



IBTS CRAFT Report

Municipality of Norristown, PA

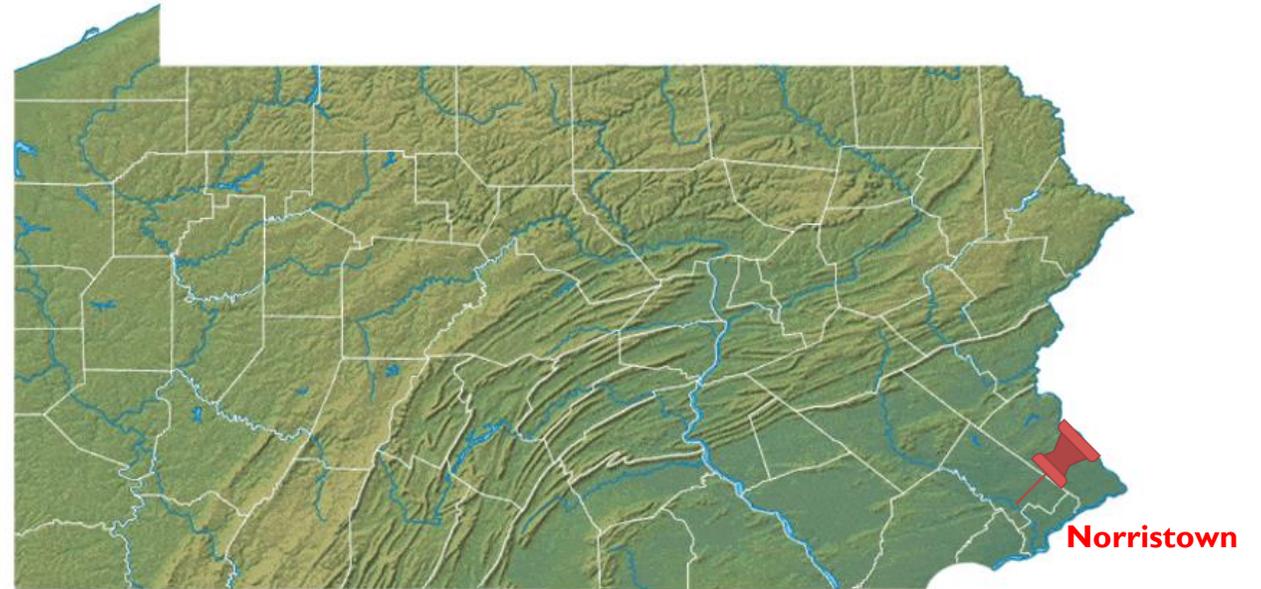
February 23, 2018

NLC Small Cities Resilience Competition



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Introduction

❖ Project Background

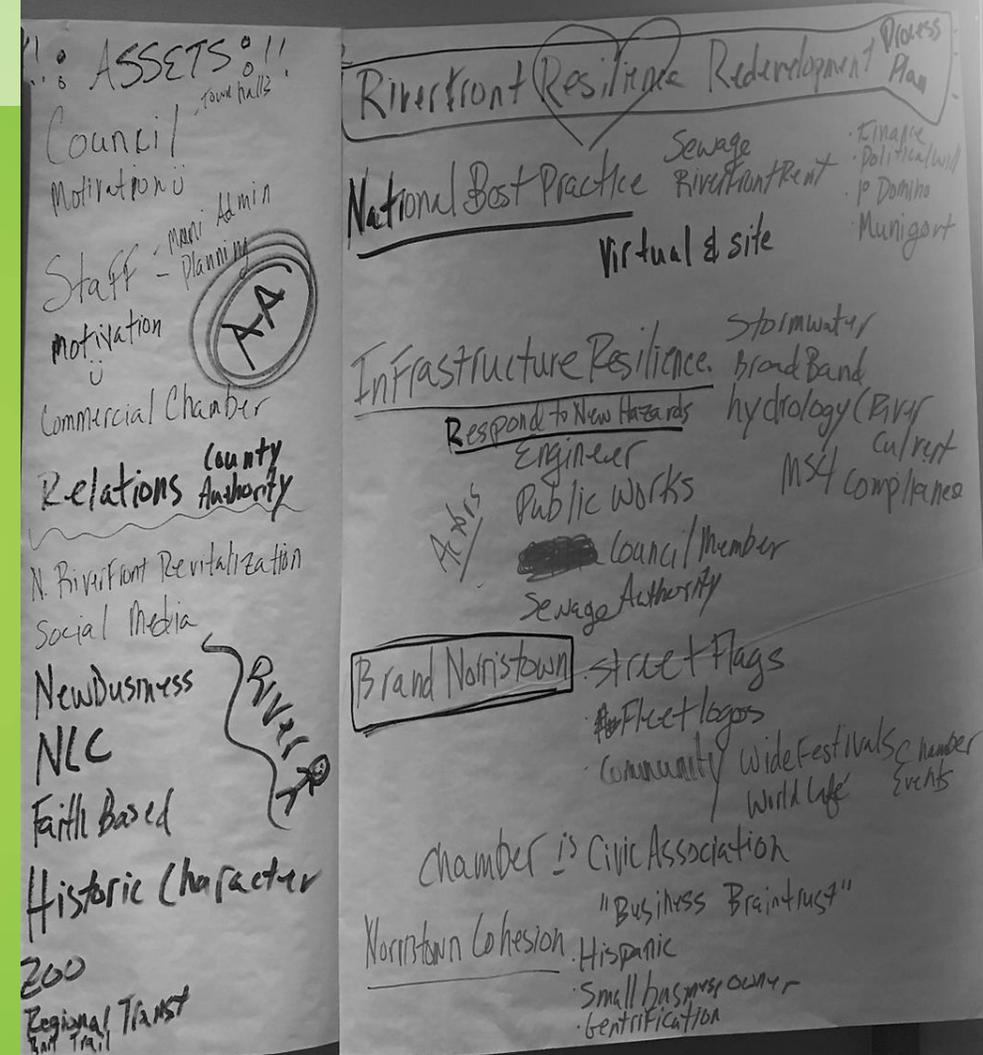


PROJECT BACKGROUND

- Small Cities Resilience Competition:
 - Institute for Building Technology and Safety (IBTS) in partnership with the National League of Cities (NLC).
 - Municipality of Norristown, PA selected as one of two finalists.
- Project objective:
 - Increase awareness of existing strengths and vulnerabilities.
 - Provide actionable recommendations for improving overall community resilience.
- As a finalist, Norristown received:
 - Baseline assessment of current resilience to natural and man-made hazards.
 - Project Impact Analysis of suggested public improvement projects.

IBTS Assessment Methodology

- ❖ Concept
- ❖ Framework
- ❖ Tools
- ❖ Process

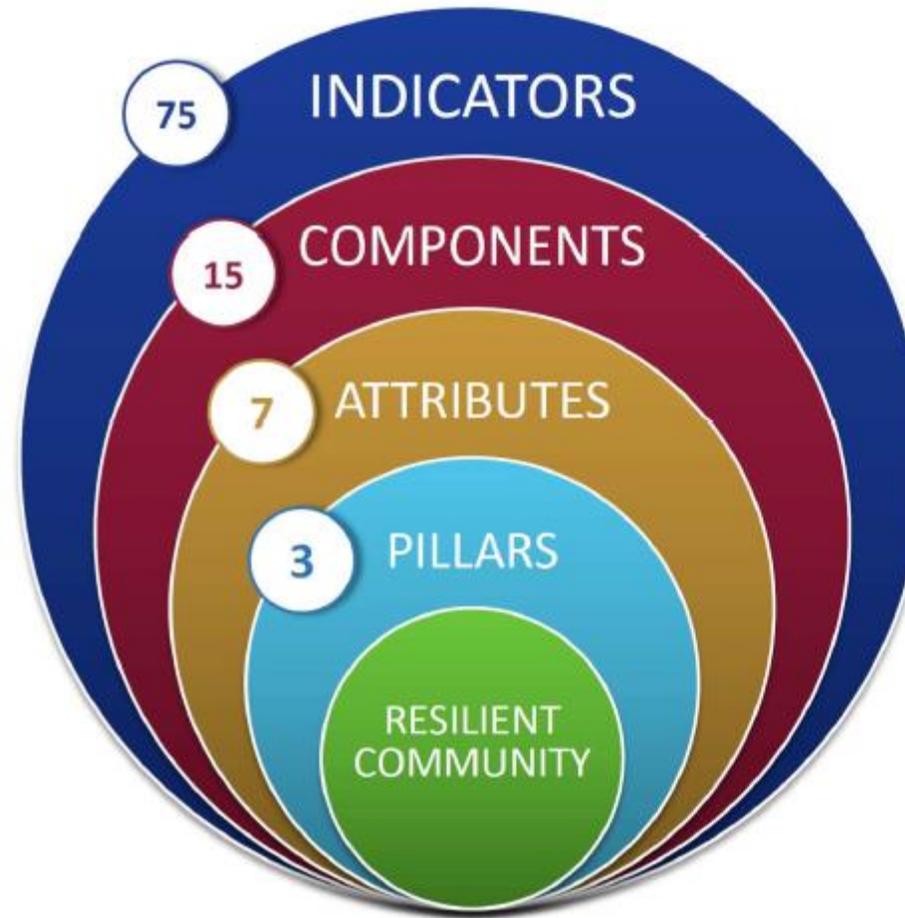


CONCEPT

- IBTS Community Resilience Assessment Framework and Tools (CRAFT):
 - Developed for small cities (<100,000).
 - Assess and strengthen community's social, economic, and government resilience.
- CRAFT was developed using IBTS:
 - Insights and experiences gained from providing local government solutions and municipal operations in small communities across the U.S.
 - Subject matter expertise in the built environment, natural disaster management, energy, and sustainability.
- CRAFT is designed to:
 - Identify strengths and vulnerabilities.
 - Inform actionable solutions that help municipalities build on their own resources.
 - Develop impactful projects unique to the communities' social and environmental fabric.

FRAMEWORK

- The CRAFT Framework is organized around three pillars familiar to most small communities:
 - Economic Resilience
 - Social Resilience
 - Government Resilience
- Each pillar has 15 components that together make the “ideal” resilient community.
- Scores are determined by using 75 indicators:
 - Five indicators for each component
 - Scores between zero (low) and five (high) for each component



● Social Resilience

- Acknowledge Stress
- Community Cohesion
- Isolate Trauma
- Social Supports
- Stress Stimulates Growth

● Economic Resilience

- Technology Resources
- Logistical Infrastructure
- Financial Resources
- Human Resources
- Physical Resources

● Government Resilience

- Strategic Planning
- Operations & Sustainment
- Government Relations
- External Plan Alignment
- Empowerment

TOOLS

1 Stakeholder Guidance Document

- Provided in advance to all assessment participants
 - Project overview
 - Explanation of framework and methodology
 - Defines project outcomes.



Logistical Infrastructure: Transportation and communication networks are durable and redundant in order to sustain and support a community's economic and emergency response needs.



Financial Resources: Economic diversity, stable revenues, financial discipline and the availability of reserves or other financial resources allow for sustained operations before, during and after a crisis.



Human Resources: Access to education and vocational training, business growth and a growing and diverse population allow for an engaged population that can react, respond and adapt to challenging situations.

2 Online Assessment Tool

- Using IBTS proprietary, web-based assessment tool
 - IBTS subject matter experts and local stakeholders review and assess CRAFT indicators
 - Scoring criteria and resilience best-practices are built-in to guide participants to determine community-appropriate indicator scores



Welcome to the IBTS Community Resilience Assessment Framework & Tools!

PROCESS

The IBTS community resilience assessment process includes two elements:

- 1) Baseline Assessment
- 2) Project Impact Analysis

Baseline Assessment

IBTS Pre-Assessment

- To perform the initial assessment, IBTS analyzed publically available materials, such as strategic plans, annual budgets, and demographic data, as well as documents furnished by the Municipality of Norristown.
- Concurrently, local stakeholders were given the opportunity to use the online assessment tool to familiarize themselves with the 75 indicators and how they align with the Norristown community.

On-Site Assessment

- IBTS and the Municipality of Norristown held a one-and-a-half day workshop with local stakeholders to discuss the initial assessment in a roundtable format and revise indicator scores where appropriate.
- The Municipality provided the IBTS Resilience Team with a tour of the community to familiarize IBTS SMEs with the unique social, economic, and governmental dynamics of Norristown to provide further insight into the assessment.

Project Impact Analysis

- Following the baseline assessment and discussion of potential public improvement projects with local stakeholders, IBTS uses CRAFT to score up to three potential projects to determine their overall impact on the community's resilience baseline.
- Using the same 75 indicators, IBTS compares the projects to determine which has the greater potential for positive impact across the 15 components.
- The findings of the Project Impact Analysis provide IBTS and the Municipality with clear recommendations for project selection and prioritization within the context of overall community resilience.

NORRISTOWN BASELINE SCORES																			
	SOCIAL RESILIENCE					ECONOMIC RESILIENCE					GOVERNMENT RESILIENCE					OVERALL			
	Acknowledge Stress	Community Cohesion	Isolate Trauma	Social Supports	Stress Stimulates Growth	Technology Resources	Logistical Infrastructure	Financial Resources	Human Resources	Physical Resources	Strategic Planning	Operations & Sustainment	Government Relations	External Plan Alignment	Empowerment	Social Resilience	Economic Resilience	Government Resilience	Total Resilience
BASELINE ASSESSMENT	56%	72%	60%	72%	64%	28%	60%	68%	72%	48%	68%	76%	56%	52%	52%	65%	55%	61%	60%

Assessment

- ❖ Baseline Assessment
- ❖ Project Impact Analysis



BASELINE ASSESSMENT: SUMMARY

Norristown received a resilience baseline assessment score of **60%**, receiving **226** out of **375** total points.

The Municipality is strongest in the area of **Social Resilience**

- Received high scores in Community Cohesion and Social Supports, largely due to factors such as:
 - Extensive community outreach regarding preparedness
 - Preservation of historic and cultural heritage
 - A robust and diverse network of community and volunteer organizations that facilitate engagement across varied demographics

The Municipality is most vulnerable in the area of **Economic Resilience**

- Received lowest scores in Technology Resources and Physical Resources, largely due to factors such as:
 - Lack of resilience awareness and investments in the business community
 - Barriers to access broadband and telecommunication networks
 - Resilience needs and considerations not incorporated into the municipal budget evaluation process

CRAFT Resilience Pillar	Total
Social Resilience	65%
Economic Resilience	55%
Government Resilience	61%
Total:	60%

**Throughout this report, maroon, blue and grey are used to signal content related to the Social, Economic and Government Resilience pillars, respectively.*

Hazards	
Stormwater Management	Norristown drainage, including the Sawmill Culvert, runs underneath built structures (including City Hall and commercial property) and is not properly sized for the current state of the drainage basin, which has become more urban over time and therefore has less pervious surface.
Overbank Flooding	Shuykill River overbank flooding from both upstream watershed changes and downstream waterway modernization means that the Norristown's river edge – including industrial, housing, wastewater treatment, highway and natural areas can be inundated during and following snow melt and/or extreme precipitation events.

BASELINE ASSESSMENT: SOCIAL RESILIENCE

- Norristown received a score of **65%**, earning 81 points out of 125 total points in Social Resilience.
- Social resilience is Norristown’s strongest area.
- Norristown scored strongest in **Social Supports and Community Cohesion** due to extensive networks of volunteer organizations, a strong sense of shared identity and place, and robust disaster preparedness and mitigation and efforts.

Social Resilience	Total
Acknowledge Stress	56%
Community Cohesion	72%
Isolate Trauma	60%
Social Supports	72%
Stress Stimulates Growth	64%
Total:	65%

Social Resilience Strengths	Social Resilience Vulnerabilities
<p>Community Education and Outreach</p> <ul style="list-style-type: none"> ➤ Norristown engages students and a wide range of community members through educational and outreach initiatives such as Breakfast with a Cop, Kids Fire Safety House, community policing programs, and public service announcements. <p>Preservation of Historic and Cultural Heritage</p> <ul style="list-style-type: none"> ➤ The Norristown Historical and Architectural Review Board (HARB) ensures the modifications to Norristown’s built environment remain historically appropriate and consistent. ➤ Multiple commemorations, memorials, parks, and community centers help preserve heritage and facilitate social interaction. 	<p>Little education on resilience specifically</p> <ul style="list-style-type: none"> ➤ City has extensive education on emergency preparedness, but no programs to address resilience. <p>Social and demographic segregation</p> <ul style="list-style-type: none"> ➤ East/West community separation driven by socioeconomic, cultural, and ethnic divisions. <p>Limited risk assessment of public facilities</p> <ul style="list-style-type: none"> ➤ Community risk assessments do not explicitly address education and health care facilities.

BASELINE ASSESSMENT: ECONOMIC RESILIENCE

- Norristown received a score of **55%**, earning 69 points out of 125 total points in Economic Resilience.
- Economic Resilience is Norristown’s weakest area.
- Norristown scored strongest in **Human Resources** due to a diverse and growing business sector with ample access to education and vocational training opportunities.

Economic Resilience	Total
Technology Resources	28%
Logistical Infrastructure	60%
Financial Resources	68%
Human Resources	72%
Physical Resources	48%
Total:	55%

Economic Resilience Strengths

New business investments

- Norristown has attracted new business ventures that signal a business-friendly environment and can spur additional private sector investments.

Community amenities support controlled and consistent population growth

- Multiple, well-kept parks, the Norristown Zoo, Horizon Theater and other community amenities make Norristown an attractive place to live, work, and play.

Convenient and affordable transportation networks

- The Norristown Transportation Center, its proximity to major highway and interstate networks, and easy access to Philadelphia provide Norristown with the logistical infrastructure needed to support high levels of economic activity.

Emergency preparedness assets in place

- Active mutual aid agreements with many surrounding communities, along with strategically dispersed emergency response and relief assets throughout the region.

Economic Resilience Vulnerabilities

Little business involvement in resilience initiatives

- Programs to encourage business to invest in community resilience do not exist.

Smaller tax base

- In part due to significant county government presence and relatively high proportion of new immigrants establishing themselves.

No municipal continuity of operations plan

- Norristown does not have a continuity of operations plan to assist with response and recovery in the event of a natural disaster or other large-scale emergency.

BASELINE ASSESSMENT: GOVERNMENT RESILIENCE

- Norristown received a score of **61%**, earning 76 points out of 125 total points in Government Resilience.
- Government Resilience is Norristown’s second strongest area.
- Germantown scored highest in the **Operations & Sustainment** component due to factors including:
 - Promotion and enforcement of building code compliance among builders and developers.
 - Well defined roles, authority, and responsibilities of intergovernmental departments related to incident command.

Government Resilience	Total
Strategic Planning	68%
Operations & Sustainment	76%
Government Relations	56%
External Plan Alignment	52%
Empowerment	52%
Total:	61%

Government Resilience Strengths

- Supplementing internal resources with external organizations**
 - Close collaboration with county, regional, and national resilience resources, such as NLC, ICMA, and other partnerships.
- Community engagement in disaster preparedness**
 - Post-crisis volunteer organizations, such as the American Red Cross and faith-based organizations, are active in community outreach and engaged in disaster planning and recovery efforts.
- Intergovernmental collaboration**
 - Emergency operations plans are periodically shared and coordinated with county and surrounding jurisdictions.

Government Resilience Vulnerabilities

- Limited attention and resources dedicated to resilience**
 - The Municipality does not have a dedicated resilience office or person to coordinate resilience planning and efforts internally or with external partners.
- Resilience not incorporated into municipal comprehensive plan**
 - Best practices in urban planning related to improving community resilience have not been evaluated and included into municipal planning efforts.
- Long-term capital investments in resilience and emergency assets lacking**
 - Investments to maintain, retrofit and/or replace critical emergency services assets have not been made.

PROJECT IMPACT ANALYSIS

- The IBTS resilience team conducted a brainstorming exercise with community stakeholders to develop a list of resilience projects.
- Stakeholders then voted on each project to narrow the list to the top three projects with the greatest potential to improve the Municipality's resilience.
- After choosing the top three projects, IBTS conducted an analysis to determine how each project improves or contributes to maintaining Norristown's CRAFT indicator scores.



PROJECT 1: RIVERFRONT RESILIENCE REDEVELOPMENT HUB

Norristown stakeholders identified the need for a “red thread” of resilience, tying together the significant efforts underway around the riverfront, including: Sewage Plant, Riverfront, Lafayette Extension, Saw Mill Culvert, Brownfields Renovation, Flooding/Stormwater Management; Transportation Hub; Connection between Schuylkill and Chester Trails.

Benefits

- Increased safety and security to mitigate future risks from increased precipitation, particularly for low-income, elderly, and disabled residents
- More collateral benefits from externally-funded projects
- Clearer assets to attract investment to Norristown

Impact on Norristown Baseline Resilience Score

- The resilience hub contributes to improving eleven resilience indicators that have a score of 0 or 1, including:
 - Four economic resilience indicators
 - Three government resilience indicators
 - Four social resilience indicators

IBTS Suggestion

- *Convene all riverfront-related stakeholders (projects noted on slide 15) to create an immediate Resilience Hub action plan based on existing efforts.*
- *Identify common goals and desired outcomes between public and private sector stakeholders.*
- *Ask: “What are the two steps – one immediate, one longer term, that I will take to ensure a successful resilience hub?”*

PROJECT 2: SMALL BUSINESS RENAISSANCE

Norristown stakeholders identified continued growth and thriving in the small business sector as key for Norristown's resilient future.

Benefits

- Increase cohesion between small business owners, new Norristown residents (e.g., millennials), immigrant communities and long standing residents
- Attract new business.
- Fill amenity gaps such as food, hotel, conference, entertainment, eateries

Impact on Norristown's Baseline Resilience Score

- An emphasis on small business resilience contributes to improving eight resilience indicators that have a score of 0, 1 or 2, including:
 - Five economic resilience indicators
 - Three government resilience indicators

IBTS Suggestions

- *Develop incentive programs that encourage new business startups, retention of workers, and job growth through business expansion.*
- *Use the existing open lines of communication and energy within small business leadership to continue to listen to the needs of business.*
- *Use the opportunity of engaging the small business community to brand Norristown.*

PROJECT 3: EMERGENCY OPERATION PLAN UPDATE

- Norristown stakeholders identified the need for an EOP update that includes additional community stakeholders and also enhances the continuity of the operations plan.

Benefits

- Increasing communication from City Hall to stakeholders in key sectors like health, schools, and small business furthers trust building between key sectors.
- Continuity of operations planning can create collateral benefits by helping to organize city and business processes.

Impact on Norristown Baseline Resilience Score

- EOP/COOP updates can contribute to improving seven resilience indicators that have a score of 3, including:
 - Three economic resilience indicators
 - Two government resilience indicators
 - Two social resilience indicators

IBTS Suggestions

- *Perform annual assessment of risks and assets related to crisis response and emergency operations, incorporating findings into municipal budget evaluations, as appropriate*
- *Develop a municipal Continuity of Operations Plan that is regularly updated and shared with surrounding jurisdictions and community stakeholders.*
- *Assign resources to develop toolkits and standard operating procedures for post-crisis and emergency activities.*

PROJECT PRIORITIZATION

#1 = Resilience Hub

- Has the greatest impact on improving Norristown's baseline score.
 - Contributes to improving the greatest number of low-scoring indicators.
- Greatest potential to enhance and maintain high scoring indicators.
- Leverages significant, existing effort, ensuring municipal staff is not overly taxed with an entirely new project.
- Has high day-to-day impact on Norristown's most visible resilience challenge – stormwater and river overbank flooding:
- Small business renaissance project elements can be incorporated for the riverfront region.
- Not ensuring a resilience theme in these projects will be a significant and missed opportunity for projects with both short and long-term impact on the Norristown.

#2 = Small Business Renaissance and/or Emergency Operation Updates

- Small Business Renaissance and/or Emergency Operations Updates have similar impact on improving Norristown's baseline score.
 - The Resilience Hub will make an effort to encourage small business enhancements, furthering efforts already underway with internal and external commitments.
 - Norristown's required Emergency Operations Plan update can be guided by CRAFT indicators which scored 1 and 2.

Recommendations

- ❖ Overarching Resilience
- ❖ Top Five Recommendations



OVERARCHING RESILIENCE: VULNERABILITIES & ASSETS

- **Vulnerabilities** – Little systematic or systemic address of:
 - Resilience, risk assessments, continuity of operations, crisis recovery
 - Social and demographic segregation
 - Long-term capital investments in resilience and emergency assets
- **Assets** – Built and human resources primed for resilience integration:
 - Open lines of communication between leaders within the Municipality, Municipal Council, and the business community.
 - Strong bond rating indicates market confidence in Norristown's future.
 - Transportation, zoo, theater, municipal (county) presence are stable built forms.
 - New residential and industrial growth prove viability of Municipality's future vision.
 - Embrace of diverse and dynamic populations demonstrate Norristown's ability to accommodate US's current and future demographic shifts.
 - Pride in historic and cultural heritage and river create means to further social cohesion.

TOP THREE RECOMMENDATIONS

1. Create a **Riverfront Resilience Redevelopment Hub** that:
 - Asks the resilience question of every project within the hub: “Are the enduring structures we build able to withstand—and mitigate—climate change?”
 - Includes a very senior focal point in City Hall and on Municipal Council responsible for ensuring cohesion between the related projects and resilience as part of the normal budgeting process.
 - Includes tools to ensure collaborative opportunities are maximized, including: a comprehensive timeline, a joint asset library (with demographic, climate and other data, foundational reports, drawings and diagrams).
 - Asks the small business question: “How can I ensure that small business grows based on this project?”
 - Ensures that upstream and downstream data are included in all plans.
 - Considers how restaurants, groceries and other under-represented sectors are considered for prospective future use.
 - Seeks out best practice for water’s-edge stormwater treatment plant modernization.
2. Update your **Emergency Operations Plan** to:
 - Ensure capital investments focus on modernizing critical emergency services.
 - Derive further vulnerability data on schools, health facilities and other public buildings.
 - Establish a public awareness campaign on citizen safety.
3. Further a **Small Business Renaissance**:
 - Create incentive programs to develop new businesses (including through the resilience hubs).
 - Increase the robustness of Norristown’s information technology infrastructure and GIS data to ensure modern communications and decision making.
 - Create web-based permit, regulatory, and incentive communications through a business lens,

Appendix

- ❖ CRAFT Component Definitions
- ❖ Norristown Baseline Assessment Score
- ❖ Norristown CRAFT Indicator Scores



CRAFT COMPONENT DEFINITIONS

Social Resilience	
Component	Definition
Acknowledge Stress	The community is aware and informed of past, current, and potential hazards and possible preventive measures.
Community Cohesion	Physical assets, sense of belonging, and collective identity are maintained under stress.
Isolate Trauma	Resources and assets are purposefully redundant and strategically located so as mitigate cascading effects and hazards during an emergency.
Social Supports	Public, private, and civil society groups are engaged in risk-reduction and resilience planning. Emergency responses are coordinated and inclusive of community stakeholders.
Stress Stimulates Growth	Communities and institutions are self-correcting and adaptable, learning from past crises and seizing opportunities to enhance resilience to future hazards.



CRAFT COMPONENT DEFINITIONS

Economic Resilience	
Component	Definition
Technology Resources	Public and private technology capabilities are available and accessible to inform and support community needs for data, communications, transportation, and essential services.
Logistical Infrastructure	Transportation and communication networks are durable and redundant in order to sustain and support a community's economic and emergency response needs.
Financial Resources	Economic diversity, stable revenues, financial discipline, and the availability of reserves or other financial resources allow for sustained operations before, during, and after a crisis.
Human Resources	Access to education and vocational training, business growth, and a growing and diverse population allow for an engaged population that can react, respond, and adapt to challenging situations.
Physical Resources	Communities have adequate, diverse, adaptable, and decentralized public spaces, facilities, and assets to support community engagement, commerce, and emergency and recovery operations.



CRAFT COMPONENT DEFINITIONS

Government Resilience	
Component	Definition
Strategic Planning	Current, future, internal, and external factors are identified, assessed, and addressed through a comprehensive urban planning process.
Operations and Sustainment	Policies, procedures, and practices of public agencies and departments are assessed, trained, and funded to provide services before, during, and after a crisis. Resources and communication networks support interoperability, redundancy, and durability across agencies and departments.
Government Relations	Mechanisms exist that promote integrated, coordinated, and flexible risk assessment, preparedness, and response between city, county, state, and federal agencies.
External Plan Alignment	Urban planning, community development, and capital improvement programs consider, integrate, and prioritize projects that enhance the community's resilience to chronic stresses and acute shocks.
Empowerment	Community groups are educated and integrated into risk assessment and planning, enabling stakeholders to react, respond, and adapt in challenging environments.



NORRISTOWN BASELINE ASSESSMENT SCORE

NORRISTOWN BASELINE SCORES																			
	SOCIAL RESILIENCE					ECONOMIC RESILIENCE					GOVERNMENT RESILIENCE				OVERALL				
	Acknowledge Stress	Community Cohesion	Isolate Trauma	Social Supports	Stress Stimulates Growth	Technology Resources	Logistical Infrastructure	Financial Resources	Human Resources	Physical Resources	Strategic Planning	Operations & Sustainment	Government Relations	External Plan Alignment	Empowerment	Social Resilience	Economic Resilience	Government Resilience	Total Resilience
BASELINE ASSESSMENT	56%	72%	60%	72%	64%	28%	60%	68%	72%	48%	68%	76%	56%	52%	52%	65%	55%	61%	60%

Social Resilience: Acknowledge Stress		
Indicator	Criteria	Score
Are there commemorations and/or memorials to preserve the memory of the impact of past crises?	<p>1 (Low) There was a memorial installed or a ceremony held on the first anniversary of a past crisis. At least some national events such as July 4th are celebrated, as no local crisis may have occurred in the past.</p> <p>3 (Medium) The event occasionally has articles in the news or other similar references drawing public attention.</p> <p>5 (High) There are periodic ceremonies held that may include community and political dignitaries held at libraries and schools. There is a separate free standing memorial area dedicated to the memory of the crisis with specific literature, periodic news articles, museum or other types of memorial.</p>	5
Are there efforts to raise awareness of citizens and businesses that aim to reduce the likelihood of a crisis impacting themselves or the community?	<p>1 (Low) Meeting(s) held discussing that grants could be applied for.</p> <p>3 (Medium) Grants are applied for, but not followed up on, won or otherwise implemented fully.</p> <p>5 (High) At least one grant has been applied for and closely followed, preferably multiple grants including some implemented</p>	5
Is there a public awareness campaign on citizen safety and emergency preparedness such as marking shelters and evacuation routes or suggesting household readiness tips?	<p>1 (Low) There are signs at some public buildings related to emergency response such as shelters.</p> <p>3 (Medium) There are signs for shelters, supplies, evacuation routes and information available through libraries and community organizations or schools.</p> <p>5 (High) There are community exercises periodically to inform and practice responses.</p>	2
Are there programs to communicate the interconnectedness and benefits of ecosystems?	<p>1 (Low) Signs along a nature trail.</p> <p>3 (Medium) Multiple outdoor markers over multiple sites, calculations of costs avoided, collateral benefits to communities that are publicly relayed.</p> <p>5 (High) Demonstration sites or museums or parks and recreation centers with exhibits, signage, training and events.</p>	2
Are there programs to communicate the benefits, importance and relevance of resilience to the public?	<p>1 (Low) Creation of cases that are shared within city government and to city's direct partners. Occasional newsletter article in government publications</p> <p>3 (Medium) Exhibits at fairs, website information updated frequently.</p> <p>5 (High) Programs or displays in public places, such as libraries, museums or parks, that highlight examples from across the world of how resilience efforts have created positive impacts</p>	0

Social Resilience: Community Cohesion		
Indicator	Criteria	Score
Is compliance with current regulations such as those related to resilience, buildings and others feasible in low-income areas?	<p>1 (Low) Socio-economic impacts were considered during the development of regulations.</p> <p>3 (Medium) Programs to support rehabilitation and other efforts exist.</p> <p>5 (High) Funding sources for grants and other programs exist, active requirements among developers related to these areas needing support are in place.</p>	5
Are there plans, including explicit actors, to ensure compliance with safety standards and to maintain the physical integrity of schools, health facilities and other public buildings or facilities?	<p>1 (Low) Buildings are built to normal code standards.</p> <p>3 (Medium) Critical assets are catalogued and codes are modified to account for known hazards, and must be met by new buildings.</p> <p>5 (High) New construction and existing buildings are retrofitted to withstand hazards.</p>	3
Have special programs been developed to protect historic buildings and cultural heritage?	<p>1 (Low) Programs exist but are rarely utilized or only for partial efforts such as electric or fire suppression, but not humidity or physical hazards.</p> <p>3 (Medium) Programs exist and are utilized for a few key buildings to aide in their preservation such as upgrades to utilities, fire suppression and physical hazards. Community is engaged in activities celebrating community's history and heritage, such as festivals or parades.</p> <p>5 (High) Active use of programs, plaques or other markers to show program to public. Public actively engaged in program/aware of markers. Funding for protection exists and used to strengthen and support buildings</p>	5
Have vulnerability data on schools, health facilities and other public buildings or facilities been included in risk assessments and made available to the citizens?	<p>1 (Low) Vulnerability assessment is completed.</p> <p>3 (Medium) Assessments completed, results collected and evaluated, and shared with community and stakeholders in a comprehensive manner.</p> <p>5 (High) Public meetings held discussing the results and possible responses.</p>	1
Are there methods of communications established that can be maintained during and after a crisis that are usable both by public officials and private citizens?	<p>1 (Low) Social media accounts, a reverse 911 system and a call center function during and after a crisis, but are not tested regularly or used to communicate with citizens during non-crisis events.</p> <p>3 (Medium) Social media accounts, a reverse 911 system and a call center function during and after a crisis, are tested regularly and social media accounts are used to communicate information with citizens regularly.</p> <p>5 (High) Social media accounts, a reverse 911 system and a call center function during and after a crisis, and are tested frequently. Social media accounts actively engage citizens on a regular basis. Citizens know where to look for information in a crisis.</p>	4

Social Resilience: Isolate Trauma		
Indicator	Criteria	Score
Is there a process for assessing availability and accessibility of emergency goods and services of existing schools, health facilities and other public buildings during a short-term crisis?	<p>1 (Low) Assessment has been completed and includes goods and services in addition to structures.</p> <p>3 (Medium) Assessment is updated, ensures that goods have a shelf life and identifies what needs to be restocked.</p> <p>5 (High) Assessment mitigation actions are addressed and periodically updated.</p>	3
Are new and existing physical assets, such as hospitals, shelters, community centers, schools and public facilities, geographically dispersed to create redundancy and ensure availability during a stress or trauma?	<p>1 (Low) Physical assets exist and are assessed, deficiencies are known.</p> <p>3 (Medium) New assets consider these concerns, and are part of the decision making criteria for new projects.</p> <p>5 (High) Physical assets have been rebuilt to address and respond to issues related to dispersion, multiple threats and potential to relieve redundancy concerns.</p>	3
Are personnel capabilities dispersed throughout the community such as fire, police, and EMS?	<p>1 (Low) Personnel capabilities are somewhat dispersed throughout the community, but clustered in population dense areas.</p> <p>3 (Medium) Personnel capabilities are dispersed throughout the community and can reach all urban, suburban and rural areas of the community.</p> <p>5 (High) Personnel capabilities are dispersed throughout the community and redundant in number to reach all areas and ensure staffing capabilities during a crisis.</p>	5
Have risks/hazards been assessed regarding potential disproportionate effects on a subset of the community such as elderly, lower-class or minority ethnicities.	<p>1 (Low) Risks/hazards have been assessed but no action has been taken to reduce the impact on populations identified as high-risk.</p> <p>3 (Medium) Risks/hazards have been assessed and a plan is in place to ensure no population subset is impacted disproportionately.</p> <p>5 (High) Risks/hazards have been assessed and actions have already been taken to ensure no population subset is impacted disproportionately.</p>	3
Is the community functioning with shared expectations, values and rewards, or are neighborhoods strongly separated due to social or economic factors?	<p>1 (Low) Neighborhoods are functioning with shared expectations, values and rewards, but neighborhoods are siloed.</p> <p>3 (Medium) Community functions with shared expectations, values and rewards, but does not actively engage citizens in building a sense of community through inclusive community events and activities.</p> <p>5 (High) Community functions with shared expectations, values and rewards and holds events and meetings that celebrate and bolster an inclusive sense of community.</p>	1

Social Resilience: Social Supports		
Indicator	Criteria	Score
Is there a process and programs for encouraging communities to learn and participate in risk reduction?	<p>1 (Low) Processes and programs exist and education events are regularly held, but engage few citizens.</p> <p>3 (Medium) Processes and programs exist, education events are held regularly, and a wide range of participants are actively engaged.</p> <p>5 (High) Processes and programs exist, education events are held regularly, and a wide range of participants are actively engaged. Local government or other organization provides assistance to help citizens take risk reduction measures in their own lives.</p>	4
Are social organizations involved in the government emergency preparedness processes, resilience planning and overall government stewardship of environmental and community sustainability?	<p>1 (Low) Social organizations attend public forums to provide input into government emergency preparedness processes and resilience & sustainability planning.</p> <p>3 (Medium) Social organizations representing most segments of the community are involved in emergency preparedness processes, planning and sustainability efforts through voicing opinions at public meetings, attending government-run events, holding organization-wide events to promote these issues, etc.</p> <p>5 (High) Social organizations representing all segments of the community are involved in government emergency preparedness and planning processes, in addition to sustainability efforts as members of steering committees and boards, volunteers, public meeting attendees, etc. Social organizations actively shape and promote carrying out these policies and processes.</p>	3
Is there a diverse network of community and volunteer organizations that create space for, and cohesion among, citizens of different racial, social, religious, political and economic sectors?	<p>1 (Low) A diverse network of community and volunteer organizations exist but are not widely dispersed geographically throughout the community; some sectors still lack a strong network.</p> <p>3 (Medium) A diverse network of community and volunteer organizations exist to provide space for major and most niche social groups. Organizations sometimes engage with one another, hold regular public events and are geographically dispersed throughout the community.</p> <p>5 (High) A diverse network of community and volunteer organizations exist to provide space for nearly all major and niche social groups. Organizations actively engage with one another, hold frequent public events and are geographically dispersed throughout the community.</p>	4
Are the key social networks for a community, such as schools, religious institutions, media, fraternal organizations, recreation organizations and others, identified so that they can assist with reacting and responding to a crisis?	<p>1 (Low) Key social networks exist, are identified and have internal crisis response plans.</p> <p>3 (Medium) Key social networks exist, are identified and have internal crisis response plans that have been shared and vetted with social networks and the municipal government.</p> <p>5 (High) Key social networks exist, are identified, have shared and vetted internal plans cross-organizationally and with the municipal government, have practiced their plans, and are assigned roles and responsibilities if needed in the locality's emergency operations plan.</p>	3
Is there an action plan for evacuation or continued functioning of health facilities and senior care centers?	<p>1 (Low) Individual health facilities and senior care centers have evacuation plans and emergency operations plans.</p> <p>3 (Medium) Individual health facilities and senior care centers have evacuation plans and continuation of operations plans that are shared with emergency management and practiced regularly.</p> <p>5 (High) Individual health facilities and senior care centers have evacuation plans and continuation of operations plans that are shared with emergency management and practiced regularly. A backup plan with neighboring facilities exist in case needs exceed capacity during a crisis.</p>	4

Social Resilience: Stress Stimulates Growth		
Indicator	Criteria	Score
Are data from past crises collected, analyzed and used for learning opportunities, and made publicly available?	<p>1 (Low) Stakeholders exercise formal lessons learned activities and produce a formal after action report for internal use.</p> <p>3 (Medium) Stakeholders exercise formal lessons learned activities and produce a formal after action report that is made publicly available.</p> <p>5 (High) Stakeholders exercise formal lessons learned activities and produce a formal after action report that is made publicly available. Forums or public hearings are held to gain community input on successes and areas for improvement.</p>	5
Has there been demonstrated change to the built environment due to past crises such as new building codes or relocation of housing?	<p>1 (Low) A plan for implementing new building codes or relocating housing exists but has not been put into action.</p> <p>3 (Medium) New building codes and flood zone requirements have been implemented and are applied to new construction.</p> <p>5 (High) New building codes and specific requirements such flood zone control are applied to new construction, and existing structures are being retrofitted to meet new requirements.</p>	4
Have community development or growth plans been updated or amended to reflect new priorities or concerns due to hazards?	<p>1 (Low) Development plans have been proposed to be updated including at least some in response to a past hazard or crisis. Revisions are likely to be accepted by the community.</p> <p>3 (Medium) Development plans consider past crises, future crises and have been accepted for updates/revisions.</p> <p>5 (High) Development plans consider past crises, future crises and provide a complete look at how systems may change, impacting the likelihood of a newly increased or emerging crisis. The plan is accepted, followed and enforced.</p>	4
Have individuals or communities changed their behavior to potentially adapt to new threats?	<p>1 (Low) Educational campaigns are launched to inform community when new threats are identified or imminent.</p> <p>3 (Medium) Community preparedness events and educational campaigns are held before a threat is expected, after a threat occurs and when a new threat is identified.</p> <p>5 (High) Residents are aware and educated of all potential threats to the community and public awareness campaigns and training opportunities are available to help residents prepare.</p>	3
As communities rebuild infrastructure due to past crises, are they modernizing and responding to potential new hazards or alleviating threats from existing hazards?	<p>1 (Low) Government examines infrastructure failures and successes in past crises to develop areas for improvement in responding to potential new hazards.</p> <p>3 (Medium) Assessment of infrastructure failures and successes in past crises is performed to develop areas for improvement in responding to similar hazards. Rehabilitation is planned for structures damaged in previous crises to ensure they withstand hazards and future crises.</p> <p>5 (High) Formal assessment of infrastructure failures and successes in past crises is performed to develop areas for improvement in responding to similar and potential new hazards. Rehabilitation is planned for all existing structures to ensure they withstand hazards and future crises.</p>	0

Economic Resilience: Technology Resources		
Indicator	Criteria	Score
Has the local government assigned resources to develop toolkits and standard operating procedures for post-crisis and recovery activities?	<p>1 (Low) Resources are assigned but no toolkits or SOPs have been developed.</p> <p>3 (Medium) Resources are assigned, some toolkits and SOPs have been developed, such as for debris removal, sheltering procedures and recordkeeping after a natural disaster.</p> <p>5 (High) Resources are assigned, toolkits and SOPs have been fully vetted and are maintained through regular updates and training exercises.</p>	0
Can production sector (e.g., agriculture, mining, commerce, tourism) and the scientific and technical community input data and access data from a community-wide GIS database?	<p>1 (Low) Production sector and the scientific and technical community have the ability to access and input data from a community-wide GIS database, but few individuals/organizations are engaged.</p> <p>3 (Medium) A large portion of the production sector and the scientific and technical community actively access and input data from a community-wide GIS database.</p> <p>5 (High) A large portion of the production sector and the scientific and technical community actively access and input data from a community-wide GIS database and are using data to make informed decisions that increase resilience in the industry.</p>	0
Are broadband internet and mobile phones available to all citizens, in addition to other quickly evolving technology assets?	<p>1 (Low) Broadband internet and mobile phones are available to all citizens in public spaces, such as libraries, city hall and schools.</p> <p>3 (Medium) Low-income and other vulnerable populations have access to broadband, mobile phones and other quickly evolving technology assets in their homes. Broadband speeds are above the national average, enabling community to access quickly evolving technology assets.</p> <p>5 (High) The community offers free, public-access wi-fi to all residents. Broadband speeds are above the national and state average, enabling community to access quickly evolving technology assets. Community assets are interconnected enabling smart city type applications and decision making</p>	2
Are there incentive programs to develop or attract new businesses such as those in the technology field?	<p>1 (Low) There are incentive programs targeted to new or emerging technology companies.</p> <p>3 (Medium) Incentive programs are broad-based, including business development incubators, worker retraining, tax or other financial incentives. Active attendance through trade shows, exchange programs and sister city programs also exist to grow businesses</p> <p>5 (High) Incentive programs have resulted in a measurable impact on the community such as new business startups, retention of workers and job growth through business expansion or new businesses.</p>	2
Is there an early warning and alert system in place and tested for emergency events such those related to weather or acts of terror?	<p>1 (Low) An early warning and alert system exists, and is tested periodically.</p> <p>3 (Medium) Early warning and alert systems exist, are tested at least monthly, and reach most members of the community. Citizens are educated on what different alerts mean and where to look for alerts.</p> <p>5 (High) Community participates and cooperates with government programs to notify citizens of threats and emerging threats through Department of Homeland Security programs such as the Private Sector Preparedness Program (PS-Prep), National Terrorism Advisory System (NTAS), or others.</p>	3

Economic Resilience: Logistical Infrastructure		
Indicator	Criteria	Score
Is there a capital project budget for risk reduction measures to increase the resilience of infrastructure, such as sewer systems, highways and public parks and recreation spaces?	<p>1 (Low) The current fiscal budget includes risk reduction measures to increase the resilience of outdated infrastructure. Some specific improvements have been identified but not yet funded.</p> <p>3 (Medium) Budget allocates funding for a five-year plan to increase resilience of outdated infrastructure. Specific improvements to reduce risk, such as levees, storm drainage updates and increased police presence at public parks after dark, have been identified and funded.</p> <p>5 (High) Budget allocates funding for a five-year plan to increase resilience of existing infrastructure and build new, resilient infrastructure. Specific improvements to reduce risk, such as levees, storm drainage updates and increased police presence at public parks after dark, have been identified, funded and some have been implemented</p>	4
Are resilience needs and considerations part of the normal budget evaluation process for operations and maintenance, separate from specific capital projects?	<p>1 (Low) Businesses and governments have identified need for operations changes and continued maintenance to respond to threats such as rising sea waters, drought, and increased security due to man made threats.</p> <p>3 (Medium) Business or government entities have begun to fund and make operational and maintenance changes to their infrastructure to ensure continued use and access before, during and after a crisis.</p> <p>5 (High) Business and government entities are both taking steps to ensure continued operational resiliency, ranging from redundant systems and stores to continued maintenance of infrastructure, in order to pro-actively anticipate and mitigate potential hazards.</p>	0
Is the business community involved in the government's processes, including urban planning, to create connective corridors and more accessibility to local business and retail.	<p>1 (Low) Business community informally provides input to local government's urban planning initiatives.</p> <p>3 (Medium) Members of the business community attend public forums, council meetings and other civic engagement opportunities organized by the local government.</p> <p>5 (High) Business community is formally involved in urban planning processes, providing input through public forums, surveys to assess business needs, serving on steering committees and establishing business improvement districts.</p>	3
Does a communications plan exist to inform the community of the location of physical resources before, during and after an emergency?	<p>1 (Low) At least one form of communication, such as a social media or news media campaign or reverse 911 system, is available before, during and after disasters to notify residents.</p> <p>3 (Medium) Multiple forms of communication, such as social media platforms and a reverse 911 system are available before, during and after disasters. Messages are sent regularly before disasters to inform residents where resources will be located during a disaster.</p> <p>5 (High) Multiple forms of communication, such as a social media platform and a reverse 911 system are available before, during and after disasters. A formal preparedness campaign exists to communicate with residents frequently about resource location and where to look for updates during an emergency.</p>	4
Is there convenient and affordable access to transportation networks such as for air, rail, ride sharing platforms and barge transport of goods?	<p>1 (Low) Multiple forms of transportation exist within the community for transport of goods.</p> <p>3 (Medium) Community and its business district have convenient and safe access to interstate transport modes.</p> <p>5 (High) Community is on several primary transportation lines for rail, interstate highway, river/sea and major airport. Transfer stations exist to facilitate multi-modal transport.</p>	4

Economic Resilience: Financial Resources		
Indicator	Criteria	Score
Is there a formal process for identifying and prioritizing economic vulnerabilities?	<p>1 (Low) The local government has internally identified and prioritized economic vulnerabilities through a formal process.</p> <p>3 (Medium) A formal process exists and has been used at least once, shared with the community, and used to establish a baseline for economic vulnerabilities in the community, including best- and worst-case scenarios.</p> <p>5 (High) A formal risk assessment of economic vulnerabilities has been performed, results have been analyzed to develop best- and worst-case scenarios and shared with the community. A schedule has been established to re-assess economic vulnerabilities on a regular basis.</p>	4
Are there business development and incentive programs within the community such as incubators, tax incentives and worker retraining programs?	<p>1 (Low) Incentive programs exist but few businesses are aware or participate.</p> <p>3 (Medium) Incentive programs exist but are not widely used across local businesses.</p> <p>5 (High) Incentive programs are in place and have successfully increased resilience efforts among the local business community.</p>	3
Are there provisions to support economic high-risk areas, such as those with high rates of unemployment, low rates of education or limited employment opportunities?	<p>1 (Low) There may be state or federal programs targeted to these communities.</p> <p>3 (Medium) Local resources ranging from trade school and universities to business or social organizations have specific programs designed to address these needs.</p> <p>5 (High) Programs are targeted for these areas and people with demonstrated success in diversifying employment opportunities and increasing worker salaries.</p>	4
Is there a contingency fund to meet short- and long-term post-crisis needs?	<p>1 (Low) A contingency fund exists, but it is not adequate to meet short- and long-term post-crisis needs.</p> <p>3 (Medium) A contingency fund exists and it is adequate to meet short- and long-term post-crisis needs.</p> <p>5 (High) A contingency fund exists with ample funds to meet short- and long-term post-crisis needs. Post-crisis needs for different scenarios have been assessed for their potential cost</p>	3
Does the budget maintain well-trained and equipped emergency response services, personnel and facilities, in addition to communications and risk assessment capacities?	<p>1 (Low) Budget provides adequate funding to maintain these services for the current fiscal year.</p> <p>3 (Medium) Budget provides adequate funding and there is a five-year plan to ensure funding for these capacities is maintained.</p> <p>5 (High) Budget includes a five-year plan that provides enough funding to improve current emergency response capacities through purchasing new technology, making new hires, increasing training and credentialing, etc.</p>	3

Economic Resilience: Human Resources		
Indicator	Criteria	Score
Are public sector staff training and credentials up-to-date and plans practiced, including with business, social, faith-based and other voluntary organizations and their staff and volunteers?	<p>1 (Low) Emergency management staff are required to take basic and role-specific disaster training and maintain up-to-date credentials.</p> <p>3 (Medium) Role-specific disaster training occurs and key stakeholder groups are asked for feedback on their emergency management concerns and their roles in suggested solutions.</p> <p>5 (High) All city staff are required to take basic disaster training. Staff who have or may have a designated role are required to take role-specific training; Disaster training is offered at the local or regional level for all stakeholders; Tabletop or scenario-based exercises are held with all sectors of the community at least annually.</p>	2
Are economic opportunities diverse and growing in order to attract and retain workers for existing and new businesses?	<p>1 (Low) Local government and/or Chamber of Commerce has a formal campaign to boost economic growth and diversity.</p> <p>3 (Medium) Local government and/or Chamber of Commerce has campaigns and programs to boost economic growth and diversity, such as entrepreneurial or small business startup incubator competitions. Programs are available to the entire community rather than just one sector, neighborhood or other stratification. This may be done via having several different programs.</p> <p>5 (High) Programs have matured to demonstrate effectiveness through openings of new businesses, reduction of business closings, or improved demographics related to diversified workers, education or opportunities.</p>	5
Is there access to affordable education opportunities, including vocational training and apprenticeship programs, to attract and retain people of all ages and interest?	<p>1 (Low) Access to affordable education opportunities exists, but options are limited and vulnerable populations still have trouble accessing programs due to cost, transportation, scheduling or other issues.</p> <p>3 (Medium) Access to affordable education opportunities exists, including job training for jobs in and near the City, based on expected demand from nearby employers. Opportunities attract a wide range of people.</p> <p>5 (High) A wide range of affordable vocational and apprenticeship programs are offered and used by a diverse set of people. Many students who complete vocational training stay in the community to work. Financial assistance is provided for those who need it.</p>	4
Does the community offer amenities such as parks, museums and performing arts venues to attract and retain their population?	<p>1 (Low) Amenities are dispersed throughout some areas of the community and are accessible and utilized by some residents of diverse ages and racial, economic and religious backgrounds. Strategic plans and budgets include maintenance of existing amenities.</p> <p>3 (Medium) Amenities are dispersed throughout the community, accessible to and utilized by most residents of diverse ages and racial, economic and religious backgrounds. Strategic plans and budgets include maintenance and improvements to existing amenities.</p> <p>5 (High) Amenities are dispersed, accessible to and utilized by residents of all ages and racial, economic and religious backgrounds. Public amenities are safe and unique and relevant to the history and interests of the community. Strategic plans and budgets include improvements to existing and development of new amenities.</p>	4
Is the crime rate, such as that of violent crimes, at or below national or state normal levels?	<p>1 (Low) The crime rate is at the national and state levels; Police department has enough staff to effectively police crime in the community; Crime data is shared across government departments and with the community; Police are viewed positively by many in the community.</p> <p>3 (Medium) The crime rate is slightly below the national and state levels; Police department is adequately staffed and has a plan to reduce crime; Crime data is openly shared and discussed across government departments and with the community; Police are viewed positively by most in the community.</p> <p>5 (High) The crime rate is well below the national and state levels; Police department is fully staffed and has implemented effective crime reduction programs that have successfully reduced or are reducing crime rates; Crime data is openly shared and discussed across government departments and with the community; Police are viewed positively by all in the community.</p>	3

Economic Resilience: Physical Resources		
Indicator	Criteria	Score
Are there long-term established plans for access to critical needs of a community such as potable water, affordable housing, energy sources and future public land-use needs (solid waste disposal, cemeteries, etc.)?	<p>1 (Low) Community has assessed some scenarios for threats to long-term access to critical assets and has developed a plan to address most scenarios for at least the next 10 years.</p> <p>3 (Medium) Community has assessed different scenarios for threats to long-term access to critical resources and developed a plan to address most scenarios for at least the next 20 years.</p> <p>5 (High) Community has assessed best- and worst-case scenarios for short- and long-term access to critical assets, and has developed a plan to address all scenarios for at least the next 30 years.</p>	3
Do programs exist to encourage businesses to invest in community resilience?	<p>1 (Low) Incentive programs exist to encourage businesses to invest in community resilience.</p> <p>3 (Medium) Programs such as incubators and thought leadership forums exist to encourage businesses to invest in community resilience. There are local businesses participating in these programs.</p> <p>5 (High) Programs such as incubators and thought leadership forums exist to encourage businesses to invest in community resilience. Evidence exists of local businesses making decisions and improving resilience.</p>	0
Are there stockpiles of relief assistance, response equipment and vehicles located in multiple locations?	<p>1 (Low) Stockpiles of relief assistance, response equipment and vehicles exist in multiple locations but are not geographically dispersed throughout the community evenly. It is likely that resource distribution may be delayed to some areas of the community during a threat.</p> <p>3 (Medium) Stockpiles of relief assistance, response equipment and vehicles are located in most neighborhoods and sub-sections of the community and a plan is in place to quickly distribute or stage equipment in areas where stockpiles do not exist. Resource shortages in some areas of the community may exist.</p> <p>5 (High) Stockpiles of relief assistance, response equipment and vehicles are located in all neighborhoods and sub-sections of the community. Equipment is staged near identified hazard areas when an imminent threat is known to ensure quick response times. Plan exists to receive aid from external sources if need exceeds stockpile. Unlikely that resource shortages in any area of the community will exist during a threat.</p>	4
Are essential consumer goods (groceries, water, gasoline, etc.) accessible to all members of the community, including vulnerable populations.	<p>1 (Low) Essential consumer goods accessible, but options are limited within town/city/county limits; More than 10 percent of the population lives in a food desert, as defined by the USDA.</p> <p>3 (Medium) Essential consumer goods accessible and available within town/city/county limits; Less than 10 percent of the population lives in a food desert, as defined by the USDA.</p> <p>5 (High) Consumers have multiple retail options for essential consumer goods within town/city/county limits; No food deserts, as defined by USDA, exist in the community.</p>	2
Is there local access to health care facilities such as emergency rooms for trauma and burn and transport such as medivac?	<p>1 (Low) At least one hospital and urgent care center exist in the city, but access to specialized medical services like trauma and burn centers is limited.</p> <p>3 (Medium) At least one hospital and urgent care center exist in the city, transport such as medivac is available to take patients to specialized treatment in neighboring communities.</p> <p>5 (High) Multiple hospitals and urgent care centers exist in the city and specialized treatment like trauma and burn centers is available in local healthcare facilities. A diverse set of highly-credentialed doctors is retained in the community.</p>	3

Government Resilience: Strategic Planning

Indicator	Criteria	Score
<p>Are there early warning and monitoring systems that alert crisis management agencies to risks that approach coping thresholds?</p>	<p>1 (Low) Formal analyses exist that estimate needs and current capacity. 3 (Medium) Analyses exist and are updated periodically to assess the capacity and needs. 5 (High) The results of these analyses are applied and mitigated through changes in funding, operations and infrastructure</p>	<p>3</p>
<p>Have minimum standards of resilience and safety been established to prevent damage to critical infrastructure and integrated into local ordinances?</p>	<p>1 (Low) Minimum standards of resilience and safety, such as seismic codes, flood zone requirements, and mandatory testing and inspection of generators in hospitals, schools and senior homes have been established. 3 (Medium) Minimum standards of resilience and safety have been established and most structures in the community comply with these standards or are working towards compliance 5 (High) Minimum standards of resilience and safety have been established and the majority of structures in the community comply with these standards or are working towards going above minimums.</p>	<p>3</p>
<p>Does the government participate in knowledge sharing activities, including regional and national fora, to promote initiatives and exchange experiences, in addition to public communication of development decision results?</p>	<p>1 (Low) Government attends at least one federal, state, local or academic knowledge sharing activities annually and participates via a workshop, presentation or exercise. Decision results are posted on the government’s website. 3 (Medium) Government attends multiple knowledge sharing activities annually and participates in multiple events. Decision results are posted on the government’s website and featured in local newspaper. 5 (High) Government hosts local knowledge sharing activity and engages business and community organizations to participate. Decision results are posted on the government’s website, shared through social media and featured in local print and TV media.</p>	<p>5</p>
<p>Have regional and national best practices in urban planning been evaluated to identify opportunities to improve local resilience to all types of hazards?</p>	<p>1 (Low) Community's resilience plan includes some elements of regional and national best practices for some types of hazards. 3 (Medium) Community's resilience plan includes many elements of regional and national best practices for most types of hazards. 5 (High) Community has participated in formal working sessions with regional and national thought leaders to improve local resilience to all types of hazards.</p>	<p>1</p>
<p>Are partnerships in place with local, national or international organizations that can provide data, expertise and research?</p>	<p>1 (Low) Partnerships are in place with local organizations. 3 (Medium) Partnerships are in place with local and national organizations. 5 (High) Partnerships are in place with local, national, and international organizations</p>	<p>5</p>

Government Resilience: Operations & Sustainment		
Indicator	Criteria	Score
Has a risk assessment been performed to examine the vulnerability of existing physical infrastructure to natural and man-made hazards?	<p>1 (Low) A risk assessment has been performed and best- and worst-case scenarios are identified; Risk assessment has been performed within last 10 years.</p> <p>3 (Medium) A risk assessment has been performed, best- and worst-case scenarios are identified and plans in place to address worst-case scenarios; Risk assessments are updated periodically within a 10 year period.</p> <p>5 (High) A risk assessment has been performed, best- and worst-case scenarios are identified and plans in place to address worst-case scenarios and reduce vulnerability through planned and funded infrastructure improvements; Risk assessments are performed at least every five years</p>	4
Is there a program to promote compliance with codes to mitigate natural and man-made hazards by all developers and builders?	<p>1 (Low) An educational campaign, such as informational brochures or informational videos, exists to promote compliance.</p> <p>3 (Medium) Workshops and educational events are held to promote compliance and educate developers and builders on resilience code compliance and the importance of complying.</p> <p>5 (High) Community offers financial incentives or recognized awards to developers and builders who comply with codes.</p>	4
Are the roles, authority and responsibilities of intergovernmental departments defined and reviewed on a regular basis as they relate to emergency operations?	<p>1 (Low) Roles, authorities and responsibilities of intergovernmental departments have been informally defined but not revisited or reviewed. Organizations are aware of their roles but not active in them.</p> <p>3 (Medium) Roles, authorities and responsibilities of intergovernmental departments are formally defined and periodically reviewed. Organizations are somewhat familiar with and active in their roles.</p> <p>5 (High) Roles, authorities and responsibilities of intergovernmental departments are formally defined in a shared document and reviewed on a regular basis. All organizations are familiar with and active in their roles and responsibilities.</p>	4
Are departments for public safety, emergency response and economic development adequately funded and staffed?	<p>1 (Low) Departments for public safety, emergency response and economic development funded and staffed, but no formal plan exists to maintain status</p> <p>3 (Medium) Departments for public safety, emergency response, and economic development are adequately funded and staffed, and a plan exists to maintain but not improve funding and staffing resources beyond the fiscal year.</p> <p>5 (High) There is a at least a five-year funding plan, which includes allocations for staff training, new hires, technology updates and resources, to ensure adequate funding and staffing for public safety, emergency response and economic development departments.</p>	3
Have backup and failover systems from local power at health care facilities to IT and communications systems been exercised and tested to confirm continued functioning during a crisis?	<p>1 (Low) Backups are tested at least annually, all are functioning.</p> <p>3 (Medium) There is a disaster recovery plan that is exercised annually.</p> <p>5 (High) Failover systems exist and are tested to be available within the planned time frame in the disaster recovery plan.</p>	4

Government Resilience: Government Relations		
Indicator	Criteria	Score
Is there a strategy to integrate all emergency response, relief and recovery efforts from multiple jurisdictions?	<p>1 (Low) Informal agreements exist to provide and receive assistance from multiple jurisdictions during a threat or crisis if needed. Agreements have never been activated and are not tested or exercised.</p> <p>3 (Medium) A formal strategy exists to activate a Joint Operations Center that integrates emergency response, relief and recovery efforts with other jurisdictions when needed.</p> <p>5 (High) A formal strategy exists to activate a Joint Operations Center that integrates emergency response, relief and recovery efforts with other jurisdictions when needed.</p> <p>The community holds formal training sessions in the JOC with other municipalities to ensure all actors are familiar with roles and responsibilities during activation.</p>	4
Is GIS data received and shared with all levels of government and relevant departments?	<p>1 (Low) GIS data has been collected but not shared with all levels of government and relevant departments.</p> <p>3 (Medium) GIS data is shared with all levels of government and relevant departments, or a plan is place to do so.</p> <p>5 (High) GIS data is shared with all levels of government and relevant departments. Meetings and working sessions are held across departments to analyze GIS data and inform planning decisions.</p>	2
Do mutual aid agreements exist between various government organizations to provide response assistance and other support during a time of need?	<p>1 (Low) Informal mutual aid agreement exist between neighboring cities, towns and the county.</p> <p>3 (Medium) Formal mutual aid agreements exist between neighboring cities, towns and the county.</p> <p>5 (High) Formal mutual aid agreements exist and are maintained between neighboring cities, towns, counties and the state. Agreements with jurisdictions outside of the region are in place to address needs in the instance of an incident impacting the entire region.</p>	5
Is there a person or office designated to coordinate resilience planning and efforts internally and with external organizations/departments?	<p>1 (Low) A person or office is designated but does not take an active role in sharing information between government, business, social and community organizations.</p> <p>3 (Medium) A person or office is designated and communicates information periodically between government, business, social and community organizations.</p> <p>5 (High) A formal liaison and/or department is designated and communicates information and leads activities frequently between government, business, social and community organizations.</p>	0
Are exercises conducted that include need for inter- and intra-operability of government organizations and possibly private sector resources?	<p>1 (Low) Community holds tabletop exercises and training sessions internally and with stakeholders from surrounding jurisdictions, including the private sector.</p> <p>3 (Medium) Emergency management includes all internal stakeholders, such as elected and appointed officials, department heads and NGOs, in disaster training.</p> <p>Emergency management holds an annual full-blown, scenario-based disaster training drill that brings all internal and external stakeholders to the table, including the private sector.</p> <p>5 (High) Local emergency management holds frequent disaster training and drills and includes all internal stakeholders, such as elected & appointed officials, department heads & NGOs. Emergency Management holds a quarterly full-blown, scenario-based disaster training drill with internal and external stakeholders.</p>	3

Government Resilience: External Plan Alignment		
Indicator	Criteria	Score
Are sustainability and resilience factors evaluated as part of the analysis for existing and potential infrastructure projects?	<p>1 (Low) Sustainability and resilience factors like impact on surrounding environment and habitats, access for bikers and pedestrians, providing alternative modes of egress for car-less residents, impacts of flooding and natural threats, and interconnectedness among and between communities are evaluated. No action has been taken as a result evaluation.</p> <p>3 (Medium) Existing and new infrastructure has been evaluated to develop strategies for minimizing impact to surrounding environment and habitats, improving access for bikers and pedestrians, providing alternative modes of egress for car-less residents, reducing flooding and impacts of natural threats, and building interconnectedness among and between communities. A plan exists for retrofitting existing infrastructure, but no action has been taken yet.</p> <p>5 (High) Existing infrastructure has been or is being retrofitted to minimize impact to surrounding environment and habitats and improve access for bikers and pedestrians, reduce flooding and impact of natural threats, provide alternative modes of egress for car-less residents, and boost interconnectedness among and between communities. New infrastructure takes these factors into account.</p>	2
Are roads and sites designed to be accessible in case of an emergency event or other hazard?	<p>1 (Low) Existing roads & sites have been assessed for accessibility during an emergency but not all have been deemed or made accessible.</p> <p>3 (Medium) Existing roads and sites have been assessed for accessibility in the case of emergency and plans for alternate routes or bypassing roads are in place in case of inaccessibility during a crisis.</p> <p>5 (High) Existing roads and sites have been assessed for accessibility in the case of an emergency, sites have been relocated to ensure accessibility, roads have been physically altered to improve accessibility through storm drain improvements, widened shoulders for snow removal, levees to prevent flooding, etc.</p>	3
Do policies, management strategies and plans incorporate resilience into infrastructure maintenance, upgrades and new projects?	<p>1 (Low) A comprehensive two-year plan is in place across all key levels of government to support infrastructure maintenance, upgrades and new projects that support resilience. At least two improvement projects are planned in the coming fiscal year.</p> <p>3 (Medium) A comprehensive three-year plan is in place across all key levels of government to support infrastructure maintenance, upgrades and new projects that incorporate resilience. At least three improvement projects are planned over the next three years.</p> <p>5 (High) A comprehensive five-year plan is in place across all key levels of government to support infrastructure maintenance, upgrades and new projects that incorporate resilience. At least one new project and five improvement projects are planned over the next five years</p>	3
Have long-term capital investments been developed to maintain, retrofit and/or replace critical emergency services?	<p>1 (Low) Critical emergency services and needs are identified and long-term plans are developed.</p> <p>3 (Medium) Funding is dedicated to meet at least some of the foreseen needs for critical emergency services.</p> <p>5 (High) Funding for the long-term needs is planned and enough is dedicated to meet anticipated needs.</p>	1
Do community project and planning decisions take into account factors such as analysis of the urban plan, land-use, investment decisions and worst-case scenarios for emergency preparedness plans?	<p>1 (Low) These factors have been analyzed, and priority programs and projects have been identified but not implemented.</p> <p>3 (Medium) These projects and plans are formally reviewed jointly or while they are in preparation as a factor in their final approval.</p> <p>5 (High) Updates and revisions to projects are actively reviewed to determine their impact on emergency response plans and prioritize emergency response needs in the final decision making.</p>	4

Government Resilience: Empowerment		
Indicator	Criteria	Score
Are emergency plans and other information shared and coordinated with community and other local and regional government organizations?	<p>1 (Low) Emergency plans and other information are shared with community and other local and regional government organizations, but action and training is not facilitated through information sharing.</p> <p>3 (Medium) Emergency plans and other information are periodically shared, discussed and practiced with community and other local and regional government organizations to inform coordinated, mutually beneficial plans.</p> <p>5 (High) An open flow of information sharing regarding emergency plans and other information exists with community and other local and regional government organizations to inform effective, mutually beneficial plans; Coordination is established through formal training exercises with all stakeholders present.</p>	4
Is there an official government continuity of operations plan (COOP) to ensure that lifelines and services are quickly restored?	<p>1 (Low) Government has an informal plan to ensure lifelines and services are quickly restored.</p> <p>3 (Medium) Government has an official COOP but has never practiced.</p> <p>5 (High) Government has an official COOP, updates and practices it at least annually, and has shared it with surrounding jurisdictions and other stakeholders included in the plan.</p>	0
Are NGOs authorized to support or conduct operations within the community during times of need?	<p>1 (Low) Some relevant NGOs have a formal role/clearly defined responsibilities in the community's emergency operations plan.</p> <p>3 (Medium) Many relevant NGOs have a formal role/clearly defined responsibilities in the community's emergency operations plan and practice with emergency management annually.</p> <p>5 (High) All relevant NGOs have a formal role/clearly defined responsibilities in the community's emergency operations plan and are included in emergency managements disaster training exercises, when applicable.</p>	4
Is there an established network and a plan to coordinate and utilize volunteer resources and emergency aid organizations, such as Red Cross and Faith based organizations, to provide shelter, food or other care for people and pets?	<p>1 (Low) An informal network exists and activates to address an imminent threat or crisis.</p> <p>3 (Medium) A formal network, such as a local Voluntary Organization Active in Disaster (VOAD) program, local Certified Emergency Response Team (CERT) program, or similar coalition is established and coordinates efforts among charitable disaster relief organizations in the community. The network only activates during an imminent threat or crisis.</p> <p>5 (High) A local Voluntary Organization Active in Disaster (VOAD) program, local Certified Emergency Response Team (CERT) program, or similar coalition has been established, coordinates efforts and has assigned roles and responsibilities among charitable disaster relief organizations in the community. The network is active even when an imminent threat is not on the horizon.</p>	5
Is there a formal campaign or program to assist local businesses in developing a continuity of operations (COOP) plan?	<p>1 (Low) The local government encourages local businesses to develop a COOP plan but no formal campaign or assistance program exists.</p> <p>3 (Medium) There is a formal campaign to assist local businesses in developing a COOP plan, but no formal assistance is provided on behalf of the local government.</p> <p>5 (High) The local government leads training sessions and workshops to assist local businesses in developing a COOP plans and provides incentives for those who have plans.</p>	0

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