide	150 ft.							
212	Kenton	Covington	KY 17	1/22/1975										
213	Kenton	Covington	I 275	1/7/1975	9/20/1973								Yes	\$ 120,000.00
214	Kenton	Covington	I 75											\$ 325,360.00
215	Kenton	Covington	KY 1072											
216	Kenton	Covington	I 75		5/1/1973							Slow	Yes	
217	Kenton	Covington	KY 8		1/1/1992								Yes	\$5,000,000.00
218	Kenton	Covington	I 75											
219	Kenton	Covington	I 75		5/1/1978		90 ft.	110 ft.	5 ft.				Yes	
220	Kenton	Independence	KY 1303											
221	Kenton	Newport	KY 1930										Yes	
222	Kenton	Covington	I 75			Slide							Yes	
223	Kenton	Independence	KY 1303											
224	Kenton	Covington	KY 1072											
225	Kenton	Independence	KY 1303											

	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
226	Kenton	Covington	I 275											
227	Kenton	Covington	KY 1072											
228	Kenton	Covington	KY 1303											
229	Kenton	Covington	KY 1072											
230	Kenton	Covington	KY 8											
231	Kenton	Covington	I 275											
232	Kenton	Newport	U 9999											
233	Kenton													
234	Kenton													
235	Kenton													
236	Kenton													
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257	Kenton													
258	Kenton													

	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
259	Kenton													
260	Kenton													
261	Kenton													
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291	Kenton													

	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
292	Kenton													
293	Kenton													
294	Kenton													
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322	Kenton													
323	Kenton													
324	Kenton													

	County	City	Location	Date Observed	Failure Date	Type	Extent (Track Length)	Extent (Width)	Extent (Head Scarp Height)	Extent (Slip Surface Depth)	Slope Angle (in degrees)	Extent (Movement Rate)	Impact (Damage?) (Narrative)	Impact (Cost)
325	Kenton													
326	Kenton													
327	Kenton													
328	Kenton													
329	Kenton													
330	Kenton													
331	Kenton													
332	Kenton													
333	Kenton													
334	Kenton	Covington												
335	Kenton	Independence	Brookwood Dr			Landslide								
336	Kenton	Covington	Amsterdam Rd	11/16/2012		Landslide							Yes	
337	Kenton	Covington	Amsterdam Rd	11/16/2012		Landslide							Yes	
338	Kenton	Covington	US 25											\$ 64,359.00
339	Kenton	Covington	KY 8											
340	Kenton	Newport	47th St	6/22/2011	4/25/2011	Landslide							Yes	
341	Kenton	Newport		6/22/2011		Landslide							Yes	
342	Kenton	Covington	Devou Dr		3/12/2014	Landslide							Yes	
343	Kenton	Covington	KY 8			landslide	460 ft.						Yes	
344	Kenton	Covington	I 275			Landslide		120 ft.	8 ft.					
345	Kenton	Covington	KY 8			Landslide		200 ft.						
346	Kenton	Covington	KY 8			Landslide								
347	Kenton	Covington	KY 8			Landslide								
348	Kenton	Alexandria	KY 177			Landslide	35 ft.	75 ft.	3-5 ft.				Yes	
349	Kenton	De Mossville	KY 3081			Landslide	30 ft.	90 ft.						
350	Kenton	Walton	KY 3072			Landslide	20 ft.	250 ft.						
351	Kenton	Covington	KY 1072			Landslide							Yes	
352	Kenton	Independence	KY 1829			Landslide								
353	Kenton	Covington	US 127			Landslide							Yes: In Parking Lot	
354	Kenton	Independence											Trees and Powerlines Broken; Road Closed	