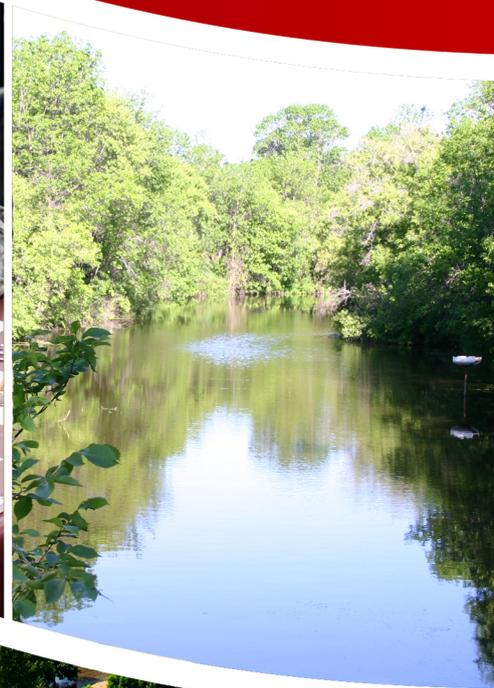


# National Disaster Resilience Competition Phase 2 Application

MINOT, NORTH DAKOTA



**City of Minot**

Exhibit A: Executive Summary  
*City of Minot, North Dakota*

ExhibitA\_ExecutiveSummary.pdf



## EXHIBIT A: EXECUTIVE SUMMARY

PROVIDE, POWER, and PROTECT. Located in northwest North Dakota near the Canadian border and sixty miles from the geographic center of North America, in the heartland of agriculture and energy and home to Minot Air Force Base's global strike and nuclear deterrence resources, Minot is strategically important to the United States and the world due to its ability to Provide for the World (agriculture), Power the World (energy), and Protect the World (defense).



At the peak of the June 2011 flood, 12,000 people were evacuated from their homes in Minot. There were fewer than 300 people in the shelters that had been set up, however, and they were there for only a short period of time. Families, friends, coworkers, and even strangers who became like family shared their homes, their dinner tables, and their compassion with neighbors who had lost everything. That is the story of Minot. We're a community that works hard every day to provide, power, and protect, and when we're faced with great adversity we step up and help one another. We hope this proposal reflects our earnest commitment to help everyone in our community recover from the flood. We realize now that we must dedicate ourselves to a legacy of resilience so this region will continue to build on what we've learned through this NDRC process.

Minot has proposed an integrated set of NDRC projects: *reduce flood risk and improve water management, build affordable resilient neighborhoods, and foster economic resilience and diversification*. These three projects address our unmet recovery needs using innovative, science-based decision support tools; inclusive communication and outreach strategies that will continue to involve people from across our community in the implementation of these projects; and an annual Report to Minot that will recount our progress toward achieving the

objectives outlined in our approach. The projects were developed in consultation with residents, partners, and city officials who worked together over the past 13 months to determine the most critical unmet needs, how we could best address those needs, and how we can use the best science to protect our region, including our agricultural assets, in order to create a more resilient future. We are confident that our proposal will enable us to do that.

This has truly been a regional collaboration—and it does not stop at the U.S. border. We have begun communicating more frequently with federal regulatory agencies and with our international partners in Canada, and are meeting regularly with our regional partners and state agencies to consider flood risk reduction options that will benefit us all. Our resilience is grounded in a regional approach. We have asked the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the International Souris River Board to adopt and implement a one-foot-lower normal water level control for Lake Darling, located 20 miles northwest of Minot, by next spring. That single action could provide 10,000 acre-feet of additional water storage upstream of Minot, increasing public safety and reducing flood risk from smaller events. It isn't the total solution, but it is one layer in a more resilient vision for our region.

Remember the old saying, “put your money where your mouth is?” Minot has done just that. Because our city is the trading center for the region, and because we recognized the smaller communities in our region have limited financial capabilities, Minot has committed to fund the local cost share for the regional flood protection system for all communities along the Souris River in North Dakota. That means Minot will provide a minimum of \$337 million dollars over the next 30 years to help protect the entire region. For a city of just under 50,000 residents, that's a pretty powerful example of regional cooperation. We recognize, however, that resilience is not achieved in a vacuum. Minot's environmental, social, and economic

resilience is intrinsically linked to the resilience of our entire region.

Minot was faced with devastating flooding of the Souris River (also known as the Mouse River) and a simultaneous economic shock from the Bakken oil boom. We've learned valuable lessons from these very diverse events, and we recognize the challenge posed by the economic volatility of the oil industry. We have reached out to other areas of the country that have faced similar economic peaks and valleys to identify lessons they've learned that could be helpful to us, and we want to share the lessons and best practices from our experience. As the effects of climate change, economic globalization, transformative technologies, and other environmental challenges continue, more regions will face concurrent disasters, hazards, and shocks that can significantly complicate the process of developing the best recovery responses, as has been the case in Minot. We believe our experiences can help others consider these scenarios in their planning efforts, and think differently about the best solution strategies.

This is a bold proposal, but it is one that Minot and its partners are fully capable of implementing. Minot has come a long way since the historic flood in 2011, but available resources are insufficient to complete our recovery or invest in becoming a more resilient city and region in the future. Our proposal focuses on critical unmet recovery needs: moving people in low-lying flood prone areas out of harm's way, because the flood protection system will not be completed for many years; developing affordable housing that is so critically needed for our vulnerable residents; and providing access to the skills and training required to maintain and enhance our economic diversity, so we do not become even more reliant on the oil industry. We are confident these projects can be completed within the schedule we have outlined, and will produce the benefits we've described. We sincerely appreciate the NDRC process and your consideration of our application for the National Disaster Resilience Competition.

## Exhibit B: Threshold Requirements

*City of Minot, North Dakota*

ExhibitB\_ThresholdReq.pdf



## **EXHIBIT B: THRESHOLD REQUIREMENTS**

- 1. General Notice of Funding Availability Threshold:** The City of Minot is an eligible applicant; it has no outstanding civil rights matters. Minot is not an entitlement community, but this NDRC proposal was reviewed by the North Dakota Department of Commerce and is consistent with the state's Consolidated Plan (see *AttachmentD\_Consultation.pdf*). This application is consistent with Minot's Analysis of Impediments to Fair Housing.
- 2. Unmet Need:** Minot has many competing needs for flood recovery funds, and insufficient resources to cover these needs. Two CDBG-DR allocations totaling \$102,631,964 have gone toward essential recovery projects. Despite this assistance, funds have not been sufficient to meet all disaster recovery needs, nor are funds available to significantly reduce risks from future flooding. See *ExhibitD\_Need.pdf* for details of Minot's unmet recovery need.

**Housing:** Minot has invested \$49,165,210 from its CDBG-DR funding to address housing needs resulting from the flood. The city continues to invest in housing recovery, focusing specifically on the lack of affordable housing resulting from a combined disaster and economic shock from the Bakken oil boom. In Phase 1, the city conducted a windshield survey of 20 flood-damaged properties and received surveys from the owners of 15 of those properties to fulfil the threshold requirement. Owners attested that the flood caused the damage, and that they had inadequate resources from insurance, FEMA, and/or SBA to complete necessary repairs (see documentation link in *AttachmentI\_MIDURNChecklist.pdf*). *ExhibitD\_Need.pdf* documents that these homes represent a fraction of the current unmet housing recovery needs in Minot.

**Economic Revitalization:** Maintaining a sustainable and diversified economy in Minot may be the greatest challenge to the region's recovery and future resilience. The disaster and

subsequent economic shock created dramatic increases in housing costs and siphoned skilled employees away from non-oil businesses, and over 800 skilled workers permanently left the Minot area due to flood-related events (see *ExhibitD\_Need.pdf*). For its Phase 1 application, the city conducted a windshield survey of damaged commercial buildings to document the threshold requirements in accordance with Exhibit B of the NOFA and documented five businesses with outstanding repair needs due to the 2011 flood. Three of these businesses have not re-opened due to lack of resources, and they provided letters attesting that the damage was related to the flood and they had inadequate resources from available sources to complete the repairs (see link in *AttachmentI\_MIDURNChecklist.pdf*).

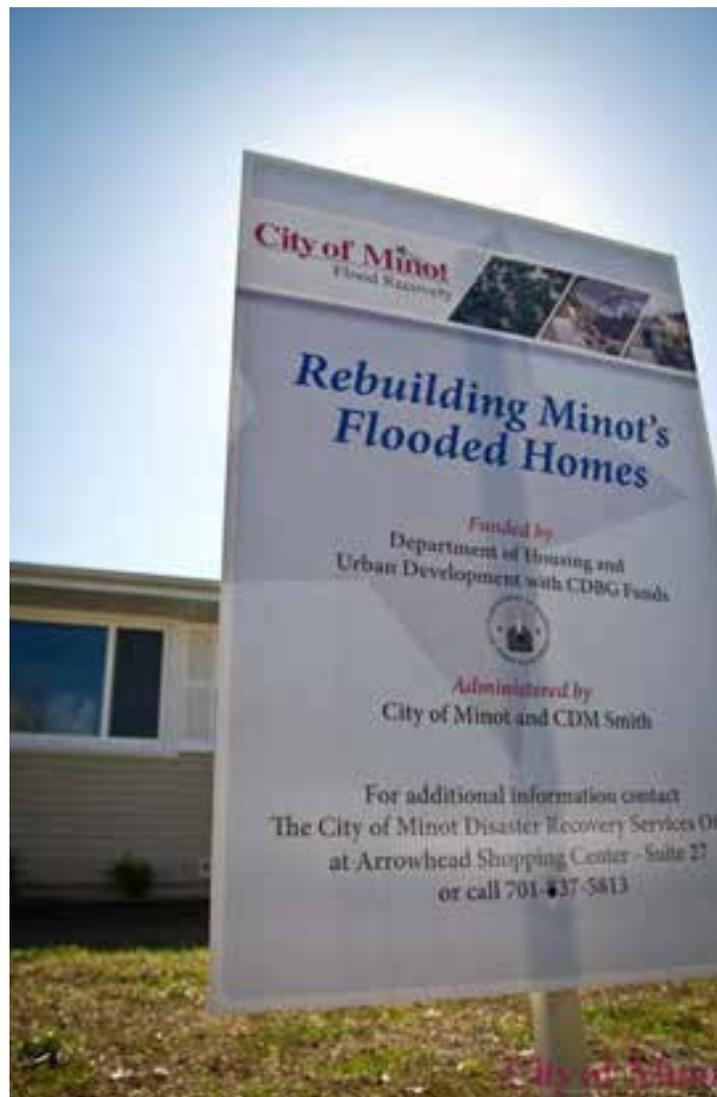
**Infrastructure:** Since the flood, Minot has spent over \$41,495,159 in CDBG-DR funds on critical flood-related infrastructure repairs of roads, street lights, and signals; repairs to the sewer system; and removal of debris from the city's storm drainage system. Despite this investment, essential repair needs remain unmet. Paramount to preventing future losses is repair of the existing USACE-constructed flood protection system of levees, dikes, and channelization along the Souris River (also known as the Mouse River) which was damaged in the flood. The system was in place before the flood and was designed to protect the city from a 5,000 cubic feet per second flood (the current 100-year flood event). As a result of this damage, Minot is highly vulnerable to future flood damage and is not protected from the comparatively modest floods experienced in prior years. Without these basic repairs, low-lying areas of the city are extremely vulnerable. In addition to the engineer's report for necessary repairs (see *Exhibit G* of our Phase 1 application) that documents a \$5 million funding gap, the city must make critical repairs to three bridges on major roadways that provide essential connectivity north and south of the river in Minot. Repairs to these bridges

will cost the city \$21 million. The City of Minot has also committed a minimum of \$337 million over the next 30 years to provide the local cost share for the entire Souris River basin for the Mouse River Enhanced Flood Protection Plan (see *AttachmentB\_Leverage Documents.pdf*).

- 3. Eligible Applicant:** The City of Minot is the applicant for this grant and is named as an eligible applicant in Appendix B of the NDRC NOFA.
- 4. Eligible County:** The NDRC NOFA identifies the City of Minot as an eligible applicant.
- 5. Most Impacted and Distressed Target Area:** Section III.A of the NOFA lists Minot as an eligible applicant; it therefore meets the threshold criteria as most impacted and distressed.
- 6. Eligible Activity:** CDBG-NDR funds will only be used for eligible activities, as stipulated in Appendix A of the NDRC NOFA.
- 7. Resilience Incorporated:** NDRC projects proposed will improve Minot's resilience to future threats and hazards identified in *Exhibit D\_Need.pdf* of this Phase 2 application.
- 8. Meet the National Objective:** Projects will meet one of the three national objectives.
- 9. Overall Benefit:** The projects proposed by the City of Minot will meet the national objective requiring at least 50 percent of the funds benefit low-to-moderate income (LMI) persons.
- 10. Establish Tie-Back:** All proposed CDBG-NDR activities will establish proper tie-back to the 2011 Souris River Flood, the Qualified Disaster for the city of Minot.
- 11. Benefit-Cost Analysis:** Included in *AttachmentF\_BCA.pdf* of this Phase 2 application.
- 12. Application:** The city of Minot will submit only one NDRC application.
- 13. Certifications:** See *AttachmentC\_Certification.pdf* for certifications required in Appendix F of the NOFA.

Exhibit C: Factor 1 - Capacity  
*City of Minot, North Dakota*

ExhibitC\_Capacity.pdf



## **EXHIBIT C: FACTOR 1 - CAPACITY**

### **City of Minot – Past Experience**

Minot has successfully planned, designed, and managed major disaster recovery, infrastructure, housing, and economic revitalization projects and programs in the past three years. The city will use a number of the systems and controls developed to carry out its CDBG-DR program, as well as experienced city staff and consultants, to implement its NDRC programs and projects. This team has been very successful in implementing \$177 million in disaster recovery funding, including over \$102 million in CDBG-DR funds and \$75 million in state recovery funds.

Since the flood in June 2011, Minot has aggressively but carefully implemented its DR Action Plan, facilitating the development of 229 units of LMI housing; buying out 227 properties to enable households to move out of harm's way; rehabilitating and reconstructing 117 flood-damaged owner-occupied homes; repairing and reconstructing \$38 million of infrastructure; launching an LMI rental rehab program to reconstruct 21 housing units; and implementing a program that reimbursed 394 homeowners for a portion of the investments used to repair their homes. The City has administered \$13 million in FEMA-PA and Hazard Mitigation programs and \$155 million in Department of Homeland Security grants. Minot has successfully managed and implemented federal grant programs in compliance with the myriad of federal regulations tied to the funding sources, including civil rights and fair housing regulations and requirements. Federal grants awarded to Minot since January 2012 are listed in the table on the following page.

In the past three years Minot has successfully undertaken major infrastructure projects, including a new 115,000 square foot airport terminal and related taxiways and parking to accommodate significant increases in passenger activity. Under Public Works Director Dan Jonasson and City Engineer Lance Meyer, Minot has invested \$41,495,159 in CDBG-DR funds

to renovate and expand sewer and water infrastructure damaged in the flood and provide for more resilient development outside flood prone areas. Minot has also built two new schools and renovated six others while meeting the scheduling requirements of area students.

**Federal Grants Awarded to the City of Minot 2012-2015**

<b>Federal Agency</b>	<b>Grant Description</b>	<b>Funds awarded</b>
Dept. of Commerce	Economic Development Administration	\$19,600,000
HUD	Office of Community Planning & Dev.	\$102,631,964
USDOT	Federal Aviation Administration	\$47,402,772
Dept. of Homeland Security	Transportation Security Administration	\$155,212,597
Federal Transit Administration	Formula Grants for Non-Urban Areas	\$2,296,655
FEMA (3 grants)	Public Assistance & Hazard Mitigation	\$13,259,775

The flood destroyed Minot’s Oak Park, but one year later the park reopened due to the heroic efforts of the community, state electric cooperatives, and an unexpected gift from the people of Cincinnati. In June 2012, 11 electric cooperatives from around the state worked an entire day to repair and replace the park’s electrical equipment. Three months after the flood, a small group of community volunteers rallied votes from across the nation to win Coca Cola’s annual “America is Your Park” competition. The volunteers’ dedication and their portrayal of the devastation caused by the flood convinced the Cincinnati Board of Parks, also in the running for the award, to ask its residents to cast their votes for Minot. Oak Park received over 3 million votes and was awarded the \$100,000 prize. This effort aptly demonstrates the enthusiasm and tenacity of the Minot community, which has been evident throughout this NDRC process and will no doubt play a significant role in the success of proposed NDRC projects.

Affordable housing is a serious challenge in Minot. In the past 3 years, the Minot Housing Authority, with nonprofit developer Beyond Shelter, Inc., has developed four new affordable housing communities with 229 units. (Both organizations are partnering with the City of Minot for the NDRC effort.) The City of Minot was instrumental in building 34 units of affordable live-work space for artists in the Artspace Lofts, which opened in summer 2013. Artspace is an important anchor for a growing downtown Minot arts and tourism economy.

In the past three years, Minot has collaborated with its regional stakeholders to produce the Ward County Hazard Mitigation Plan and the Mouse River Enhanced Flood Protection Plan, and has contributed to the other forward-thinking plans and studies outlined in *Exhibit G* of our Phase 1 application. Minot completed a new Comprehensive Plan, an Affordable Housing Action Plan, and an Analysis of Impediments to Fair Housing. The City of Minot has had no fair housing or civil rights complaints for any of the programs it has implemented.

To effectively manage its CDBG-DR obligations, Minot established the policies and procedures listed below to formalize program oversight, program income, audit, grant oversight and internal controls, quality assurance, procurement, and other HUD requirements.

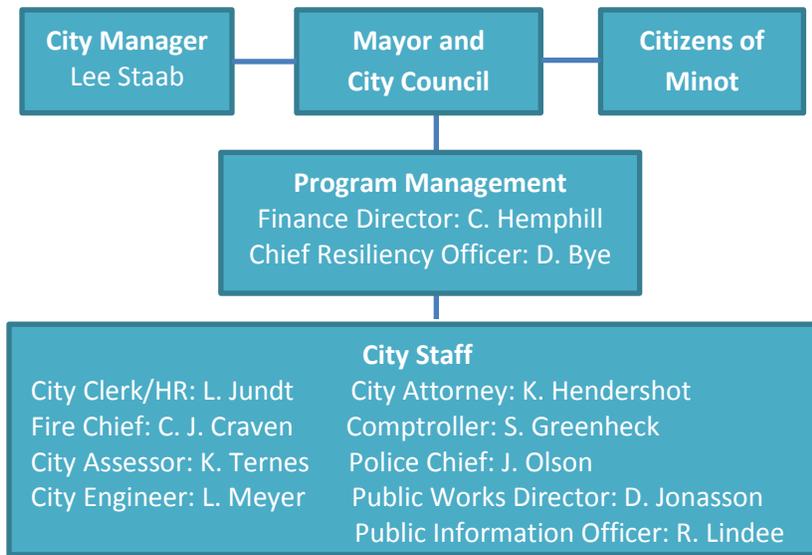
**New Policies Implemented by the City of Minot since 2011**

Citizens Participation Plan	HUD Section 3 Policy
Fair Housing Policy	Grant and Project Oversight Policy and Procedures
Vendor Monitoring Plan	Communications Policy for Sensory Impaired
Anti-Displacement Plan	Voluntary Acquisition and Relocation Policies
Procurement Policy	Anti-Fraud, Waste, and Abuse Policy and Procedures
Demolition Policy/Procedures	Internal Auditor Policy and Procedures

Complaint Policy	Internal Controls Policy and Procedures
Recapture Policy	Housing Rehabilitation and Reconstruction Policy/Procedures
EEO Compliance Policy*	Conflict of Interest Policy/Procedures
Section 504 Grievance Policy*	Small Rental Rehab and Reconstruction Policy/Procedures
Monitoring Policy/Procedures	Infrastructure Policy and Procedures
Davis Bacon Policy/Procedures	<i>*a compliance officer or coordinator was added as well.</i>

**City Of Minot – Management Structure**

Minot is governed by a mayor, 14 aldermen, a city manager, and professional department heads including the finance director, public works director, city attorney, city engineer, and city assessor, all of whom have been actively involved in framing this application. The organization chart on the following page illustrates Minot’s management structure. Lee Staab, City Manager, is a retired Colonel from the U.S. Army Corps of Engineers and served as Executive Officer with the Assistant Secretary of the Army and Commander for the European District. He holds a BS and MS in Engineering, an MA in International Relations, and an Executive Degree from Harvard Business School. He spent seven years as president of a global project management company based in the Washington, DC area and engaged in engineering and construction management. Mr. Staab and Finance Director Cindy Hemphill will continue to work with Minot’s NDRC program management consultant and HUD, the State of North Dakota, city department heads, and local community groups and citizens. Ms. Hemphill has guided Minot’s administration of CDBG-DR programs and other federal and state programs during her 9.5 year tenure with the city. She has a degree in accounting, a masters in management, and extensive experience in finance, federal regulations, and auditing federal programs. She and her staff grasp the applicable procurement, environmental review, Davis-Bacon and related labor acts, fair



housing and equal opportunity, Section 3, Section 504, and many other regulations. She has 16.5 years of federal government audit experience with the Department of Defense, Department of Energy, U.S. Attorney's

Office, and Department of Justice. Mr. Staab and Ms. Hemphill led the NDRC application process, actively participating in stakeholder and committee meetings, meeting one-on-one with the many partners and community groups, and soliciting citizen and stakeholder ideas on how Minot may be more resilient to future disasters. The Mayor, City Council, City Manager, Finance Director, and other city leaders are all committed to continuing their hands-on roles throughout the NDRC process.

Minot's Engineering and Public Works Departments plan for, design, construct, and manage the city's public infrastructure, GIS services, transit services, flood protection systems, and water management systems. Professionals from these departments will be actively involved in the flood risk reduction and water management projects proposed in this application. Minot's Comptroller has 22 years of financial accounting experience and will continue to have primary responsibility for reconciling the CDBG-DR and NDRC funds. The city's internal auditors have independent audit responsibility for the CDBG-DR program, and will audit the NDRC program as well. The City Attorney and City Assessor have been invaluable partners in implementing the CDBG-DR program and other significant development and construction projects, and will

provide legal services and market assessment, appraisal, and data for the NDRC projects. To ensure the most cost-effective projects, Minot will use a competitive bid process and will compare lowest and best bids with independent engineering and design cost estimates. City staff will review the final scope and fee proposals from all partners to ensure they reflect reasonable professional services costs for the services provided.

Minot has appointed former city planner Donna Bye as Chief Resiliency Officer to direct its resilient approach to future development. She has 14 years of planning and grant management experience, and is working with city department heads, elected officials, the business community, and regional agencies to define and implement the city's resilience plan.

### **Key Partners – Management Structure and Experience**

To further enhance its existing capacity, the City of Minot has brought together an exceptional team of experts to assist in the planning, design, construction, and implementation of our proposed NDRC projects. These partners (see *AttachmentA\_PartnerDocumentation.pdf*) represent architects and landscape architects, construction managers, hydrologic and hydraulic modelers, climate scientists, nonprofit developers, economic developers, educators and trainers, water management experts, and housing and neighborhood developers. Many of these partners were described in *Exhibit C* of our Phase 1 application, which also presents experience in regional or multi-governmental collaboration, community engagement, cost reasonableness, and assessment of science-based risk information capacities not recounted in this Phase 2 narrative.

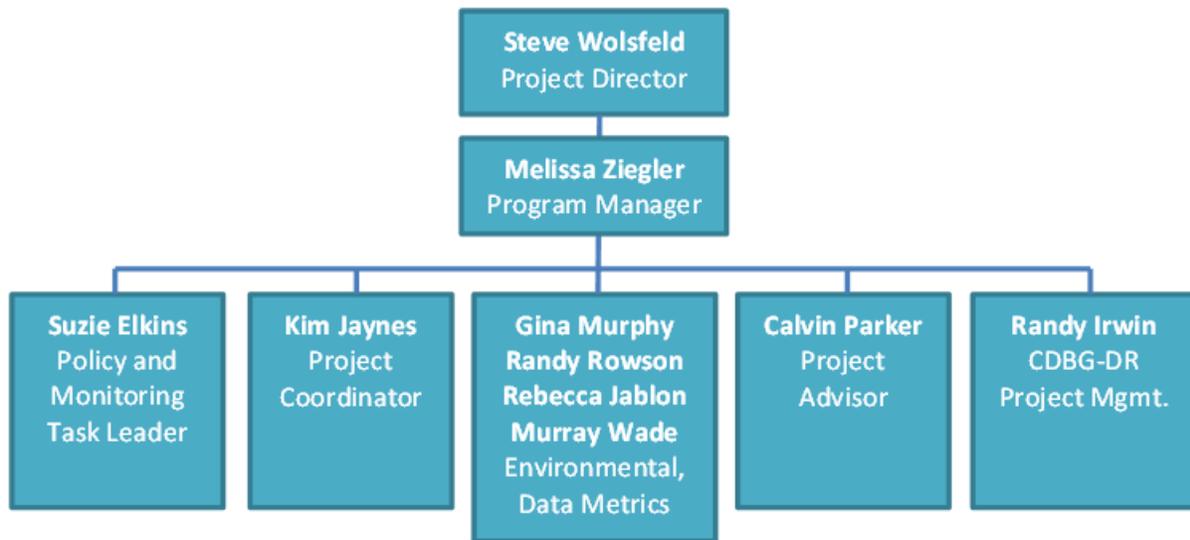
The table below assigns a reference number to each of the specific capacity activities detailed by HUD on page 38 of the Phase 2 NOFA. The City of Minot's demonstrated capacity includes items 1, 2, 3, 5, 6, 7, 12, 13, 16, 19, 20, 21, 23, 24, 25, 26, 27, and 28. The capacity

expertise added by each partner is described on the following pages using the reference numbers from this table. Together the City and its capacity partners provide the skills and expertise required to successfully implement Minot’s proposed resilience projects and activities within the schedule proposed, and to do so according to the requirements of the NDRC grant program.

<b>General Administrative Capacity:</b>	
1. Project management and logistics	5. Procurement
2. Accountability, QA/QC, monitoring, and internal audit	6. Contract management
3. Rapid program design and launch	7. Financial management
4. Determining, tracking, and evaluating outcomes	
<b>Technical Capacity:</b>	
8. Risk, impacts, and vulnerability assessment	16. Site, city, regional planning
9. Management of project design	17. Insurance industry issues
10. Flood insurance and floodplain management	18. Pre-development site prep
11. Green infrastructure planning and implementation	19. Property disposition
12. Acquisition and disposition of real estate	20. Leverage/mixed financing
13. Rehab and reconstruction of various types of structures	21. Redevelopment of property
14. Remediation of brownfields and ecological restoration	22. Accessing operating and investment capital
15. Assessing technical feasibility and value engineering	
<b>Community Engagement and Inclusiveness:</b>	
23. Cross-disciplinary collaboration	26. Regional collaboration
24. Project coordination/partnership with key stakeholders	27. Working with other orgs.
25. Consultation and stakeholder involvement during all phases of the project	28. Community engagement, especially vulnerable populations

**CDM Smith** (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, and 28) has worked with Minot since 2011 as its recovery program consultant. Steve Wolsfeld, Vice President and client service leader, will serve as project director for implementation of NDRC projects. He has an MS and BS in Engineering and is a licensed professional engineer based in Minneapolis with over 20 years of civil engineering experience. He has overseen CDM Smith's disaster recovery contract with the City of Minot since 2011. Melissa Ziegler, who will serve as program manager, has 35 years of experience managing CDBG entitlement programs and commercial, industrial, and housing developments, and is a Certified Economic Developer. She has led planning and development projects throughout the U.S., developed innovative investment prioritization processes for state DOTs, served on the steering team for a bi-national scenario planning project for FHWA, led redevelopment strategies for first-ring suburbs in Houston and Kansas City, led the Minot Affordable Housing Study, and is a Past President of the National Association for County Community and Economic Development (NACCED). She has an MBA and a Masters of Public Administration. Susan Elkins has over 35 years of CDBG and disaster recovery experience; she has consulted with the cities of Minot and Lake Charles and the states of Illinois, New York, New Jersey, and Colorado. She retired from the State of Louisiana after serving as Executive Director of its Office of Community Development from 1981 to 2008. During that time she oversaw the largest supplemental appropriation in the history of disaster recovery for Hurricanes Andrew, Rita, and Katrina. Ms. Elkins is a nationally recognized expert in disaster recovery and HUD regulations.

As an international engineering, planning and infrastructure firm, CDM Smith works with communities around the world on water management, environmental restoration, green infrastructure, transportation, climate science, and community development projects. The firm



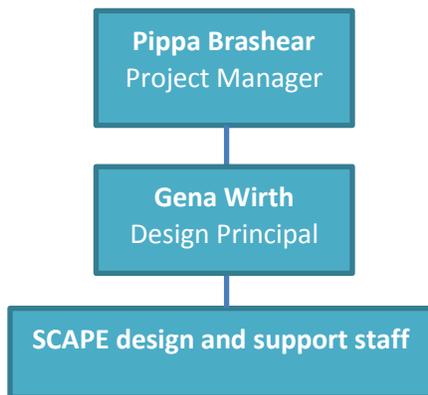
has successfully managed the CDBG-DR program for the State of Illinois for four disaster declarations. The \$211 million in CDBG-DR funds for Illinois supports housing, economic development, planning, and public infrastructure projects through nine grant programs. CDM Smith is currently working with the U.S. Army Corps of Engineers and the Louisiana Coastal Protection and Restoration Authority to prepare the feasibility study and environmental impact statement for the Blind River Freshwater Diversion project.

***Dr. Adnan Akyuz, North Dakota State Climatologist*** (4, 8, 23, 26, and 27) is a Professor of Climatological Studies at North Dakota State University. He has an MS and PhD in Atmospheric Science from the University of Missouri and a BS in Meteorological Engineering from Istanbul Technical University, and was a climate services specialist with the National Weather Service. He will advise on potential effects of climate change as they affect the Minot area and proposed NDRC projects, and will help the team develop strategies to mitigate these effects.

**Design Team:** Our design team includes SCAPE/Landscape Architecture, EAPC Architects, KLJ, and the North Dakota State University Department of Architecture and Landscape Architecture. They bring national design innovation as well as regional experience and

understanding, and will be supplemented by experienced construction manager Steve Gehrtz to ensure design excellence, cost effectiveness, and practical and implementable design solutions.

**SCAPE/Landscape Architecture PLLC** (1, 4, 8, 9, 11, 14, 15, 16, 23, 24, 25, 27, and 28)



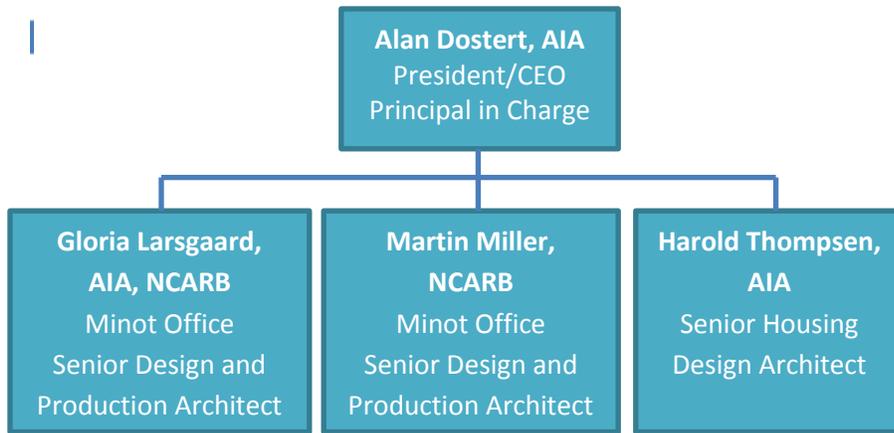
designed the *Rebuild by Design* Living Breakwaters project.

The firm also won the Buckminster Fuller Challenge (socially-responsible design’s highest award), the National Planning Achievement Award for Environmental Planning, and the ACEC of NY Engineering Excellence Award. Pippa Brashear, SCAPE’s Director of Planning and Resilience and

project manager for the design phase of Living Breakwaters, will advise Minot on design and resiliency for its NDRC projects. She holds MA degrees in Landscape Architecture and Urban Planning from the Harvard University Graduate School of Design and a BA in Environmental Science and Public Policy from Harvard College. Gena Wirth, a principal with SCAPE and project manager for the Living Breakwaters concept design, is also part of the team. She has MA degrees in Landscape Architecture and Urban Planning from the Harvard University Graduate School of Design and a BS in Horticulture from the University of Delaware.

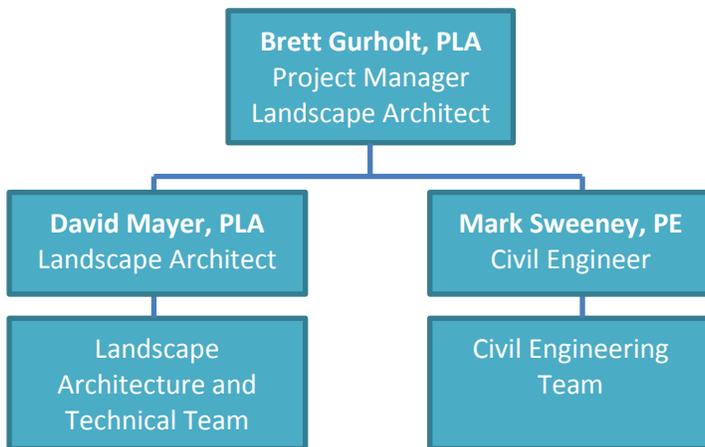
**EAPC Architects** (1, 2, 3, 5, 6, 7, 9, 11, 13, 15, 16, 21, 23, 24, 27) will provide architectural design and programming for the proposed Center for Technical Education and the MSU downtown Arts Education Center, and will participate in the development of the Affordable Housing Plan Book. EAPC recently designed the Cook’s Court senior apartments and The Willows and Sunset Ridge affordable housing in Minot, as well as the Slaaten Learning Center at MSU and the Western Star Career and Technology Center at Williston State College in North Dakota. EAPC’s Minot NDRC effort will be led by Alan Dostert, President/CEO, with 34 years

of experience in architecture including fast-track phasing. He has led numerous housing and university design projects in the Midwest. Gloria Larsgaard, Minot Office Manager/Project



Manager and AIA Young Architect of the Year for North Dakota in 2011, will support EAPC’s design work. She has extensive experience in residential

and university projects, including many for Minot State University. Harold Thompsen is EAPC’s go-to architect for housing including senior living developments, apartments, townhomes, and supportive housing throughout the Midwest, and he will also support the NDRC projects.



**KLJ** (1, 3, 6, 7, 9, 11, 14, 15, 16, 21, 23, 24, 25, 27) will provide master planning and landscape architecture for the Riverfront Greenway, the new resilient neighborhoods, and the downtown public gathering space

proposed in Minot’s NDRC grant application. KLJ has a Minot office and 23 locations in six Midwestern states. Brett Gurholt will serve as project manager for Minot’s NDRC projects, assisted by David Mayer and Mark Sweeney and supported by staff engineers and landscape architects. Mr. Gurholt and Mr. Mayer earned BLA and BS degrees in Environmental Design from North Dakota State University, and have 15 and 16 years of design and project

management experience, respectively. Mr. Sweeney, KLJ’s Minot office manager, has over 18 years of municipal design experience. He has a BS and MS in Civil Engineering. KLJ provided the master plan and design for Centennial Park on Minot’s western edge in 2011 before the flood; designed improvements to Lions Park, a 40-acre park in central Bismarck; and has worked on a number of landscape planning, historic restoration, and cultural resources projects.

**North Dakota State University Department of Architecture and Landscape Architecture** (2, 7, 8, 9, 11, 15, 16, 23, 24, 25, 26, 27, and 28) is an integral member of the Minot NDRC design



team. They will evaluate disaster-resistant construction materials and techniques and best practices that will be incorporated in the development of affordable housing in Minot.

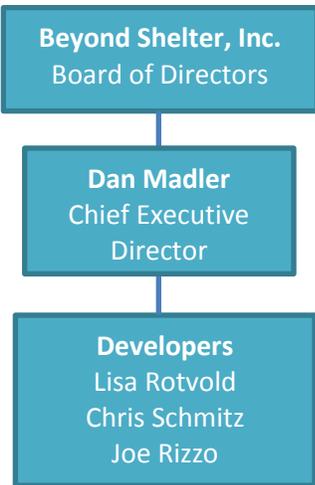
NDSU will provide design feedback for new resilient neighborhoods and green site planning features, and will serve on the design review committee. Matthew Kirkwood, Associate Professor and Program Director, will lead this effort and will be supported by other architecture and landscape architecture faculty and students.



**Minot Housing Authority** (1, 2, 5, 6, 7, 9, 12, 13, 20, 22, 23, 24, 25, 26, 27, and 28) continues to be an active partner with the City of Minot in developing and managing affordable rental housing, and will operate and manage the affordable rental housing proposed in this application. Working with Beyond Shelter, Inc., MHA has developed 260 new affordable housing

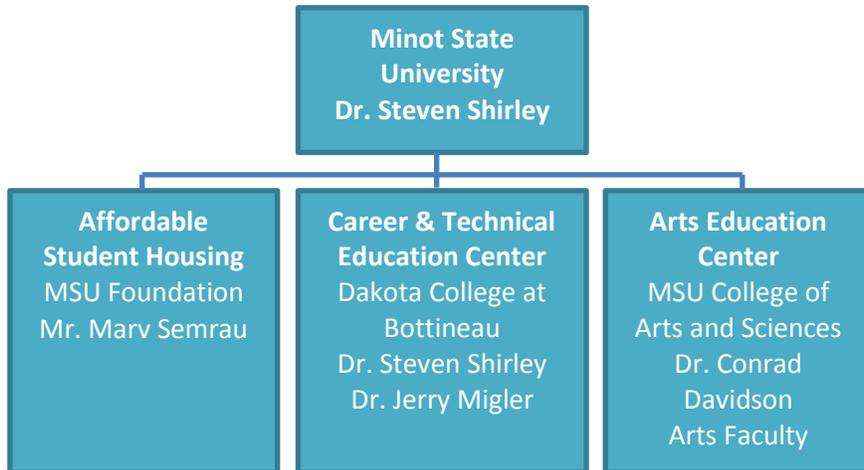
units since the 2011 flood, and MHA owns and/or manages more than 600 units of affordable housing for seniors, families, and vulnerable populations in Minot. Tom Alexander, Executive

Director of MHA, will lead MHA’s participation. Before joining MHA, he worked with the North Dakota Center for Persons with Disabilities at Minot State University, and he has been involved in the National Coalition for the Homeless. Mark Austin, Occupancy Director for MHA will serve as deputy project manager. He has over 25 years of affordable housing experience.



**Beyond Shelter, Inc.** (1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 15, 18, 19, 20, 22, 23, 24, 25, 26, 27, and 28) was founded in 1999. BSI has developed 33 affordable housing projects, producing 878 units or homes for seniors, families, and special needs populations. Dan Madler, CEO, will lead our NDRC affordable rental housing development projects and he will be supported by Lisa Rotvold, Chris Schmitz, and Joe Rizzo. Mr. Madler has over 21 years of experience in affordable housing and has participated in the design, financing, and general development of projects in North and South Dakota and Minnesota. He is a certified Housing Development Finance Professional (HDFP). Ms. Rotvold has 21 years of experience in development and grant administration and has helped develop 600 units of affordable housing. She holds HDFP and Housing Credit Certified Professional (HCCP) certifications. Mr. Schmitz is a HDFP and HCCP and has more than 14 years of experience in property management and development. Mr. Rizzo has 19 years of experience in residential mortgage and finance and is a certified HDFP.

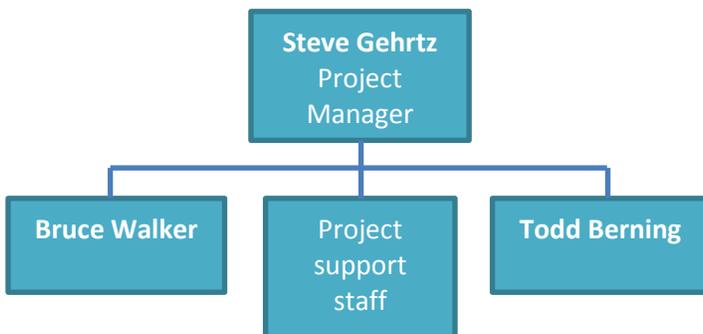
**Minot State University** (1, 2, 4, 5, 6, 7, 8, 9, 11, 12, 13, 15, 20, 21, 22, 23, 24, 25, 26, and 27) will play a key role in Minot’s NDRC resilience projects, partnering with the city on affordable student housing and expanding technical education and academic education programs. Dr. Steven Shirley, MSU President, will lead these projects on behalf of the University, working with MSU Dean of Arts and Sciences, Dr. Conrad Davidson, and Dr. Jerry Migler, Dean of



Dakota College at Bottineau (DCB). They will oversee the University's involvement in planning and design for the MSU Arts Education Center and the Center for Technical

Education proposed in Minot's NDRC application. DCB, a community college, has been an affiliate campus of MSU for 20 years and the two institutions have collaborated to offer academic programming. The MSU Foundation, which constructed and currently manages a 32-unit student apartment complex that was completed 13 months after the 2011 flood, will lead the MSU affordable student housing project proposed for University Avenue. The Foundation is a partner in the Beaver Suites student housing complex and has additional experience in real estate and development on the MSU campus. MSU Foundation Executive Director Marv Semrau will lead the MSU affordable student housing effort outlined in this application.

**Essential Living, Inc.** was organized as a nonprofit to manage and develop affordable housing

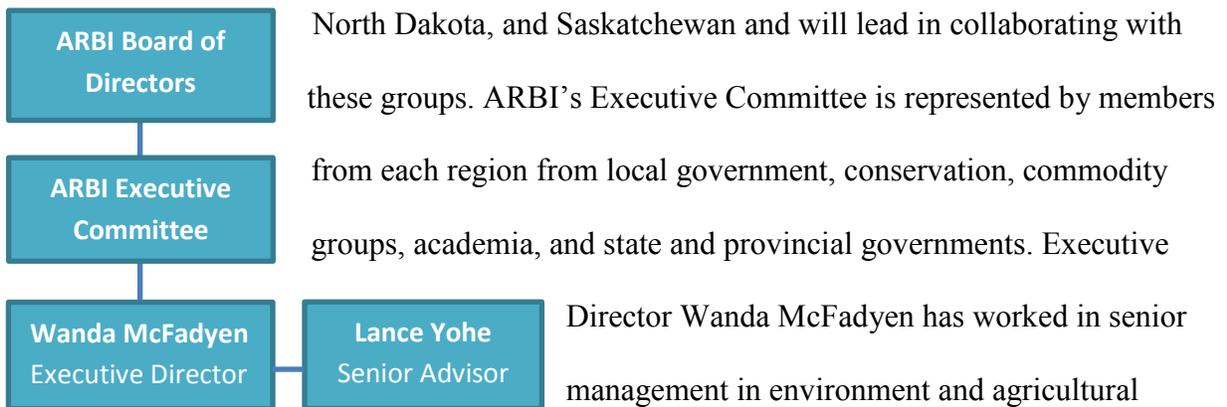


in the Minot area. Its three directors are Bruce Walker, President; Steve Gehrtz, Vice President; and Todd Berning, Treasurer. Collectively they have over 65 years of experience in real estate and development. Mr. Gehrtz will lead the

team in the development and construction of the infill housing project and resilient

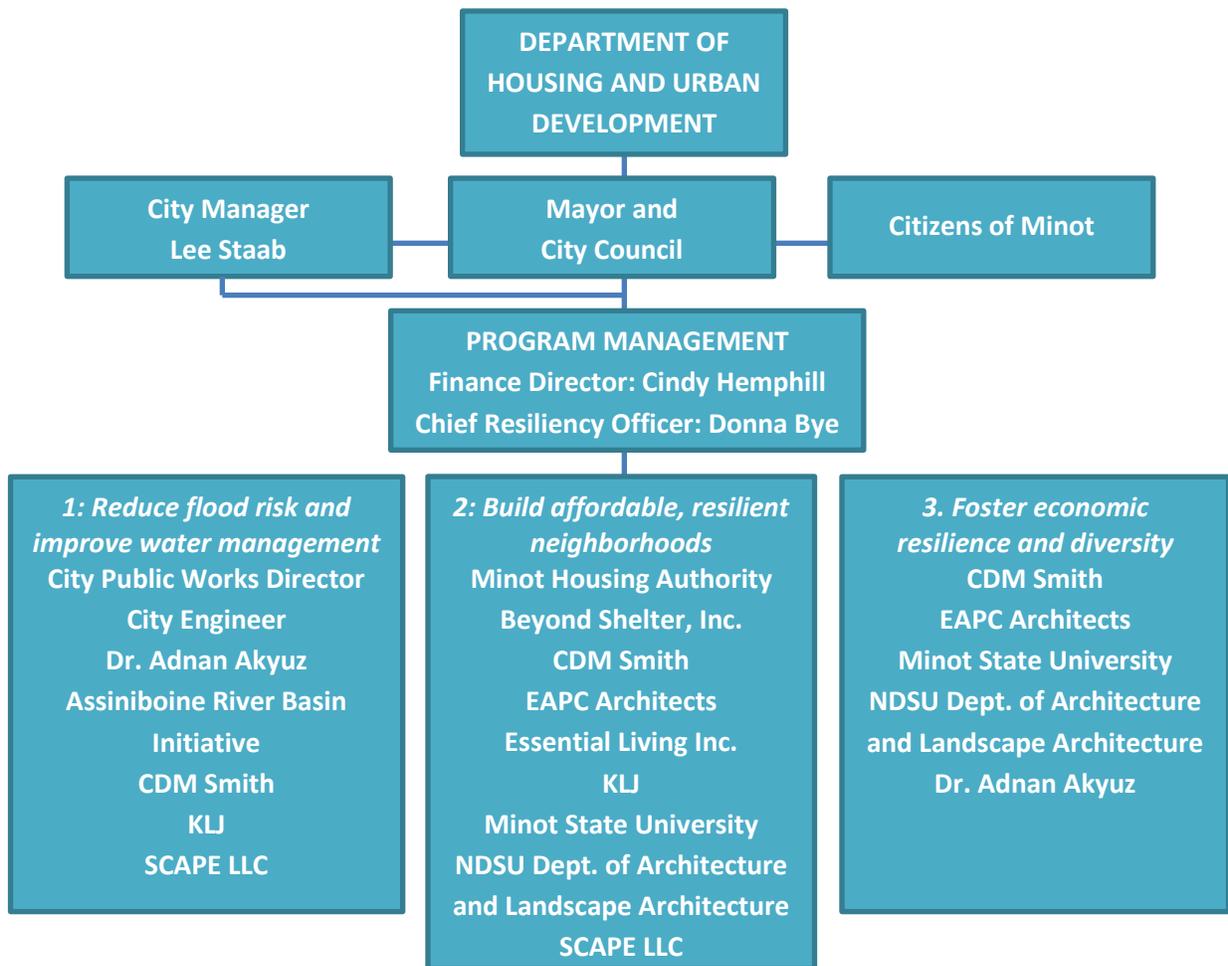
neighborhoods and single family homes for homeownership. He is both an architect and an experienced construction manager, having completed over \$800 million in construction management services. He has developed several affordable housing projects using CDBG and other federal programs. Bruce Walker is the owner of Coldwell Banker real estate in Minot and has been involved in the development and management of housing and commercial projects throughout the region. He is very involved in the Habitat for Humanity Northern Lights chapter. He developed MSU's Beaver Ridge affordable student housing and was on the Technical Advisory Committee for the Minot Affordable Workforce Housing Plan and Supply and Demand Analysis. Mr. Berning, an accountant, has worked on many affordable housing projects and develops the financial models for these efforts. His team includes Ruby Rau, with 20 years' experience in managing affordable housing, and Blake Nybakken, who has worked with GSA and other government contracts.

***The Assiniboine River Basin Initiative (ARBI)***, based in Winnipeg, Manitoba, brings together stakeholders to address water-related issues across the Qu'Appelle, Souris, and Assiniboine River basins. ARBI works with municipalities, counties, and governments from Manitoba,



Director Wanda McFadyen has worked in senior management in environment and agricultural agencies. Lance Yohe, Senior Advisor to ARBI and former Executive Director of the Red River Basin Commission, will also be engaged in this effort.

The overall NDRC project organization chart below shows how Minot will manage and implement the projects proposed in this NDRC Phase 2 application.



**References**

**Mr. Paul Benning, Local Government Engineer, North Dakota Dept. of Transportation**

608 E. Boulevard Avenue, Bismarck, ND 58505

(701) 328-2217 [pbenning@nd.gov](mailto:pbenning@nd.gov)

**Mr. Brian Stavenger, CPA, Partner, Eide Bailly LLP**

4310 17th Avenue S., Fargo, ND 58108-2545

(701) 239-8518 [bstavenger@eidebailly.com](mailto:bstavenger@eidebailly.com)

Exhibit D: Factor 2 - Need/Extent of the Problem

*City of Minot, North Dakota*

ExhibitD\_Need.pdf



## **EXHIBIT D: FACTOR 2 - NEED/EXTENT OF THE PROBLEM**

June 22, 2011, 12:57 p.m. The sirens sounded and people in Minot knew the levees had been breached. A police sergeant working in the 911 dispatch center said, “I remember feeling a fear I’ve never experienced before. I’ve been protecting this city for 28 years and this situation proved to be out of my hands. I couldn’t keep the city safe.”<sup>1</sup> Homes, businesses, schools, and parks were destroyed, families displaced for years, roads and bridges demolished, and infrastructure damaged or destroyed. Economic and social costs were substantial, and vulnerable elderly, disabled, and low-income residents were affected more than most. People pulled together, using the local, state, and federal funds at their disposal to repair what they could. Still, over four years later homes are vacant and uninhabitable, families struggle to find affordable housing, infrastructure is in disrepair, and critical recovery needs remain. Minot has come a long way in recovering from the historic flood, but resources are insufficient to complete its recovery—much less invest in the resilient community its residents now desire.

### **Unmet Recovery Need and Target Geography**

***Most Impacted and Distressed Target Geography:*** As demonstrated in *ExhibitB\_ThresholdReq.pdf*, the City of Minot meets the threshold for the most impacted and distressed (MID) geography. Minot’s Phase 2 MID geography is identical to the MID area identified in Phase 1 and includes census tracts 101, 102, 103.01, 103.02, 104-108, 112 and 113. The projects and programs outlined in this Phase 2 proposal will be implemented within Minot; non-NDRC resources will fund flood risk reduction, water management projects, and other resilience activities in the broader Souris River basin. The 2011 floods impacted four counties along the Souris River; while the most significant damage occurred within Minot, towns and farmlands were also affected. To achieve its resilience and recovery goals, Minot

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<sup>1</sup> “One Minute of the Flood Minot Remembers,” stories compiled by Rachel Maxfield, winner of the 2013 North Dakota State Fair Heritage Contest.

will collaborate with a much larger geographic region including the counties along the Souris River and the upper Souris River basin in Canada; see maps E1-E3 in [Attachment E](#) (password: minotndrc).

***Unmet Recovery Need Update:*** The city's unmet needs assessment in August 2012 determined unmet recovery need in Minot was \$1,510,623,270.<sup>2</sup> Since then, Minot received \$35,056,000 in CDBG-DR and other federal and state funds, reducing the unmet recovery need to \$1.45 billion. The URNs facing Minot are exceptional, however, because the city was affected by both a disaster and an economic shock. As more places face the effects of climate change, economic globalization, transformative technologies, and other environmental and economic challenges, there is every reason to anticipate more frequent situations where complex conditions compound disaster outcomes, similar to Minot.

The Bakken oil boom hit the region just after the 2011 flood disaster. The combined disaster and economic shock changed Minot, affecting housing costs and availability, contributing to the loss of at least 800 skilled workers, damaging social cohesion, and affecting employers and businesses. Some who left the area took higher-paying oil industry jobs; others could not find housing they could afford.<sup>3</sup> This ongoing situation threatens to significantly weaken Minot's economic diversity and resilience.

Minot is the regional trading center for northwestern North Dakota and southern Manitoba and Saskatchewan. As such, it has historically seen higher employment concentrations in retail, trade, professional services, and health care. These jobs often have lower wages, but the employees are essential to the region's economy. People throughout northwestern North Dakota and southwestern Canada come to Minot to buy food, building materials, agricultural equipment and products, fuel, and

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<sup>2</sup> City of Minot Unmet Needs Assessment: Helping the City of Minot Recover from the Mouse River Flood of 2011, August 31, 2012.

<sup>3</sup> Ondracek and Witwer, Minot North Dakota Business Recovery Survey Final Report, Sept. 16, 2011, for the Minot Chamber of Commerce.

heating oil; they also come to Minot for hospitals, medical specialists, and other critical services. A decline in Minot’s economic sustainability puts the entire region at risk.

Nearly 4,200 homes were damaged or destroyed by the 2011 flood; 27% of Minot’s housing stock and much of its older and most affordable housing was inundated. Insurance payouts in Minot would have been much higher, but fewer than one in ten homes in the flood inundation area had flood insurance.<sup>4</sup> FEMA had revised its flood maps in 2000 based on flood control measures implemented since the last flood in 1969, and most residents along the river were no longer required to purchase federal flood insurance.

During this same period, the oil industry brought hundreds of people to Minot, the fourth largest city in North Dakota. It contains two thirds of the population in Ward County and 57% of the regional population in the counties along the Souris River north of Minot.<sup>5</sup> It had a population of 47,997 in 2014,<sup>6</sup> up 17.2% since 2010.<sup>7</sup> While the Bakken boom helped some business sectors in the region (such as hotels, construction, restaurants, and professional services) recover more quickly from the flood, the dramatic loss of housing coupled with a substantial increase in demand created an unprecedented affordable housing crisis that continues to plague the region. The flood and the oil boom have created serious workforce and economic resilience issues for Minot and the region.

***Affordable Housing:*** The flood and the oil boom completely changed the housing demographics in Minot, as shown in maps E4-E6 in [Attachment E](#) (password:minotndrc). The flood substantially

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<sup>4</sup> Sulzberger, A.G. They Dropped Their Flood Insurance, Then the ‘Mouse’ Roared. The New York Times, June 23, 2011.

<sup>5</sup> U.S. Census 2010 American Fact Finder. Ward, Bottineau, Renville, McHenry Counties

<sup>6</sup> U.S. Census July 1, 2014 Population Estimates

<sup>7</sup> U.S. Census 2015 Population Estimates

damaged 2,400 homes and destroyed 805 homes.<sup>8</sup> A recent assessment found 150 blighted and vacant flood-damaged homes in the flood inundation area. The flood and the economic shock, together with the population growth precipitated by the oil boom, caused dramatic escalations in housing costs. Rents for two-bedroom apartments grew from an average of \$600 before the flood to as high as \$3,950 post-flood.<sup>9</sup> The average sale price of a single family home in Minot in 2008 was \$145,062; in 2014 it had increased to \$241,174.<sup>10</sup> From 2010 to 2015 the number of homes in Minot valued over \$400,000 increased 359% and the number of homes valued between \$300,000 and \$400,000 increased 327%. Based on 2013 census estimates, Minot’s homeownership rate is 61.4%, much lower than the statewide rate of 66.1%. Housing costs skyrocketed due to the loss of inventory and increased demand from rapid population increases in the region, as shown in the table below.<sup>11</sup>

<b>Housing Values</b>	<b>% of Housing in 2010</b>	<b>% of Housing in 2015</b>
\$0-\$150,000	62.9%	28.9%
\$150,001 - \$250,000	30.3%	47.2%
\$250,001 - \$350,000	5.3%	18.3%
Above \$350,001	1.5%	5.6%

Affordable homes and apartments that housed students, seniors, and low and moderate income families before the flood were rehabilitated or replaced, then rented or sold at substantially higher

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<sup>8</sup> FEMA

<sup>9</sup> Minot Affordable Housing Strategy: Supply and Demand Analysis, December 2012.

<sup>10</sup> Statistical Analysis Minot MLS Data, Bruce Walker, Coldwell Banker 1<sup>st</sup> Commercial Realty, September 2015

<sup>11</sup> City of Minot Assessor Data, Single Family Housing Assessed Valuations 2010 and 2015

prices, leaving many vulnerable people facing a serious housing crisis. At least 188 households purchased FEMA trailers in order to have a place to live.

The lack of affordable housing seriously threatens Minot's social cohesion, economic sustainability, and diversity. Businesses cannot attract and retain staff, including service workers, healthcare workers, police and fire personnel, and teachers, all essential to the city's quality of life. Minot businesses also support the region's agricultural economy with equipment and materials like seed, fertilizer, and feed. In short, people leaving Minot due to the lack of affordable housing depletes the community's workforce, changes long-held social relationships, and jeopardizes its non-oil economy. It also threatens efforts to reduce flood risks. The city has identified 340 homes and 400 mobile homes that are vulnerable to flooding and need to be bought out to move people out of harm's way. But finding affordable housing to relocate these households is nearly impossible.

Minot's CDBG-DR program has invested over \$120.9 million in affordable housing, including additional funds leveraged by these projects. While the CDBG-DR program rehabilitated, replaced, or developed 294 units of affordable housing, some property owners did not qualify for assistance because of their income. Others would not agree to affordability requirements. Minot Housing Authority faced a similar challenge with its Section 8 program when many property owners cancelled Section 8 contracts as soon as they could to charge much higher rents.<sup>12</sup>

The information below demonstrates the impacts caused by the lack of affordable housing since June 2011 on Minot Housing Authority, Minot State University, and the Minot Air Force Base. Similar conditions permeate the entire community, but are far more difficult to document. However, social service agencies continue to report people leaving Minot to relocate to more affordable areas; students and military personnel "couch surf" for months while trying to find affordable housing; people are

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<sup>12</sup> Tom Alexander, Minot Housing Authority Executive Director

living in overcrowded housing; and the number of working homeless has increased. It is impossible to verify how many individuals and families left Minot after the flood, although the relocation of 800 employees was documented in a 2011 business survey.<sup>13</sup> Food banks continue to report an increase in working families who rely on them to feed their families because of high housing costs.

***Minot Housing Authority (MHA):*** In 2009, the MHA waiting list had 200 families. In 2011 that number was over 600, and although it has fluctuated since the flood, today over 600 families remain on MHA's waiting list for housing assistance. The amount of assistance required based on the area's median rent has soared. In 2008 average Section 8 assistance per family was about \$300 per month; in 2015 the average subsidy has increased to \$610 per month, so MHA is able to assist half as many families.<sup>14</sup> Although MHA and Beyond Shelter, Inc., a nonprofit developer, have developed 129 units of new affordable housing since the flood with an additional 35 units under construction, they use a lottery system when housing becomes available because demand far outstrips supply. The North Dakota Housing Finance Agency only had \$2,635,000 in housing tax credits in 2014 to fund affordable housing for the state. At this level, NDHFA can only support 150 to 200 units of affordable housing annually. Clearly Minot must find other options to finance additional affordable housing.

***Minot State University (MSU):*** The flood displaced 567 MSU students in 2011, and enrollment fell 7.3%.<sup>15</sup> The loss of student housing continues to depress MSU enrollment, as many prospective students are unable to afford housing in Minot and ultimately choose to attend other schools where their overall costs are lower. The MSU Foundation developed 32 units of student housing but more is needed. The decline in student population has a negative impact on Minot's economy. A recent North

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<sup>13</sup> Ondracek and Witwer, Minot North Dakota Business Recovery Survey Final Report, Sept. 16, 2011.

<sup>14</sup> Minot Housing Authority, Tom Alexander, Executive Director

<sup>15</sup> Economic Impact of the North Dakota University System in 2013, NDSU Applied Economics

Dakota University System study found that each MSU student contributes \$9,781 to the area economy annually.<sup>16</sup> In 2013 students contributed over \$26.7 million to the local economy; the loss of 456 students<sup>17</sup> reduced Minot's economy by \$4.46 million in the 2014-2015 school year alone.

***Minot Air Force Base (MAFB):*** Located seven miles north of Minot, MAFB is the region's largest employer with 6,487 military and civilian personnel. Over 47% of active duty military and their dependents (2,794 families) and 100% of the 1,017 civilian employees live off base, primarily in Minot and Ward County.<sup>18</sup> Although active duty military personnel get a housing allowance, many advise the MAFB housing office they are priced out of the homeownership market in Minot and the surrounding region. At present 140 civilian positions at the base are vacant; each of these positions is critical to the base mission.<sup>19</sup> Surveys of eligible civilian personnel indicate their primary reason for declining a position at MAFB was the lack of affordable off-base housing. The annual economic impact of MAFB exceeds \$577.8 million, and it is one of the state's largest economic drivers.

***Economic Revitalization:*** Maintaining a sustainable, diverse economy in Minot may be the greatest challenge to the region's resilience and recovery. Of Minot's residents, 93% have graduated from high school but only 27% have a bachelor's degree or higher, similar to the state as a whole. The flood and oil boom dramatically increased housing costs, and low skill/high wage jobs in the oil industry have siphoned employees away from non-oil businesses. These oil jobs are often short-lived, but high housing costs have forced people to take more lucrative jobs to provide for their families. The loss of

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<sup>16</sup> Ibid.

<sup>17</sup> MSU Institutional Research, accessed at <http://www.minotstateu.edu/instplan/cds.html>

<sup>18</sup> Economic Impact Analysis Minot Air Force Base, December 2014, prepared by Budget Office 5<sup>th</sup> Bomb Wing Comptroller

<sup>19</sup> Renetta Pearson, MAFB POC assigned to assist City of Minot with NDRC Phase 2 MAFB data

skilled and semi-skilled workers continues to hurt non-oil businesses, affecting the sustainability and diversity of Minot's long-term economy. Though Minot has enjoyed a relatively stable and diverse economy (driven by MSU, MAFB, Trinity Hospital, Cognizant, and Marketplace Foods), businesses still report significant challenges in attracting and retaining a skilled and stable workforce. Surveys conducted by the Minot Chamber of Commerce, employer interviews, and comments in stakeholder and public meetings document the continuing challenges to the city's economy and future resilience due to underlying unmet needs caused by the flood and the economic shock.<sup>20</sup>

In August 2011 area business owners were surveyed to determine the extent of damage, needs, and intent of Minot's business community after the flood.<sup>21</sup> Results indicated that over 40% of Minot businesses sustained facility or building damage. Only 2% reported clear intentions to close their business. Businesses also faced loss of revenue, additional costs, and employee shortages after the flood. Minot's businesses incurred over \$300 million in losses and costs and, as mentioned previously, over 800 employees permanently left the Minot area. A second survey in June 2012 assessed on-going effects of the flood on the business community.<sup>22</sup> Results from the 2012 survey indicated that, thanks in part to the oil boom, 97% of the businesses in Minot were operating and only 3% had closed. But more recent business surveys, interviews, and stakeholder and public comments indicate Minot still faces serious challenges in diversifying its economy, including retaining and attracting the skilled workforce required to staff businesses in the area.

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<sup>20</sup> Minot NDRC Public Meetings and Community Advisory Committee Meetings. See Attachment D: Consultation Summary for dates

<sup>21</sup> Ondracek and Witwer. Minot, North Dakota Business Recovery Survey, September 16, 2011.

<sup>22</sup> Ondracek and Witwer. Minot, North Dakota Business Recovery Survey II, June 27, 2012.

***Infrastructure:*** Since the flood, Minot has spent more than \$45 million on critical infrastructure including repairs to streets, street lights and signals, sewer systems, parks and trails, and a pedestrian bridge across the Souris River, and debris removal from the storm water management system. Despite these investments, essential infrastructure repair needs remain unmet as documented in *ExhibitB\_ThresholdReq.pdf*. In fact, the actual unmet infrastructure need is over \$20 million.

### **Resilience Needs within Recovery Needs and Unmet Resilience Needs**

Why become a more resilient city? To test the value of resilience within Minot’s recovery needs, we created two “what if” scenarios and used HAZUS modeling analysis to evaluate how conditions after the 2011 flood might have been different if policies or alternatives had been different. In **Scenario 1**, a policy is negotiated with the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the International Souris River Board to reduce the normal water level in Lake Darling (20 miles northwest of Minot) by 2.5 feet to create additional water storage capacity. Unusually high rainfall and rapid warming in early spring creates conditions like those in the upper Souris basin in Canada in May 2011. Although a 2011-level flood will still arrive in Minot, the actions to lower normal water levels in Lake Darling create additional storage. As a result, the damages in Minot are reduced by \$126 million.

In **Scenario 2**, Minot completes the first four phases of its flood protection plan to protect the water treatment plant and structures on the north side of the river. Minot offers buy-outs to residents in the lowest lying areas along the river who would not be protected by the flood protection system for at least 15 years. This has multiple benefits: residents move out of harm’s way in the event of another flood; families avoid hazards from future train derailments and spills; and families avoid costly flood insurance payments. Extreme weather events produce numerous blizzards and significant spring rains, and Minot braces for another 2011-level flood. With the four phases of flood protection in place and a successful buy-out program completed, the flood damages in Minot are reduced by \$554,292,000—

more than 70% below the damages from the 2011 flood. Considering these scenarios and our HAZUS analysis, we estimate the total investment in resilience required to benefit our community is \$919,970,000; however, given the leverage and projects included in our NDRC proposal, that total investment in resilience is reduced to \$537, 975,000.

***Vulnerable Populations in MID-URN Target Area:*** In 2011, 42.9% of Minot’s population had incomes below 80% of the median income and 31% of Minot’s LMI population lived within the flood inundation area,<sup>23</sup> as shown on map E7 in [Attachment E](#) (password:minotndrc). By 2015 the population with incomes below 80% of AMI had fallen slightly to 41.45%.<sup>24</sup> To serve our homeless population, CDBG-DR provided funds to relocate the Domestic Violence Center after the flood, the Men’s Winter Refuge shelter was opened, and the YWCA now operates a women’s homeless shelter. However, these resources are still not sufficient to provide for Minot’s growing homeless population. According to Mac McLeod, Executive Director of the Minot Homeless Coalition, there are 125 to 150 homeless people in Ward County, and half of these are working homeless.

In the 2010 Census, 14.8% of Minot’s population was over the age of 65.<sup>25</sup> By 2013, 13.6% of Minot residents were elderly. This is a significant decrease in the elderly population in just three years.<sup>26</sup> Those over age 65 represent 12.2% of Ward County’s population compared with 13.6% statewide. Approximately 1,477 elderly people lived in the flood inundation area in 2011. Some of these residents left the community after the flood to live with family or find more affordable housing

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<sup>23</sup> US Census 2010

<sup>24</sup> American Community Survey for 2010 and 2015

<sup>25</sup> US Census 2010

<sup>26</sup> American Community Survey 2013 Population Estimates

options. Minot also has a larger percent of the population with disabilities (11.5%) compared to Ward County (10.3%) and the State of North Dakota (10.6%).<sup>27</sup>

***Why unmet need exists:*** Minot has many competing needs for funds related to flood recovery, and insufficient resources to address all of them. The unmet needs assessment prepared in August 2012<sup>28</sup> documented over \$1.475 billion in unmet recovery needs after receiving \$102,631,964 in CDBG-DR funds. Unmet needs include flood protection measures for the water treatment plant to prevent disruptions to the public drinking water supply (\$33.8 million); relocation of critical utilities out of flood hazard zones (\$19.5 million); upgrades to existing storm water facilities to reduce future flooding impacts (\$29 million); and flood protection for critical public utility infrastructure (\$328 million). The estimated cost of the regional Mouse River Enhanced Flood Protection Plan is over \$1 billion, and Minot's local cost share is estimated at \$337 million. These unmet needs total over \$1.413 billion, not including needs for affordable housing, road and bridge repairs, and reconstruction of parks and trails. Demand for resources in Minot is compounded by a population surge requiring additional public services, schools, roads, and utilities. While it might seem that local governments should be flush with cash as a result of the oil boom, oil taxes flow directly to the state. Local governments receive oil funds through a series of formulas and grants, but most of the money goes into the state's general fund. A county typically receives about 10% of the oil tax revenues that originate within its borders.<sup>29</sup>

Minot successfully used foundations and volunteer efforts to help address its needs after the flood. Hope Village, a FEMA Best Practices honoree, provided a model for bringing local leaders, businesses, national faith-based disaster response organizations, and local, state, and federal

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<sup>27</sup> American Community Survey 2013

<sup>28</sup> City of Minot Unmet Needs Assessment: Helping the City of Minot Recover from the Mouse River Flood of 2011, August 31, 2012.

<sup>29</sup> Association of Oil and Gas Producing Counties and Governing Magazine, August 2011

government agencies together to deliver a one-stop disaster response service to people in need. This organization provided \$3.6 million in volunteer labor, helped repair 549 homes, and created the mechanism to feed, house, manage, and supply tools for 160 volunteers per day. Minot has made excellent use of its existing resources in the aftermath of the flood, but does not have funds to meet all of the needs created by this disaster or to address its goal of becoming more resilient.

***Appropriate Approaches:*** A new vision emerged from our NDRC Phase 1 consultation with stakeholders, the public, local leaders, and regional and national experts. The Phase 1 concepts *preservation of a protective open space network to build greater resilience; livable and resilient neighborhoods, and reinforcing strong leadership and resources* have evolved throughout Phase 2. We have integrated information about the areas most at risk with ideas about sustainable and livable development outside of the floodplain areas. Vulnerabilities resulting from the loss of young people, due to eroding economic diversification that affects the quality of economic opportunities and the high cost of living in Minot, were coupled with information from design charrettes for affordable housing and new ideas for more resilient entrepreneurial employment options.

We used a community-driven engagement and planning process to integrate recovery thinking with resilience goals. How could Minot achieve long-term social and economic viability, improve the resilience of vulnerable people, sustain the city and the broader region, and drive future resilience? How could we integrate Minot's assets, hazard exposures, and vulnerabilities with opportunities generated by our NDRC Phase 2 approach?

Drilling down into our unmet needs, we recognized the flood disaster from which we were trying to recover was just one layer of a much more complex environment: Minot was trying to recover from a disastrous flood while responding to the economic tsunami of the Bakken oil boom. Conditions after the flood made it impossible for Minot to return to what we once saw as normal.

Our Phase 1 concept *preserving a protective open space network to build resilience* has evolved to incorporate not only protective open space, but structural and non-structural ***flood risk reduction and improved water management***. Our Phase 1 concept *livable and resilient neighborhoods* expanded as we thought about flood risk reduction, livable and resilient neighborhoods, and our unmet needs. Our Phase 2 concept focuses on ***affordable, resilient neighborhoods*** of varying types and densities, connected by transit and walking and biking trails, to foster social cohesion and bring together new and old residents. Our Phase 1 concept *strong leadership and resources* must be interwoven throughout the recovery and resilience process, connecting people, agencies, counties, and even countries to strengthen the region's understanding of risks and make our communities safer. Through Phase 2 we recognized the economic vulnerabilities and risks we face because of Minot's role as the region's trading center. Minot will ***foster economic resilience and diversification***, creating an environment where small and larger non-oil businesses continue to prosper, stable non-oil job creation continues, and workforce skills are enhanced to ensure opportunities for entrepreneurship remain and long-term economic opportunities help vulnerable people stay in the city they call home.

The NDRC process helped Minot consider a holistic approach to recovery and resilience. The U.S. National Climate Assessment<sup>30</sup> predicts the northern Great Plains will see higher annual temperatures; winter and spring precipitation and very heavy rain events are projected to increase, increasing runoff and flooding. Climate change will impact agriculture, extending the growing season and perhaps allowing a second annual crop, but increased precipitation may require different crops be produced.<sup>31</sup> Minot's new City Manager, Lee Staab, made a profound observation in the first Phase 2 Community Advisory Committee meeting: "Twenty-five years from now we hope to complete the flood protection plan that will keep our community safe, but between now and then we must do all we can

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<sup>30</sup> 2014 National Climate Assessment, accessed at <http://nca2014.globalchange.gov/highlights/regions/great-plains#intro-section-2>.

to become a more resilient community so people here don't fear every spring rain event.”

Minot's recovery and resilience approaches address our most compelling unmet recovery needs and increase resilience so we can adapt to environmental, social, and economic changes, respond to risks, and thrive. Our approaches are *reduce flood risk and improve water management; build affordable, resilient neighborhoods; and foster economic resilience and diversification*. Our Phase 1 proposal called for identifying and preserving land for flood storage and providing green space to enhance health and quality of life. Our Phase 2 approach identifies high priority, low-lying areas along the river at the greatest risk of flooding for flood storage and eco-restoration areas. Activities include buy-outs, resilient open space, and eco-restoration areas offering education opportunities and trails. These will be combined with “buy-in” opportunities outside the flood hazard area to create outstanding new neighborhoods with affordable housing and convenient connections to jobs and services.

In Phase 1 we proposed resilient neighborhoods with affordable housing, mixed-use development, and commercial areas. Our Phase 2 approach builds on this concept, including affordable student housing and new neighborhoods with enhanced transit for vulnerable residents. We will design and build quality neighborhoods that reflect what people told us when we asked, “What kind of neighborhood do you want?”

Our final Phase 1 concept, *reinforce strong leadership and resources*, will be critical to the success of all our recovery and resilience actions. Phase 2 helped us see that the economy of the entire region is built on Minot's economic resilience. The oil industry's boom-bust cycles require we pay careful attention to economic diversity and resilience. Our final Phase 2 approach, *foster economic resilience and diversification*, addresses critical workforce skills training and brings anchor businesses and people back to the center of the region: downtown Minot.

Exhibit E: Factor 3 - Soundness of Approach

*City of Minot, North Dakota*

ExhibitE\_Approach.pdf



## **EXHIBIT E: FACTOR 3 - SOUNDNESS OF APPROACH**

Our proposal is crafted to address unmet needs supporting our continued physical, economic, and social recovery from the 2011 flood. The impact of the flood was exacerbated by the concurrent oil boom, and jointly this created an unprecedented affordable housing crisis. Our proposal is also designed to improve our resilience to a range of future risks, including the threat of climate change that may result in more frequent flood events and changes to weather that may have serious repercussions for our agricultural industry. We also considered other risks, including threats from train derailments and natural hazards. Equally important, and perhaps most challenging, is fostering regional economic resilience to recover from downturns that can result from the volatile boom-bust cycles in the oil industry, an important economic force in our region.

**Goals and Objectives:** Our overarching goal is recovery in Minot and the region that results in increased resilience and reduced risks in a vibrant community that connects quality neighborhoods, the natural environment, and a widely shared and prosperous economy to benefit all who live, work, and visit here. Specifically, our objectives are to:

- Reduce flood risk to address the needs of our most vulnerable, provide benefits in the near as well as the long term, support local land uses, layer with existing flood protection plans.
- Increase the supply of quality affordable housing for our most vulnerable residents in a manner that fosters livability and the long term viability and sustainability of neighborhoods.
- Foster a robust, diverse, and healthy economy that enables the region to weather disruptions from physical as well as economic disasters.

**Approach:** Our proposal consists of three projects with multiple activities, but they make up one integrated approach that creates the foundation for recovery and resilience in Minot and our region as shown on map E8 in *Attachment E* (password: minotndrc). Our three projects are:

- *Reduce flood risk* through physical projects, policies, restoration of the floodplain, creation of resilient open space, and improved water management.
- *Build affordable housing* in resilient neighborhoods.
- *Reinforce our diverse economy* by enhancing the capacity and skills of our workforce, creating a more vibrant downtown, and strengthening our university.

The NDRC process has changed our approach to risk and resilience. Inclusive and iterative thinking by city officials, residents, and partners throughout the region allowed us to develop an integrated set of projects. Building on our assets and our past efforts, we are looking toward our future, using the best available science to identify options that address our needs. This proposal is the culmination of 13 months of stakeholder involvement. We held 24 meetings with the NDRC Community Advisory Committee, formed to help guide this effort; our Vulnerable Populations Committee, representing vulnerable people throughout the region; and meetings with the public. City leaders met with civic organizations and conducted two housing design charrettes. We met with regulatory agencies and regional and international organizations engaged in water management to begin a more effective dialogue to achieve local and regional flood risk reduction and resilience.

**Defining Success:** Achieving success means being prepared when the oil downturn comes. Our diverse economy will foster a variety of job options and residents will have the skills they need to fill them. Our vulnerable LMI residents will have quality, affordable housing options for rental and homeownership. When the Souris River basin experiences heavy rain and snowmelt, layers of flood protection will absorb the floods and vulnerable populations in the lowest-lying areas will no longer be in harm's way. Specifically, we will achieve:

- Upstream and basin-wide changes in water management, additional flood storage areas, strategic buy-outs, and construction of Phases 1 through 4 of the flood protection plan in Minot within 15

years. This will create a resilient flood risk reduction system that will lower flood losses by 40% in a flood event similar to that experienced in 2011.

- A 50% reduction in the waiting list at Minot Housing Authority, an increase in enrollment at Minot State University above the pre-flood level, filling all civilian positions at Minot Air Force Base, and creating a vibrant and revitalized downtown Minot, all within 10 years.
- An economic environment that enables businesses to successfully compete and create well-paying jobs, where entrepreneurs and employees can access technologies and skills to achieve their goals, and where the arts and culture cluster in Minot brings thousands of residents and visitors downtown every year.

Minot's three proposed NDRC projects contain multiple activities, as described below.

### **Project 1: Reduce flood risk and increase resilience**

Prior to the NDRC competition, we had one flood risk reduction strategy: the Mouse River Enhanced Flood Protection Plan, a system of flood walls, levees, and diversions. In Phase 1 of this process the city and residents raised important issues about Minot's flood risks:

- What happens if a flood event occurs before the flood protection system is in place? While the 2011 flood was the largest on record, changes in climate and upstream land and water management suggest flood events may occur more frequently. If this system is not completed for 30 years, how can we respond to the risk of flooding in the intervening years?
- What about the expanded flood plain and rising flood insurance rates? Much of the area inundated in 2011 was not within the FEMA floodplain. Revised FEMA maps, to be released next year, will dramatically increase the number of homes in the floodplain. Coupled with anticipated increases

in flood insurance rates, many vulnerable people in low-lying areas will find it hard to afford to remain in their current homes.

- Are there other options? Discussions with regional partners, and the science-based risk analysis undertaken for this proposal, indicate options for upstream and basin-wide changes in water management that may be combined to help reduce risks in the near term.

***Project Overview:*** Our proposed NDRC project activities focus on specific actions that will be layered with ongoing flood protection efforts to reduce risk and provide resilience benefits that begin now and extend over time. The flood risk reduction projects proposed below reframe Minot's approach to flood risk reduction, from an infrastructure-only approach to a layered strategy of grey, green, and non-structural techniques to reduce risks and costs while adapting to a changing climate. Activities include a strategic buy-out program to move people out of harm's way; the Souris River Decision Support Tool; preserving open space and eco-restoration of flood storage areas; a waterfront greenway and Oak Park improvements; and implementing a more resilient Mouse River Enhanced Flood Protection Plan. These activities are integral to our long term recovery and our ability to rebuild a diverse and resilient economy and protect the homes of those who live in the valley.

Individually and collectively, these activities help us meet our unmet recovery need and tie-back to the effects of the flood disaster by targeting people living in low-lying areas most prone to flooding and building affordable housing so they can move out of harm's way. More important, these activities increase our resilience and resistance to future flooding. By combining flood storage and water management strategies, as well as non-structural solutions like buy-outs, with the already-planned long-term flood protection system, we will create a layered approach to flood risk reduction. This approach provides co-benefits for the region: converting and preserving open space along the river as amenities, providing protection sooner, and potentially reducing the overall cost of the

proposed infrastructure-based protection plan. Projects for local flood storage will address some risks more quickly, protecting people and small businesses that serve LMI communities and generating opportunities to restore habitat and offer options for land- and water-based recreation.

### **Project 1 Activities**

***Strategic buy-out program:*** Minot residents living in low-lying areas are at greater risk of future flooding. They remain in the neighborhoods where they lived before the flood, often because they cannot afford to do otherwise. With housing prices well above the national average, affordable housing is scarce and those living in areas at risk for flooding have few options. When the new flood maps are released and flood insurance is required, the cost of the insurance could force some to relocate outside our region. This jeopardizes the health and well-being of these residents and the economic and social health of Minot and the region. These residents must have choices besides leaving Minot or living with a real fear of what the spring thaw might bring. A buy-out program targeted at the most vulnerable areas, coupled with the affordable, resilient neighborhood projects also included in our proposal, will enable residents to move out of harm's way but remain in Minot.

An analysis of the lowest-lying areas along the river revealed many homes, including a number of mobile home parks, at greater risk for flooding. Some of these areas will not be protected by the flood protection plan for many years, as it initially focuses on protecting critical utility systems. Some of these neighborhoods are also at risk from hazardous materials shipped on the rail lines that run along the river. Evaluation of these sites revealed opportunities to provide effective flood storage areas that can reduce future flood damage and losses. We propose to use \$33 million in NDRC funds to offer a buy-out program for LMI households in these areas. The State of North Dakota has committed an additional \$90 million for LMI and non-LMI households, so we can buy out and relocate 340 homes and relocate 400 mobile homes in these at-risk areas.

We developed prioritization filters with input from experts and stakeholders to identify areas for the proposed buy-out program. These filters include:

- Determine the low-lying areas within the flood inundation area at greatest risk for flooding, even in smaller events, using the city’s LiDAR topographic mapping.
- Review the construction timeline for the planned flood protection system to determine areas where the levees and floodwalls will not be constructed until later phases of the project.
- Review potential flood storage areas within the city. Six sites were identified by hydrologic engineers and reviewed by the city’s Public Works Director (see map D9 in *Attachment E*).

The buy-out program will follow HUD requirements and other applicable regulations, and we will employ the policies and procedures used effectively in the buy-outs the city has completed to protect critical utilities. We will develop a communication and outreach plan for the buy-out program to help people who live in these areas understand their options. We will review the city’s brownfield inventory to identify any areas of environmental concern. We will link the buy-out program to the affordable housing “buy-in” program included in Project 2.

***The Souris River Decision Support Tool*** continues the science-based risk analysis and regional collaboration initiated in our NDRC process. Climate and watershed analysis and planning are often constrained by jurisdictional boundaries. Developing the most resilient and cost-effective approach to reducing flood risk for Minot requires us to consider and evaluate watershed-wide as well as local strategies. Discussions with regional watershed management agencies, coupled with the high-level HAZUS modeling undertaken in the application process, revealed measures that have the potential to more strategically manage water flows. Minot has already discussed these measures with state, federal, and bi-national entities to promote their consideration, and promising opportunities for

storage and operations have been identified. A data-driven tool for evaluating flood risk reduction and water management strategies, especially one that produces information that can be shared with regional partners, will facilitate this collaboration and evaluation of options. The decision support tool will build on existing river models and data to create a comprehensive, basin-wide model of the river's hydrology, allowing us to dynamically test and analyze the implications of measures to be considered. This will enable Minot to develop and test initiatives across the entire river basin to understand their cumulative effect, educate the public, and prioritize initiatives for funding. We propose to use NDRC funds to build this decision support tool, and will share information from its outputs with counties along the Souris River.

***Develop open space and restoration for flood storage:*** Flood storage is about creating more space to hold water in the event of a flood, thereby protecting people and property and reducing damages and loss. Enhancing the ability of open space upstream and within Minot to store and manage water is a critical strategy for reducing flood risk. Additional flood storage can avert some flood events by increasing capacity to store or absorb flood waters before vulnerable areas are inundated. It may also help reduce the cost of floodwalls and levees. If envisioned and implemented creatively, employing productive land uses that are resilient to flooding, it will benefit the city and the region by creating open space for recreation and ecological restoration. Our proposal identifies two categories of these projects: regional flood storage (to be funded by others) and local open space improvement projects within Minot that increase flood storage. We propose to use NDRC funds for the eco-restoration of these areas, focusing on prairies, wetlands, and native forest ecologies. Volunteers and civic organizations will build trails within some of these areas, and long-term maintenance will be provided by the City of Minot. Our goal, however, is to create natural and wild habitat that requires minimal maintenance.

***Regional opportunities:*** The greatest potential to reduce flood risk through diversion and storage lies upstream. Through the NDRC process, Minot has collaborated with state, federal, and international partners to identify projects that will increase storage capacity or manage the release of floodwaters upstream of Minot in the U.S. and Canada. While NDRC funding is not requested for these projects, they are critical to our overall flood risk reduction strategy. Any of these initiatives alone will reduce the flood risk to Minot. Taken together, the impact will be dramatic. This is an unprecedented opportunity to create a new model for bi-national cooperation that others working across national or state lines can follow to improve their future resilience.

***Local opportunities:*** A series of flood storage and eco-restoration projects in Minot will establish an open space network to increase the city's resilience, reduce the scale and cost of other flood protection measures, and reconnect Minot to the Souris River. These open spaces will reduce flood levels during storm events; restore riparian habitat; engage residents in the management and stewardship of the river; and ensure the productive public use of waterfront land so it enhances the city's economy, social life, and overall resilience. One such area will restore 1.2 acres of forest and 10 acres of prairie to create habitat while contributing significantly to flood storage. It will also offer an educational space for residents, particularly children, to connect with the river and understand its ecological function, creating a living laboratory for resilience education.

***Waterfront greenway and Oak Park improvements:*** Many sites along the river do not need to be protected from flooding. They do need to be physically resilient and should be put to productive public use to support Minot's overall resilience. Designating these open spaces for a productive public purpose will provide amenities for the city, and will eliminate the risk of them being redeveloped in the future, or becoming blighted and harming Minot's social and economic potential. The Souris River cuts through the center of Minot, as do most of the region's rail lines. While the

river and the rail lines represent potential hazards, these corridors are critical to Minot's economic history, cultural identity, and future.

A greenway along the river and park enhancements will connect historic parks that flooded in the 2011 disaster, improve connectivity for Minot's neighborhoods and vulnerable people. We propose to use NDRC funds to design and construct the greenway and proposed improvements in Oak Park. These efforts will ensure this public land contributes to the city's social, economic, and physical resilience in the face of future shocks and stresses. Our public outreach revealed a strong desire to increase connectivity within the city and expand local and regional trail networks to improve health and recreation. A waterfront greenway from Roosevelt Park to Oak Park will provide pedestrian and bike trails between neighborhoods, MSU, and downtown, and will eventually connect to trails leading to Burlington and throughout the region (see map E12 in [Attachment E](#))

Strategic investments in Oak Park will ensure its continued productive use and provide additional services to vulnerable people. We plan to construct a flood-resilient 40-foot-square shelter for the city's summer feeding program, which offers healthy free meals to children and low-cost meals for adults who otherwise lack dependable access to nutritious food, an increasing problem in this 51.79% LMI neighborhood. The feeding program is an extension of the city's school-term meals program, but has outgrown its existing 20-foot-square shelter. We also propose building a sensory playground for children who have special needs. The Minot Park District will maintain the improvements in Oak Park and will provide maintenance and upkeep for the greenway.

***Implement the Mouse River Enhanced Flood Protection Plan:*** Minot is not requesting NDRC funds for the Mouse River Enhanced Flood Protection Plan, and will fund the entire regional local cost share for this flood protection from city funds. However, this system and subsequent resilience projects are necessary to create a resilient future for Minot and the region. This system will protect

our critical infrastructure, historic neighborhoods, and vital facilities. Once the initiatives described above are completed, and armed with a tool to effectively measure flood reduction alternatives, we are confident the cost and timeline for completing the proposed flood protection plan can be reduced. The BCA for this project is included in *AttachmentF\_BCA.pdf*, and the system is discussed further in *ExhibitG\_LongTermCommitment.pdf*.

***Alternatives considered:*** We evaluated several flood protection alternatives; chief among them was relying exclusively on the floodwall and levee system. In discussing options with a hydrologist and water management expert, we realized we could introduce flood risk reduction strategies that would protect people and places sooner, and offer buy-outs to residents at greatest risk of flooding before the protection system is completed (see map E10 in *Attachment E*). One buy-out area we identified will provide flood storage and reduce the cost of the flood walls by \$8 million. Using the decision support tool, we will identify other options to reduce costs and improve benefits, enhance resilience to future disasters in the most impacted and distressed area and the wider region, and protect our most vulnerable residents.

***Feasibility of the project:*** The City of Minot and its partners are fully capable of implementing this flood risk reduction project and activities to deliver the proposed benefits and meet the national objectives. The city and its engineers have experience in designing and constructing major infrastructure projects, and have completed similar projects on time and within budget. The city has successfully completed or will soon complete 230 buy-outs to protect critical utilities, demonstrating the knowledge of HUD requirements and management skills necessary to undertake the strategic buy-out program.

## **Project 2: Build affordable, resilient neighborhoods**

One of Minot's most serious unmet recovery need is the lack of affordable housing in quality neighborhoods, like those lost in the valley that flooded. Long-time residents and skilled workers left Minot after the flood, due in part to our high housing costs. We continue to experience serious consequences because we lack adequate affordable housing for service workers, hospital technicians, police, EMTs, firefighters, and military personnel. Developing affordable housing will allow the households that move from the buy-out areas (discussed in Project1 above) to remain in Minot. This will retain \$359 million in income in the city over a 10-year period, according to our BCA (see *Attachment F*). An initial analysis using HAZUS modeling indicates our proposed buy-out program would have reduced the 2011 flood losses by \$96.7 million.

Following the flood and the concurrent oil boom, housing construction and costs increased significantly. The lack of affordable housing continues to impact Minot's economic and social resilience. We are unable to estimate the number of long-time residents who left the city after the flood due to high housing costs and inadequate resources to make necessary repairs. To better understand these issues in Minot, we analyzed housing valuation data from the Minot Property Assessor's database. The assessor evaluates single family housing values annually using information from transactions, the Multiple Listing Service, and other sources. Combining GIS mapping with this annual single family housing valuation data, we analyzed single family housing values in Minot before the flood in 2010, after the flood in 2012, and in 2015 (see maps E4, E5, and E6 in *Attachment E*). The results were startling. In 2010 quite a few homes were in the \$150,000 to \$200,000 range; in 2012, after the flood, many homes in the valley were assessed below \$50,000. The 2015 map shows a dramatic increase in homes valued over \$400,000, and very few homes in the \$150,000 range.

Nearly 600 Minot State University students were displaced by the flood, and enrollment remains below pre-flood levels because of the lack of affordable housing. There are 140 vacant civilian positions at Minot Air Force Base primarily due to the dearth of affordable quality housing. Further compounding the affordable housing challenge, the base—following Department of Defense regulations—will demolish 140 units of on-base housing this year and another 170 units next year. Military families will be looking for housing in Minot. Since 2011 the number of mobile homes in Minot has increased significantly, providing affordable housing for those who have been unable to find other affordable options; FEMA trailers were purchased by 188 LMI households. More than 600 families are on the Minot Housing Authority waiting list, and the severe shortage of affordable housing will make it challenging to move LMI families from the buy-out areas yet enable them to remain in Minot. Our recovery and our future community and economic resilience depend on developing affordable housing that will allow people who want to stay in our community to continue to live here.

Although rents in Minot have moderated slightly since the flood, today two-bedroom apartments cost \$1,050 to \$1,895 per month and three-bedroom apartments rent for \$1,460 to \$2,100 per month.<sup>1</sup> With population growth projected to continue over the next 10 years, even as oil prices drop, rents in Minot will increase, though more moderately.<sup>2</sup> In 2011 the average price of a new

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<sup>1</sup>September 18, 2015 review of property management websites with Minot, ND listings: 1<sup>st</sup> Minot Mgt., IERT Properties, SMC Minot, Realtor.com, Zillow.com

<sup>2</sup> North Dakota Oil & Gas Industry Impacts Study, prepared for the North Dakota Legislature by KLJ.

single family home in Minot was \$256,979. Today the average new single family home price is \$348,185, making homeownership an unrealized dream for more and more Minot residents.<sup>3</sup>

Before the flood, some of Minot's most affordable housing was in the valley along the river. These older neighborhoods had tree-lined streets, shaded green space, and an interesting blend of architectural styles including craftsman, Cape Cod, and bungalow. Many who lived there had known and cared about one another for years; the social cohesion and sense of community was an important asset for the entire city. Since the flood, residents have struggled to recover and some have moved to lower-cost areas outside the region.

***Project Overview:*** Our community's vitality and economic well-being require an aggressive response to these needs. We propose to construct new affordable homes so that:

- People who move out of harm's way through our buy-out program can remain in Minot.
- Civilian and military personnel at the Air Force Base who want to put down roots in our city will find housing options that meet their needs, preferences, and pocketbooks.
- Our most vulnerable residents including the elderly, disabled, homeless, and financially burdened will have affordable housing options linked to transit, jobs, and services.

Although 609 new affordable homes won't eliminate our affordable housing shortage, they will provide housing for vulnerable LMI residents and will give Minot a chance to make real headway in solving this critical unmet recovery need. As a smaller city located in a state with lower population, few funding resources are available to us to support affordable housing. We will utilize all available housing resources, though they are limited, to facilitate the development of additional

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<sup>3</sup> New home sales data 2011 and 2015, MLS

affordable homes, and will continue to work with the North Dakota Housing Finance Agency to target tax credits, state HOME funds, and CDBG dollars.

We propose to expand our affordable housing inventory by developing housing for LMI students near the MSU campus and downtown, developing three resilient neighborhoods with affordable rental and homeownership options, and creating a Family Shelter to support families experiencing a temporary housing crisis. Our affordable housing will integrate quality neighborhood and housing characteristics identified by stakeholders in NDRC community meetings and design charrettes ([see charrette materials and results](#)). These characteristics include mixed housing densities; quality and affordable designs; walkability; access to transit, jobs and services; and green open space. The homes in these new neighborhoods will be designed for our climate and will meet high construction standards, Green Building Standards for Replacement and New Construction of Residential Housing, and ENERGY STAR certification.

***Downtown housing:*** Downtown is the heart of our city. It is also almost entirely outside the floodplain and the 2011 flood inundation area, and it offers access to services including schools, businesses, and transportation options. We propose to use NDRC funds to develop 40 units of affordable downtown student housing. The two-bedroom units will house 80 qualified LMI students on the upper floors of the proposed Minot State University Arts building. This student housing will be owned and managed by nonprofit developer Beyond Shelter, Inc. for 10 years, preserving affordability for LMI students. At the end of that term, the units may be sold to the Minot Housing Authority or to a local nonprofit housing agency, who will manage and maintain this housing.

These live-work-play residences will attract students to downtown and offer access to coffee shops, restaurants, retail shops, and bicycle and pedestrian trails. A new downtown mini-YMCA with a workout facility, exercise studios, and community meeting space will also locate in this new

building. The “Y” will offer low-cost memberships to LMI and vulnerable people, including seniors living nearby at the Parker Senior Center. The student housing will be near the ArtSpace Lofts, which opened in 2014 to provide 34 affordable apartments and studios for working artists, a gallery operated by the Turtle Mountain Tribal Arts Association, and the Children’s Music Academy. Minot has a growing arts and culture cluster downtown; arts businesses on Main Street draw residents and visitors to cultural events, benefiting existing small businesses.

*The Downtown Gathering Place* will be a public space where people can enjoy what makes this region special. It will help rebuild social connections among all of the people who now live here. We propose to design and build this new public space using NDRC funds; the City of Minot will provide the 2-acre site where this facility will be located. The space will feature design elements that depict the heritage and culture of Minot and the region; a fountain dedicated to the heroism of Minot’s volunteers and public servants who worked tirelessly before, during, and after the flood; a walking path; and a space for morning yoga, storytelling time, a Saturday morning farmer’s market, the city’s Arts Festival, and other activities and events. This space will provide connections and wayfinding to the riverfront greenway, and will be a gateway to downtown for those traveling by bicycle or on foot.

These two NDRC projects are part of an exciting downtown revitalization strategy. Two new parking garages will provide the foundation for 250 apartments on upper floors; 50 of these will be affordable to LMI residents. The city is improving downtown utilities and streets, and adding new streetscape enhancements. Business leaders are planning a new Children’s Museum featuring the river and our economic heritage. These and other activities proposed in this application will make the heart of the city more resilient by creating a place where people come together, young people build

new entrepreneurial ventures, the arts and culture cluster supports small businesses and economic development, and downtown is revitalized to ensure a more sustainable future for the region.

***MSU student housing:*** Minot State University is part of the heart and soul of Minot. Like many institutions of higher education, it operates under constrained budgets and expanding educational demands. The 2011 flood displaced 567 MSU students, and fall 2015 enrollment is down by 456 students compared to enrollment prior to the flood. This is due primarily to the loss of affordable student housing in the flood. The MSU Foundation has facilitated the development of 56 new two- and four- bedroom units of affordable student housing, but more is needed. The university continues to work closely with the leaders of Minot in the NDRC process, and is determined to be a vital part of our region’s recovery and resilient transformation. Minot proposes to use NDRC funds to develop 24 units of affordable student housing adjacent to the MSU campus. NDRC funds would cover 50% of the cost; the MSU Foundation will fund 50% of the cost and will own, manage, and maintain the units. The 12 two-bedroom apartments and 12 four-bedroom apartments will house 72 students, and at least 50% of these units will be for qualified LMI students.<sup>4</sup>

***New resilient neighborhoods - “buy-in” to Minot:*** Minot proposes to use NDRC funds to acquire land and develop three outstanding new neighborhoods, providing gap funding for 359 units of affordable rental housing; funds will also be used to provide gap financing for 250 LMI homebuyers. The new neighborhoods will be located outside the flood plain and will provide the quality

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<sup>4</sup> MSU Foundation has reviewed financial aid data to determine that more than 50% of MSU students qualify as LMI, based on their family income or individual income if they are independent of family income support.

community characteristics people tell us matter most.<sup>5</sup> Our nonprofit development partners will work with local and regional builders to develop well-designed affordable residential units. Lots will be available to develop market rate homes as well. The planning, design, and environmental process for these new neighborhoods began in discussions with our Community Advisory Committee, the Vulnerable Populations Committee, and in public meetings and outreach will continue during the design of this project. A successful and well-managed development process requires careful monitoring of changing market dynamics. We will use detailed housing market studies for Minot and Ward County to regularly assess housing and market conditions and make adjustments as necessary to reflect customer needs and preferences.

While affordable housing is very important to Minot, people here will tell you what they miss most since the flood is their old neighborhood, and the connections to people and places that mattered to them for so many years. Building affordable housing in new neighborhoods is a more intense process, but our unmet need is more than affordable housing; it also includes the social connections that are so important, particularly to our most vulnerable residents.

We developed site selection filters to help us identify the best sites for these new neighborhoods. Based on our analysis we anticipate these sites would require a categorical exclusion. The site evaluation filters include a location outside the projected 2017 floodplain; proximity to existing utility infrastructure and schools with student capacity; proximity to existing commercial areas, services, and employment; connections to transit and transportation networks in (see map E11 in

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<sup>5</sup> In public meetings, design charrettes, vulnerable populations meetings, community advisory committee meetings, and numerous civic and organizational meetings throughout Minot and the region.

Attachment E); compatible adjoining land uses, condition of surrounding neighborhoods, and existing zoning; suitable topography, geology, and environmental conditions; environmental factors on and adjacent to the site; and land and on-site infrastructure costs.

By carefully selecting quality sites, incorporating mixed densities, and using efficient infrastructure and building layouts, we can incorporate shared green space, community gardens, and walking trails—features usually reserved for higher-priced developments. Our design team will develop a residential plan book that will be used for the entire project, and construction specifications as well as on-site inspections will ensure adherence to these standards. Using these plans and specifications will reduce costs and ensure local builders are familiar with all requirements. We will use other innovative practices to keep construction and development costs down, including: pre-approved plans that allow developers and builders to reduce the time needed to secure permits, a builder pre-qualification process, and a construction skills training program for qualified Section 3 residents. We will work with the Minot Housing Authority and other organizations that serve public housing residents and other low and very low income households to make residents aware of construction skills training and work opportunities. We will also provide additional points in the qualification process for local builders who hire Section 3 employees and utilize Section 3 subcontractors. So far we have not identified any Section 3 contractors in the region, but will continue to identify new opportunities.

Our highly experienced nonprofit developers will facilitate this process, allowing work to begin on two neighborhood sites in 2016. The third site will be under construction by 2017. Beyond Shelter, Inc. will develop 142 units of **affordable rental housing** in one neighborhood and 110 units in the second neighborhood using 9% and 4% low income housing tax credits. Construction will begin in 2017 and the first units will be in service by 2019. The final units will be rented in 2021.

Essential Living Inc. will rehabilitate a 35-unit apartment building and construct 72 townhomes and twin-homes on adjacent property on an urban infill site. These units will be targeted for affordable senior housing. The site is within two blocks of a grocery store, transit, and a pharmacy. The total project cost for these three rental housing developments is \$77,626,900. We propose using \$30,476,800 in NDRC funds to provide gap funding for these two projects.

Developing an **affordable homeownership** program is crucial to addressing the city's unmet recovery need. The flood and rapid increases in home prices have put homeownership out of reach for many in Minot, especially our vulnerable populations. Affordable homeownership is also essential to our buy-out program, and is critical for future economic resilience and community stability. Many families became poor because of the flood. Their homes were outside the mapped flood plain and fewer than 10% of homeowners in the 2011 flood inundation area had flood insurance. Many of these homeowners now have two mortgages, and will face additional expenses when the new flood maps and required flood insurance come into play.

To determine a gap funding program for homeownership that is reasonable and prudent for Minot, and actually enables LMI households to buy a home, our team interviewed local lenders, builders, the Minot Homebuilders Association, the North Dakota Housing Finance Agency, area realtors, and non-profit developers. Information on our methodology for determining the NDRC funds requested for this activity can be found in the budget at the end of this exhibit. Some homebuyers will have received funds from the proposed buy-out program, and we anticipate they will require a lower gap subsidy. However, we also know many homeowners in the flood inundation area had to take on second mortgages and other debt to repair their homes, so they may walk away from the buy-out closing with limited cash.

We will use NDRC funds to provide a second deed of trust or similar instrument for qualified LMI home buyers; the second mortgage amount will depend on family income and factors detailed in program policies and underwriting criteria that reflect best practices of successful homeownership programs. Part of this gap funding will be structured as a forgivable loan over a fixed period (perhaps 7 years), tied to homeowner performance requirements such as maintenance and upkeep, completion of homeownership training for first time homebuyers, and payment of mortgage and taxes. This will allow homebuyers to build equity, but will not enable buyers to sell a home and take a substantial percentage of the gap funding. The balance of the second mortgage could be structured as a zero-interest loan that becomes due and payable when the house is sold or otherwise transferred. Funds recaptured from the second deed of trust payment would be used to fund other affordable housing projects in Minot.

The city will appoint a Development and Financial Advisory Committee led by an experienced local lender, with representatives from other financial institutions, the nonprofit developers, ND Housing Finance Agency, Minot Housing Authority, and the program manager. The committee will review and approve the underwriting criteria, policies, and procedures for this project. The homeownership program will serve 187 LMI buyers with incomes below 80% AMI and 63 homebuyers with incomes between 80% and 120% of AMI. Total cost for this homeownership program is estimated at \$80,833,333. We are requesting \$39.9 million in NDRC funds to acquire and develop three neighborhoods and provide the gap funding for 250 LMI homebuyers. All market rate homeowners will pay the full cost and the lot cost will be recaptured at closing. We intend to work with local lenders to create a CDFI that can facilitate the recapture of these funds and reuse them for other affordable housing in our community.

***Minot family shelter for the homeless:*** Minot has several facilities that provide housing and services for the homeless. The YWCA offers shelter for women, boys under 12, and girls, and the Men’s Winter Refuge shelters single men during the winter. There is no shelter for families, and no options for single mothers with boys over 12 to keep their family intact if they become homeless. The Vulnerable Populations Committee identified a family shelter as a critical need for Minot and the region. We will use \$3,041,500 in NDRC funds to build the Minot Family Shelter and a commercial kitchen. The 8,000 square foot facility will be owned and managed by the Minot Housing Authority, who will continue to engage Vulnerable Populations Committee members and area churches and volunteer groups to assist with ongoing needs. The shelter will provide a safe, temporary home for families. Area social service agencies will provide case management to assess needs and help families find employment, if needed, and permanent housing as soon as possible.

***Alternatives considered:*** Because of its short construction season, Minot considered building homes on infill lots. While that option might expedite construction schedules, it would not create the resilient neighborhoods desired by those impacted by the flood. If we learned nothing else from our public engagement, we heard the message loud and clear that **neighborhoods matter**. We must create neighborhoods, not just houses. While options were considered, developing affordable housing in resilient neighborhoods was considered a high priority by stakeholders and the public.

***Feasibility:*** The City of Minot and its partners are fully capable of implementing this resilient neighborhood and affordable housing project and activities to deliver the proposed benefits and meet the national objectives. The city, its consulting program manager, nonprofit developers, and design team have extensive experience designing and constructing neighborhoods and affordable housing, and have successfully completed similar projects on time and within budget. The city has been involved in the development of 296 units of affordable housing in the past four years. Our partners

have managed state and urban CDBG entitlement and housing programs, designed market rate and affordable housing developments, provided construction management for over \$800 million of development, and managed sales transactions for thousands of home purchases.

### **Project 3: Foster economic resilience and diversification**

Maintaining a sustainable, diverse economy may be the greatest challenge to the region's long-term resilience and recovery. The oil industry has been an asset in some ways, but it also contributes to our affordable housing challenge. We also understand the risk of becoming too dependent on the oil sector, given its volatility. As the regional trading center, Minot's long-term recovery and economic diversity is critical to northern and western North Dakota and south Saskatchewan and Manitoba. We must maintain a sustainable, resilient economy despite the oil industry's ups and downs.

Minot businesses documented the loss of 800 employees after the flood, and continue to report challenges in attracting and retaining skilled employees. They attribute this to the lack of affordable housing, which forced some to leave the area, and the draw of higher wages and per diems in the oil industry. While we must address housing affordability, we also must create an environment where diverse non-oil businesses thrive because they have access to a skilled workforce, quality infrastructure, and other success factors. Minot's business environment must enable large and small businesses to prosper and create quality jobs. The city's economic revitalization requires access to education and training to support cutting edge technologies and enable local companies and their employees to deploy innovations that help them prosper.

The economic shock of the oil boom and destruction from the flood affected economic drivers throughout our region. Maintaining a diverse economy in Minot depends on several factors: strengthening exports, expanding agricultural and post-processing production, building on existing economic clusters including arts and culture, ensuring the stability and sustainability of existing

businesses and institutions including Minot Air Force Base and MSU, and fostering new entrepreneurial ventures. Minot's economic resilience depends on the region's ability to provide an environment where these organizations can compete domestically and internationally.

***Project overview:*** Three activities are included in this project: a Center for Technical Education, relocation of the MSU Art Department Complex to downtown, and moving City Hall outside of the flood plain along with a new one-stop social services facility.

**Project 3 Activities:**

***Create a Center for Technical Education:*** The North Dakota University System Chancellor recently asked Minot business leaders how the university system could help them. Their response: technical education. The community college and technical education center closest to Minot is 85 miles away on two-lane rural roads, an hour and a half drive each way. The time, distance, and winter driving conditions make Dakota College at Bottineau an untenable option for many. But for those looking to re-enter the workforce, improve job skills, or take employer-required training, technical education is often the best option.

We propose to use \$11 million of NDRC funds to build a Center for Technical Education in Minot with laboratory and classroom space, a computer center, offices, and study areas. A recent study by the Georgetown University Center on Education and the Workforce found that by 2020, two of every three jobs will require some post-secondary education or training. Many of the jobs available to those with post-secondary education that do not require a bachelor's degree have earnings from

\$35,000 to \$95,000.<sup>6</sup> Some of the fastest-growing jobs in healthcare, professional and technical services, sales and office support, and STEM require an associate’s degree or technical certificate. Minot already has a strong employment concentration in several of these sectors, pointing to additional employment opportunities in the future.

Minot State University and Dakota College will provide programming and management for the Center for Technical Education, which will offer one- and two-year certificate programs, customized technical training for area businesses, associate degree programs, and eventually college transfer programs. MSU and Dakota College will work with schools to develop post-secondary training options for targeted career programs in aviation, biomedical science, and diesel technology.

Institutions of higher learning are key catalysts for economic resilience, contributing to economic growth, business development, technology transfer, and business and educational partnerships. MSU’s regional economic impact in FY 2011 was \$222.7 million, but it declined to \$186.4 million in FY 2012 due to fewer students, recovery costs, and other flood- related impacts.

***MSU Art Department in downtown Minot:*** The second activity proposes to use NDRC funds to relocate the MSU Art Department, which has distinguished itself as a center for regional art and art education, to downtown Minot. Enrollment has increased and the department, currently located in second floor space and a converted mechanical area, cannot expand further on campus. Locating downtown would provide the department with space to expand programs, which would increase MSU enrollment and provide outstanding co-benefits for downtown and economic revitalization. We want to capitalize on the opportunity to attract MSU students and rebuild enrollment, not only to

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<sup>6</sup> “Recovery and Job Growth – Educational Requirements through 2020”, Georgetown University Center on Education and Workforce, 2013

study in Minot but, for some, to stay and contribute to our community as business owners, entrepreneurs, employees, and teachers. This activity will also develop our downtown arts and culture cluster to revitalize downtown and foster a more resilient economy. Trinity Hospital, our largest downtown employer and property owner, recently announced they would close many of their downtown facilities and build a new hospital in southwest Minot. Locating the MSU Art Department downtown would help fill the void left by the hospital, and would create synergies with the ArtSpace facility, Taube Art Museum, and small arts businesses that have emerged organically. Studies have documented the tremendous value of art in the economic revitalization of communities; excellent examples exist in Asheville NC, Lancaster PA, and Northfield MN. The Art Department would occupy the first two floors of the building with studios, classrooms, and faculty offices. The affordable art student housing proposed in our *build affordable and resilient neighborhoods* project would occupy the third and fourth floors.

***Relocate City Hall to downtown and create a one-stop social services center:*** The final activity proposed for NDRC funds will relocate City Hall out of the flood plain and create a one-stop social services center in the same building. During the 2011 flood extraordinary efforts were required to protect City Hall and the central emergency communications system. While those efforts were successful, this risk can be eliminated by relocating City Hall and the communication system downtown. After the flood many community residents needed to access social services. Because these services are located throughout the city, this required multiple trips and many hours, and it was particularly difficult for vulnerable people without access to a vehicle. Resolving serious problems took weeks because accessing help was so challenging. The idea of creating a one-stop social service center arose from that experience. The social services center would provide staff offices for various agencies on a regular schedule so people could make one stop at a transit-served location to get the help they need. This would be invaluable before, during, and after a challenging event. The City of

Minot has budgeted \$2,500,000 for this project and proposes to use \$3,750,000 in NDRC funds to acquire and rehabilitate a suitable building downtown.

**Project Metrics:**

Minot will present an annual report to the community to share progress and document our recovery and increased resilience. To define our desired outcomes for success, we developed the three objectives outlined on the third page of this section. We have tied our metrics to these objectives and, where possible, to our benefit cost analysis. Minot's Chief Resilience Officer will be responsible for managing data collection and calculating metrics for the NDRC projects, and will work with the city's Public Information Officer to communicate our performance so we can help Minot and the region better understand how we are improving our resilience and addressing unmet recovery needs.

***Flood risk reduction metrics:*** Our objective is 50% flood loss avoidance within 15 years in Minot. Metrics are: 1) *Resilience* – based on HAZUS, acquisition of 740 properties in the buy-out program will result in \$96.7 million in avoided flood losses in a flood event similar to 2011. Track buy-outs annually and cumulatively from 2017 to 2027 and estimate a proportional flood loss avoidance resulting from buy-outs completed to date. 2) *Economic* – tourism revenues from the greenway are estimated in the BCA to generate \$14.1 million annually. Using the BCA formula, track the annual events and activities on the greenway and estimate increased annual tourism revenues from greenway activities. Produce this estimate beginning in 2021, based on annual events and activities, and calculate cumulatively over 10 years. 3) *Environmental* – restore 15 acres of wetlands, prairie, and native forest within acquired flood storage areas by 2019. Report the percent restoration completed annually. 4) *Social* – using the city's web site, conduct a web survey to determine the number of residents who use the greenway annually. Using the BCA formula, estimate the health benefits of the greenway based on annual usage.

***Affordable, resilient neighborhoods metrics:*** Our objective is to reduce Minot Housing Authority's waiting list at by 50%, increase Minot State University enrollments to pre-flood levels, and fill all civilian positions at Minot Air Force Base by 2021. Proposed metrics are: 1) *Environmental* – using the BCA formula and information from the Energy STAR program, calculate the estimated annual energy savings for the affordable housing units completed, resulting in XX dollars saved from reduced energy usage. 2) *Social* – using the BCA formula, estimate the annual retained income resulting from enabling households to remain in Minot because of the availability of new affordable housing. Produce an annual estimate beginning in 2018 based on retained households and an average income factor calculated for the BCA, and a cumulative projection based on total retained households. 3) *Economic* – for each household relocated from the buy-out area that purchases an affordable home, beginning in 2018 calculate the annual increase in property values, measuring an average property value in the buy-out area compared to an average property value in the new neighborhood (based on annual assessor valuation data). 4) *Resilience* - estimate the average annual per unit flood loss avoidance based on a per unit calculation using HAZUS modeling data and the number of households moved out of harm's way that remain in Minot, beginning in 2018.

***Foster economic resilience and diversification:*** Our objective is to create an economic environment that enables businesses to successfully compete and create well-paying jobs, where employees can access technologies and skills, and arts and culture bring thousands of residents and visitors with revenues to broaden the region's economy. Metrics include: 1) *Economic* – using the BCA formula, measure the annual economic impact of increased student enrollment based on the per student economic impact calculation in the BCA; use 2020 as the base year. 2) *Social* – using the BCA formula, calculate the value of the arts and culture cluster downtown in terms of improved community identity and social cohesion, using 2020 as the base year.

### **Addressing unmet recovery need and resilience:**

Both individually and comprehensively, our projects help meet our unmet recovery need. The buy-out program targets homes in areas most likely to flood before the protection system is completed. Many in these areas still struggle to recover from the 2011 flood, and their affordable housing choices are very limited. The public open space projects provide flood risk reduction, and meet the needs of vulnerable people who rely on services and social connections at these parks to meet their daily needs. Long-term recovery depends on reducing flood risks for Minot and the region. One of the most serious unmet recovery needs still facing Minot is the lack of affordable housing. Building affordable, resilient neighborhoods will allow the city to pursue a buy-out program to relocate 740 households out of flood-prone neighborhoods. Creating 609 affordable housing units in Minot will provide options for our most vulnerable residents, help small businesses serving LMI residents, and strengthen institutions that are critical to our economy. An initial analysis using HAZUS modeling indicates if the first four phases of the flood protection system had been in place along with the buy-out program, the 2011 flood damage cost would have been reduced by \$554 million.

### **Benefits to vulnerable populations:**

Our most vulnerable populations are key beneficiaries of both the direct outcomes and resilience dividends of these projects. Our flood risk reduction and water management projects can step down risk and reduce risk sooner, providing risk reduction benefits to those most vulnerable. The buy-out program provides families and individuals at the greatest risk of flooding, and least able to afford to relocate out of harm's way, the financial ability to do so. Our affordable neighborhood project offers a quality place to live in Minot. Open space strategies link flood storage with productive uses that bolster the overall resilience of all residents. During floods these spaces will help keep vulnerable residents safe, but day to day they will support social interaction and connections between residents, jobs, and services. By providing alternative transportation (the greenway) and new facilities for

programs serving some of our most vulnerable (a feeding program for youth and families unable to afford three healthy meals a day), these parks and open spaces will become even more vital to our city. Available and affordable housing, including units for seniors, the homeless, and people with disabilities, will significantly benefit our community's vulnerable populations. Finding quality affordable housing will improve social cohesion for many who may currently experience overcrowding, sub-standard housing conditions, and significant housing cost burdens.

**Meeting a national objective:**

*Reducing flood risk* is essential to our long term recovery. We will use NDRC funds to acquire and relocate LMI households in the proposed buy-out program, providing 100% LMI benefit to meet HUD's national objective for LMI benefits. Additional LMI households in the buy-out areas may also be assisted through the State of North Dakota funds committed to the buy-out activity. The remaining activities in the flood risk reduction project qualify under the urgent need national objective.

Of the 2,400 seriously damaged homes in Minot, 150 remain vacant and blighted. Although damages homes were repaired, most are no longer affordable to our vulnerable population. The affordable housing shortage in Minot is critical, affecting our ability to provide buy-outs for those in harm's way and ensure they can remain in Minot. It also affects our economy and many small businesses serving LMI people, and it affects the ability of our key economic drivers to attract and retain important service employees and technical workers. Minot proposes to *build affordable and resilient neighborhoods* using NDRC funds. We will build 250 new affordable single family homes, and 90.3% of those homes will benefit LMI households with incomes at or below 80% AMI; 9.7% of the NDRC funds will benefit LMI households with incomes at or below 80% to 120% AMI. We will build 359 affordable rental units and 100% of those units will benefit LMI households with incomes

at or below 80% AMI. This affordable housing meets HUD's national objective for LMI benefit. We propose to use NDRC funds to develop 64 units of affordable student housing; 52 will be reserved for qualified LMI students. This affordable student housing meets HUD's national objective for LMI benefit. The remaining activities in the affordable and resilient neighborhoods project qualify under the urgent need national objective.

The activities in the *fostering economic resilience and diversification* project qualify as a national objective under urgent need. The city's non-oil economy continues to struggle to retain skilled workers, due in part to the lack of affordable housing and oil industry practices offering very high wages and per diems even to non-skilled workers. As the regional trading center, the sustainability and resilience of Minot's economy impacts the entire region. Activities to stabilize and strengthen the city's non-oil economic sector is critical to our recovery and future resilience. The activities included in this project will allow our vulnerable population access to the vital job training and skills required to retain existing employment and have options to improve incomes in the future outside of the oil sector. The arts and culture cluster in Minot is helping to revitalize downtown, support existing small businesses in the region and encouraging young people to stay in our community. Our resilience depends on a strong non-oil economy so we can weather the economic downturns that we know will occur, particularly within the oil sector.

**Consulting with other jurisdictions:**

Throughout both phases of this process, Minot worked closely with the region, the Souris River Joint Board (SRJB), and the State of North Dakota to ensure we have a comprehensive understanding of disaster impacts, recovery needs, and future risks across the Souris River basin. For example, many in the basin depend on agriculture. The 2011 floods, plus climate change impacts including floods and droughts, affect the livelihood of farmers along the Souris River and the businesses in Minot that

support the agricultural industry. We also realize decisions about flood risk reduction and economic resilience don't occur in a vacuum; the choices we make in Minot influence our neighbors, and vice versa. To foster stronger regional communication, Minot now serves on the board of the International Souris River Board, the Souris River Joint Board, and the Assiniboine River Basin Initiative, a bi-national organization.

Minot's effort to become more resilient does not stop at the U.S. border. Our review of bi-national Souris River basin conditions and data from the United States Geological Survey determined 66% of the watershed in the upper Souris River basin is considered non-contributory under normal conditions, but these areas appear to have contributed to the 2011 flood. Increased agricultural activities may be short-circuiting the significant storage in the upper Souris River basin, and this may have been a factor in the historic 2011 flood. It is prudent to consider restoring upstream surface storage, storm water harvesting, and aquifer recharge practices in the upper basin to offset this increase in flow and conserve water. This is especially critical as changing climate conditions may increase temperatures, resulting in more rapid snow melt during spring rains.

With this analysis in hand, and after discussions with the U.S. Fish and Wildlife Service (USFWS) and the U.S. Army Corps of Engineers, Minot officials met with the North Dakota State Water Commission and the International Souris River Board (ISRB). Minot asked these agencies to consider opportunities to enhance or restore wetlands and lakes; evaluate declining or depleted aquifer zones; and identify industrial, oil exploration, and agricultural activities that are significant water users and might consider harvesting increased flows. Minot officials have also requested the USFWS and the ISRB adopt and implement a one foot lower normal water level control for Lake Darling by next spring, and implement additional flood release protocols as soon as possible. The one foot reduction in normal water level would provide 10,000 acre-feet of additional water storage,

increasing public safety and reducing potential flood damages. These numbers will be further refined through activities described in this proposal (See Resilience Need within Recovery Needs analysis in *ExhibitD\_Need.pdf* for HAZUS analysis of the lower normal water level.)

We are aggressively working with these agencies and the counties along the Souris River to facilitate a more resilient bi-national region for all communities bordering the river. Minot City Manager Lee Staab met recently with the Canadian and North Dakota co-chairs of the ISRB to continue these discussions and address trans-boundary water management issues, economic challenges, and safety for people and property. Developing the Souris River Flood Decision Support Tool model proposed in this application will help decision-makers in Minot and in the basin further evaluate operational protocols for Lake Darling in the event of flooding.

**Consistency with other planning documents:**

Minot's proposal is consistent with the State of North Dakota's CDBG Consolidated Plan (see certificate in *AttachmentD\_Consultation.pdf*). This proposal is also consistent with the city's 2012 Comprehensive Plan, 2035 Transportation Plan, and Ward County Hazard Mitigation Plan. The three key areas proposed in this NDRC application are addressed in the city's planning and policy documents: *Reduce flood risk and improve water management*: The Comprehensive Plan (Chapter 7, Water Resources) and Ward County Hazard Mitigation Plan (Section 12.5, Mitigation Strategy) both include flood protection as a key issue. *Build affordable, resilient neighborhoods* is woven throughout chapters 4, 5, and 8 of the Minot Comprehensive Plan, which cover neighborhood resilience, parks and trails, housing and community character, aesthetics, and facilities. *Foster economic resilience and diversification*: The Minot Comprehensive Plan (Chapter 6, Economic Development) recommends reducing economic setbacks to foster a robust, resilient economy.

Documentation from the appropriate planning officials for the FEMA-approved Hazard Mitigation Plan and the DOT-approved Transportation Plan is included in *AttachmentD\_Consultation.pdf*.

**A replicable model for collaboration and resilience:** These projects will bring real benefits to Minot, and we hope they will also serve as a model for other cities and regions. While Minot experienced an extraordinary flood event and a dramatic economic shock created by the oil industry, other cities in the U.S. and elsewhere are likely to face more complex dual disasters because of globalization, climate change, and economic volatility. It took dramatic shocks (the flood and the oil boom) and a well-timed opportunity (this competition) to prompt our city to think and plan resiliently. The projects proposed herein and the process of local and regional collaboration that has led to them can, we hope, be a model to help other communities and regions prepare to be more resilient in the face of complex, multi-dimensional hazards.

**Scaling and Scoping:** Our NDRC Community Advisory Committee and Vulnerable Populations Committee worked closely with the city through this 13-month process. They are familiar with the projects in our proposal and the community's unmet need. To assist in the required scaling and scoping process, they prioritized the proposed projects and activities based on criticality of need, opportunity for future project phasing, leverage and funding resources, and public and stakeholder input throughout the process. They prioritized NDRC activities as follows (1 is the highest priority project, 2 is next, and so forth): 1) institute strategic buy-out program; 2) develop resilient neighborhoods and affordable housing; 3) relocate City Hall and a one-stop social services center; 4) build a new family shelter and develop the MSU Center for Technical Education (tie); 5) build a greenway from Oak Park to Roosevelt Park; 6) create eco-restoration flood storage areas; 7) build downtown public gathering space; 8) develop affordable student housing adjacent to MSU campus and locate MSU's Art Department downtown with affordable student housing above (tie); and 9)

improvements in Oak Park including a sensory play area and larger shelter for summer feeding program. Planning and tools were not prioritized, as they are basic to our NDRC effort.

We considered this prioritization in our effort to scale and scope the proposal. As required in the NOFA, we have provided two additional scoping versions of our proposal. The \$100,785,745 version includes \$33 million for the buy-out program for 740 units; \$49,665,400 for affordable housing (249 rental units and 200 units for homeownership); \$2,570,000 for affordable student housing adjacent to MSU campus; \$3,041,500 for the family shelter and kitchen; \$3,750,000 to relocate City Hall and one-stop social services center; \$1,830,000 for planning and the flood decision tool; and \$4,376,845 for administration. The \$74,340,770 version includes \$20 million for buy-outs (estimate 290 homes and 380 mobile homes); \$30,179,000 for affordable housing (183 units of affordable rental housing and 150 units for affordable homeownership); \$3,041,500 for the family shelter; \$1,830,000 for planning and flood decision tool; \$3,750,000 to relocate City Hall and a central social service center; and \$3,775,270 for administration.

Because the strategic buy-out program and new affordable housing are intrinsically linked, we must ensure there will be affordable housing for households in the buy-out program so people can remain in Minot. It is therefore critical to integrate the buy-out and affordable housing program, since if all funding for affordable housing were eliminated we could not complete the buy-out and flood storage program. We are using multiple funding sources for the affordable multifamily housing; the number of units cannot be reduced on a pro rata basis. The infill site can be completed for \$7,623,000, producing 35 rehabilitated apartments and 72 townhomes and duplexes. The 9% tax credit multifamily project requires \$7,262,000, producing 142 units of affordable rental housing. The 4% tax credit project requires \$14,600,000, producing 110 affordable rental units.

### **Program Schedule:**

A detailed schedule is included at the end of this section. Because Minot's construction season is limited, we are submitting a waiver (see *AttachmentG\_WaiverRequest.pdf*) to extend the expenditure deadline to September 30, 2022. To expedite NDRC implementation, the City has already notified agencies that will be involved in potential environmental and regulatory compliance for our NDRC proposal and provided them with a copy. Minot has developed a detailed and robust regulatory strategy and communication plan to ensure partners and regulatory agencies are engaged in an effective process. This will begin immediately after the award notification to identify required reviews, approvals, and permits, and ensure a strategy is in place to identify potential barriers. We have evaluated activities in each of our projects to determine the likely level of environmental deliverable required. Our process includes early and frequent meetings and coordination with stakeholders and regulatory agencies to ensure projects are consistent with review standards for permits, as well as ongoing stakeholder and community outreach.

To achieve our goal of excellent project design and expedite the development process, an affordable housing plan book and standard specifications will be used for all affordable housing. Our program manager, CDM Smith, will prepare a detailed project work plan to ensure completion of high quality project activities within the accelerated schedule. A detailed communication plan will ensure the entire Minot team is fully integrated in effectively completing our NDRC projects.

### **Budget:**

We worked with our partners, community advisory committee members, and other experts to validate the costs used in our budget. To ensure reasonable and competitive costs throughout the implementation of NDRC projects, the city will use its procurement management system and will secure independent engineering estimates to validate project bids. To arrive at the costs included in

our budget, a concept scenario was developed, then costs were prepared by professionals and compared with recently completed projects similar in scale and use. Costs for the Center or Technical Education and the MSU Art Department and affordable student housing were developed by our partner, EAPC Architects. The budget for affordable student housing adjacent to the MSU campus was based on a similar project completed last year, adjusted for site costs. Costs for the greenway and Oak Park improvements were prepared by partner KLJ and their landscape architects.

A detailed project pro forma was developed for the proposed affordable rental housing. Our methodology for determining reasonable costs to develop the new resilient neighborhoods and provide the required gap funding for successful homeownership used information from area lenders, contractors, the Minot Homebuilders Association, and our nonprofit developers. We used current average construction costs (\$170/sf); assumed mortgage interest rates at 4.2% (providing for nominal interest rates change over the life of the project); and evaluated square footage for affordable homes assuming a range of bedrooms. Working with area civil engineers, realtors, and the city's expertise, we determined average costs for land and on-site infrastructure, common area improvements, and site development. Using 4 to 5 units per acre density and average on-site infrastructure costs including some green stormwater, we calculated neighborhood land and development costs at \$18 million. We developed a spreadsheet using AMI for a range of household sizes, made reasonable assumptions about local taxes and insurance, assumed a 3% down payment from the buyer with assistance from the ND Housing Finance Agency program, and estimated a range of mortgage limits based on family income. We assumed some homebuyers from the buy-out program would require less gap funding, as they would be required to invest cash from their buy-out. We also assumed 25% of homebuyers would have incomes at 80% to 120% of AMI and would require a much lower subsidy.

**Sources and uses of funds statement:** included in *AttachmentB\_LeverageDocuments.pdf*.

## Minot NDRC Projects - Schedule

PROJECTS AND ACTIVITIES	Start date	End date	Initial Benefits date
Project team meeting	Mar 2016	Mar 2016	
Environmental coordination meetings	Mar 2016	Mar 2018	
<b><i>Project A: Reduce flood risk and improve water management</i></b>			
1. Strategic buy-out program			Feb 2017 – Feb 2021
a. Program policies and procedures	Apr 2016	Sep 2016	
b. Environmental documents – anticipate Categorical Exclusion	Apr 2016	Sep 2017	
c. Community meetings	Jul 2016	Jun 2020	
d. Implement buy-out project	Jan 2017	Feb 2021	
e. Ecological restoration for flood storage areas	Jun 2018	Jun 2021	
2. Flood resilient open space, Oak Park improvements, eco-restoration area			June 2022
a. Enviro document: anticipate CE, identify sites with potential concern	Apr 2018	Dec 2018	
b. Community meetings	Apr 2018	Jun 2019	
c. Construct greenway and Oak Park improvements	Jun 2019	Jun 2022	
3. Develop Souris River Flood Decision Support Tool	Jul 2016	Sep 2017	

<b><i>Project B: Build affordable, resilient neighborhoods</i></b>			
a. Housing design charrettes	Apr 2016	Sep 2016	
b. Site evaluations, property options	Apr 2016	Jun 2018	
c. Enviro document: anticipate CE; complete environmental documents	Apr 2016	Dec 2018	
1. Affordable student housing – 64 units			Sep 2022
a. Community meetings	Apr 2016	Jun 2016	
b. Complete design, Construct MSU student housing	Jul 2016	Dec 2017	
c. Construct downtown student housing	Jun 2017	Jun 2020	
2. Affordable mixed density housing, rental and homeownership			
a. Community meetings, plan book	Apr 2016	Dec 2016	
b. Site evaluations, property options	Apr 2016	Dec 2016	
c. Develop neighborhood sites	Jun 2016	Jun 2017	
d. Develop housing policies and procedures	Apr 2016	Dec 2016	
e. Home builder Section 3 construction skills classes	Jul 2016	Dec 2021	
f. Rehab 35-unit multifamily housing	Apr 2016	Dec 2016	Jan 2017
g. Construct multifamily units and townhomes – 302 units	Jul 2016	Sep 2021	Jun 2017

h. Construct single family homes – 250 homes	Apr 2017	Sep 2022	Jul 2018
3. Family homeless shelter			
a. Enviro document: anticipate CE, complete environmental document	Apr 2017	Mar 2018	
b. Site evaluation, acquire property	Jan 2017	Jun 2017	
c. Design process with Vulnerable Populations Committee	Jan 2017	May2017	
d. Construct or rehabilitate shelter facility with feeding kitchen	Jun 2017	Jun 2019	Sep 2019
4. Downtown public gathering space			
a. Enviro document: anticipate CE, complete environmental document	Jan 2017	Jun 2017	
b. Community meetings and design	Feb 2017	Jul 2017	
c. Construct public gathering space	Apr 2017	Sep 2019	Oct 2019
<b><i>Project C: Foster economic resilience and diversification</i></b>			
1. Minot Center for Technical Education			
a. Enviro document: anticipate CE, complete environmental document	Oct 2016	Jun 2017	
b. Integrate design process with business community	Dec 2016	Jun 2017	
c. Construct Center for Technical Education	Jul 2017	Sep 2019	Jan 2019
2. MSU Art Department facility in downtown Minot			

a. Enviro document: anticipate CE, complete environmental document	May2016	Dec 2016	
b. Site evaluation and acquisition	Jan 2017	Jun 2017	
c. Community meetings, integrate with design process	Jan 2016	Jun 2017	
d. Construct MSU Art Department	Jun 2017	Dec 2019	Jan 2020
3. Relocate City Hall & one-stop service center downtown, out of flood plain			
a. Enviro document: anticipate CE, complete environmental document	Apr 2016	Dec 2016	
b. Site evaluation and acquire property	Jan 2017	Apr 2017	
c. Community meetings, integrate with design process	Jan 2017	Apr 2017	
d. Rehabilitate City Hall and one-stop social service center building	May2017	Sep 2019	Jan 2020

## Minot NDRC Projects - Budget

PROJECTS AND ACTIVITIES	% LMI benefit	Total cost	NDRC funds	Leverage/ private	Source*
<b><i>Project 1: Reduce flood risk and improve water management</i></b>					
1. Buy-outs: 400 mobile homes, 340 single family homes	100%	123,000,000	33,000,000	90,000,000	1
2. Riverfront greenway, Oak Park improvements		7,340,000	7,340,000	0	
3. Ecological restoration in flood storage areas		2,145,000	2,145,000	0	
4. Souris River Decision Tool		825,000	825,000	0	
5. Flood protection system, excavation/improvements for resilient flood storage sites		457,000,000	0	379,000,000	2
Subtotal: reduce flood risk and improve water management		590,310,000	43,310,000	469,000,000	
<b><i>Project 2: Build affordable, resilient neighborhoods</i></b>					
6. 359 units affordable rental multifamily and townhomes	100%	77,626,900	30,467,800	47,159,100	3
7. 250 affordable homes, single family homeownership	91%	80,833,333	39,932,000	40,901,333	4
8. Downtown public gathering space		10,795,000	8,795,000	2,000,000	5
9. MSU affordable student housing - campus	100%	4,770,000	2,570,000	2,200,000	6
10. Downtown student housing - 40 units affordable housing	100%	5,280,000	5,280,000	0	

11. Family homeless shelter	100%	3,041,500	3,041,500	0	
Subtotal: build affordable, resilient neighborhoods		182,346,733	90,086,300	92,260,433	
<b><i>Project 3: Foster economic resilience and diversification</i></b>					
12. City Hall relocation, one-stop social services center		6,250,000	3,750,000	2,500,000	7
13. Minot Center for Technical Education		11,000,000	10,764,650	235,350	8
14. MSU Arts Department, downtown campus		16,500,000	16,500,000	0	
Subtotal: foster economic resilience and diversification		33,750,000	31,014,650	2,735,350	
<b><i>Planning:</i></b>					
12. Minot detailed market study for affordable housing		120,000	120,000	0	
13. Minot/Ward Co. economic development strategic plan		275,000	275,000	0	
14. Affordable neighborhood master plans, plan book, specs		225,000	225,000	0	
15. Vulnerable populations action plan		385,000	385,000	0	
Subtotal: planning		1,005,000	1,005,000	0	
Total all above projects and activities:		807,411,733	165,415,950	214,014,100	
City administration (5%)		8,859,640	8,859,640	0	
<b>Total NDRC application:</b>		<b>816,271,373</b>	<b>174,275,590</b>	<b>214,014,100</b>	
<b>LMI benefit: 64%</b>			<b>110,697,420</b>		

**\*Sources:**

1. State of North Dakota leverage

2. State of North Dakota leverage, City of Minot leverage

3. \$33,377,500 Low Income Housing Tax Credits (4% and 9%), \$6,500,000 permanent loan, \$1,216,600 deferred developer fee, \$1,200,000 NDHIF grant, \$4,865,000 private equity

4. \$750,000 Minot Area Community Foundation, \$40,151, 333 mortgage financing, private equity

5. Site donation - City of Minot

6. Minot State University Foundation loan

7. City of Minot, FY 2016 city budget

8. \$235,350 Minot businesses - leverage

## Exhibit F: Factor 4 - Leverage

*City of Minot, North Dakota*

ExhibitF\_Leverage.pdf



## EXHIBIT F: FACTOR 4 - LEVERAGE

Minot has \$470,214,750 in direct leverage for its proposed NDRC projects from state and local government, nonprofits, business and professional groups, and private firms (see *AttachmentB\_Leverage.pdf*).

The State of North Dakota has committed \$90 million towards the strategic buy-out program and an additional \$42 million to fund flood risk reduction and water management activities. The City of Minot has committed a minimum of \$337 million over the next 30 years to fund the local cost share for the Mouse River Enhanced Flood Protection Project for the entire Souris River basin in the United States. The City of Minot also committed \$152,933 toward development of the NDRC Phase 1 grant application; Ward County and the Souris River Joint Water Resource Board pledged the remaining \$76,467 under a Joint Powers Agreement.

The Minot Area Community Foundation has committed \$750,000 to fund recovery and resilience support for vulnerable populations, increasing the supply of affordable housing, adding recreational uses along the river, and other activities to build resilience capacity in the community that are included in Minot's Phase 2 NDRC application. Local businesses and organizations have pledged \$235,350 to support Minot's resilience efforts.

Entity	Direct leverage
State of North Dakota - Flood Protection Plan	\$132,000,000
City of Minot –½ cent sales tax for flood control	\$337,000,000
City of Minot – contribution toward preparation of Phase 1 application	\$ 152,933
Ward County and Souris River Joint Water Resource Board	\$ 76,467
Minot Area Community Foundation	\$ 750,000
Ackerman-Estvold	\$ 50,000

American Bank Center	\$	1,000
Bremer Bank	\$	15,000
Downtown Business & Professional Association	\$	25,000
First International Bank and Trust	\$	5,000
First Western Bank & Trust	\$	30,000
HDR Engineering, Inc.	\$	10,000
Hight Construction, LLC	\$	250
Houston Engineering, Inc.	\$	15,000
Mainstream Boutique-Minot	\$	2,500
McGee, Hankla & Backes, P.C.	\$	2,000
Minot Noon Rotary Club	\$	3,000
Minot Young Professionals	\$	10,000
Moore Engineering, Inc.	\$	1,500
Northern Tier Federal Credit Union	\$	100
Northgate on Broadway, LLC	\$	2,500
Sandman Partnership, LLP	\$	1,000
Strata Corporation	\$	22,500
Sunrise Rotary of Minot	\$	1,500
Wagner Construction, Inc.	\$	15,000
Watne Realtors	\$	2,500
Xcel Energy	\$	20,000
<b>Total commitments:</b>		<b>\$ 470,214,750</b>

Exhibit G: Factor 5 - Long Term Commitment

*City of Minot, North Dakota*

ExhibitG\_LongTermCommitment.pdf



## **EXHIBIT G: FACTOR 5 - REGIONAL COORDINATION AND LONG-TERM COMMITMENT**

In its Phase 1 application, Minot committed to naming a Chief Resiliency Officer and supporting the necessary inter-agency coordination among city departments to foster increased resilience in the city. Donna Bye is the new Chief Resilience Officer. She has been actively engaged in the development of this proposal and is working with city departments, local organizations, and the private sector to define new strategies for increasing resilience in the city.

Minot also committed in Phase 1 to train 90 percent of its firefighters in crude oil train emergencies at the Security and Emergency Response Training Center (SERTC), a nationally recognized training program for train accident response. To facilitate the completion of this commitment, the City of Minot has arranged for SERTC experts to come to Minot to provide train accident response training for Minot Fire Department's (MFD) emergency responders. By June 2016, at least 60 percent of MFD emergency responders will have completed this training, and by January 2017, 90 percent of MFD emergency responders will have been trained. A letter from the Mayor documenting this commitment is included in Attachment D.

**Lessons learned:** Minot has made a significant commitment to improving resilience within the MID-URN area and the Souris River region. The City, working with the North Dakota Water Commission and the Souris River Joint Board, executed a Joint Powers Agreement in January 2014 and subsequently completed the initial plan for the Mouse River Enhanced Flood Protection Plan. Furthermore, the City of Minot has agreed to pay the local cost share, a minimum of \$337 million over 30 years, for this flood protection plan for Ward County, which includes Minot, and the three other North Dakota counties (Renville, McHenry, and Bottineau) along the Souris River. The design for the first three phases of this flood protection plan will be

completed in 2016 and construction will begin within one year of the NDRC Phase 2 grant award. The Mouse River Enhanced Flood Protection Plan is included in the benefit cost analysis in this application. A letter from the City of Minot in Attachment D documents our commitment to implement Phases 1 through 4 of the Mouse River Enhanced Flood Protection Plan by December 2030.

To measure the positive protection provided by the design and construction of the first four phases of the Mouse River Enhanced Flood Protection Plan, we will use the following metric: The 2011 flood caused \$794,531,000 in damages to 4,100 structures in Minot. Our goal is a 50% decrease in damages from flood loss and 50% fewer structures affected within 15 years.

In addition to building these flood walls and levees, Minot is working with the International Souris River Board (ISRB), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Army Corps of Engineers. As a result of research conducted in preparing this application, Minot requested these agencies to consider opportunities to enhance or restore storage in wetlands and lakes and evaluate aquifer zones for water recharge, and requested USFWS and ISRB adopt and implement a one foot lower normal water level control for Lake Darling before next spring, and adopt and implement additional flood release operation protocols as soon as possible. The one foot lower normal water level would provide approximately 10,000 acre-feet of additional storage. To put this in perspective, using HAZUS modeling, if a 2.5 foot lower normal water level control for Lake Darling had been in effect in advance of the 2011 flood event, \$126 million in losses could have been avoided.

Minot has identified six potential flood storage areas within the city and several located outside the city. These flood storage areas are part of an effort to identify actions that can be

layered with ongoing local and regional flood protection efforts to reduce risk and provide resiliency benefits. These efforts have already begun, and will continue until the flood protection plan is completed. These projects will provide flood risk reduction benefits sooner to some of the most vulnerable and at-risk areas of the city. They may also reduce the cost and construction timetable for the long-term flood protection plan, and will provide co-benefits including ecosystem restoration, education and recreational opportunities, improved connectivity, and economic enhancements. The six flood storage areas that will be further evaluated using the Souris River Decision Tool model are shown on map E-9 in *Attachment E* (password: minotndrc).

**Resilience actions related to plan updates or alignment:** The City of Minot updated its Comprehensive Master Plan in 2013 to improve land use patterns and allow for development of higher density housing. In March 2013, the region completed an Economic Development Strategic Plan funded by HUD, USDOT, and EPA that was part of the Regional Plan for Sustainable Development. Minot updated its Long Range Transportation Plan in January 2015. Minot and Ward County finalized a FEMA-approved Multi-Hazard Mitigation Plan in September 2013 (see documentation in *AttachmentD\_ConsultationSummary.pdf*). The Multi-Hazard Mitigation Plan considers threats imposed by climate change, vulnerabilities of land uses, and development trends so mitigation options can be considered in future land use decisions. Each of these plans utilized the best available risk information and future updates will benefit the Souris River Decision Support Tool proposed for development in this application.

**Resilience actions related to financing and economic issues:** To further improve resilience in the MID and Souris River basin, the City of Minot has committed to fund the local cost share for the Mouse (Souris) River Enhanced Flood Protection Plan, a flood protection system, as noted

above. A Joint Powers Agreement executed between the Souris River Joint Water Resource Board and the City of Minot on January 9, 2014 includes Renville, Ward, McHenry, and Bottineau counties, working with the North Dakota State Water Commission. This flood protection plan will reduce flood risks for the four counties included in this agreement.

The City of Minot has committed a one-half cent sales tax to fund the local cost share for the construction and implementation of the entire basin-wide flood protection plan, including the percentage of cost share necessary to match funds provided by the State Water Commission and all other local costs not provided by state or federal funding.<sup>1</sup> At a minimum, the city will invest \$337 million over the next thirty years to fund the required local cost share, according to Minot's Financial Director, Cindy Hemphill.

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<sup>1</sup> Sub-Agreement between the Souris River Joint Board and the City of Minot for the Mouse River Enhanced Flood Protection Plan, executed January 9, 2014

Attachment D: Consultation Summary

*City of Minot, North Dakota*

AttachmentD\_Consultation.pdf



**Attachment D: Consultation Summary**  
*City of Minot, North Dakota*  
AttachmentD\_Consultation.pdf

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Agency name or Stakeholder group	Agency type or Target population	Type of outreach	Method of notification and Materials provided
<b>International Souris River Board</b>	Public – US- Canada regional watershed council	Meetings, calls, emails, presentations	Calls to schedule meetings, emails
<b>Assiniboine River Basin Initiative – Wanda McFadyen, Executive Director</b>	Public – international water resources planning	Meeting, calls, emails, presentations	Calls and emails to set up meeting
<b>North Dakota Governor Jack Dalrymple</b>	Public – elected official	Meeting	Calls and emails to set up meeting
<b>North Dakota Senator Heidi Heitkamp</b>	Public – elected official	Meeting	Calls and emails to set up meeting
<b>North Dakota Senator Jack Hoeven</b>	Public – elected official	Meeting	Calls and emails to set up meeting
<b>North Dakota State Water Commission</b>	Public – water resources	Meetings, emails	Calls and emails to set up meeting
<b>U.S. Army Corps of Engineers</b>	Public – federal	Meetings, emails	Calls and emails to set up meeting
<b>U.S. Fish and Wildlife Service</b>	Public – federal	Meetings, emails	Calls and emails to set up meeting
<b>Souris Basin Regional Council</b>	Public – regional planning agency	Meetings	Calls to schedule meetings, emails
<b>Mouse River Coalition</b>	Public – farms, ranches along Souris River	Meetings, emails, calls, presentations	Emails, calls
<b>North Dakota state agencies</b>	Public – ND Housing and Finance Agency, Health and Environmental Agency, SHPO	Calls, emails, meetings	Email meeting invitations, email meeting reminders
<b>Ward County</b>	Public –county planning, emergency mgmt, engineering	Emails, meetings	Calls to schedule meetings, emails
<b>Renville County</b>	Public	Emails, meetings	Calls and emails to set up meeting
<b>McHenry County</b>	Public	Emails, meetings	Calls and emails to set up meeting
<b>Bottineau County</b>	Public	Emails, meetings	Calls and emails to set up meeting
<b>Community and neighborhood residents, flood impact area</b>	Public	Meetings	City web site and Facebook page, emails, press releases, email meeting agendas
<b>Business and community leaders</b>	Private and nonprofit	Meetings	Calls and emails to schedule meetings; email reminders and materials

<b>City of Minot</b>	Public: City Manager, Finance Director, Chief Resilience Officer, Planning Dept., Engineering Dept., Fire Chief, Police Dept., GIS, Public Works Dept.	Meetings	Calls, emails
<b>PUBLIC MEETINGS:</b>			
<b>Vulnerable Populations Committee</b> <i>Representatives from:</i> <i>Ward County Social Services</i> <i>North Central Human Services</i> <i>Minot Area Community Action Partnership</i> <i>MSU ND Center for Persons with Disabilities</i> <i>Independence, Inc.</i> <i>Minot Veterans Center</i> <i>Minot Commission on Aging</i> <i>Minot Area Homeless Coalition</i> <i>Men's Winter Refuge</i> <i>2<sup>nd</sup> Story</i> <i>Minot Housing Authority</i> <i>YWCA Center of Hope Shelter*</i> <i>Rehab Services*</i> <i>Bethany Lutheran Church*</i> <i>*added in Phase 2</i>	Public – low income, homeless, veterans, elderly; disabled or mentally challenged citizens and their families	Phase 2 Vulnerable Populations Committee meeting 1: July 14, 2015 (9 in attendance)	<b>Notification:</b> initial email and follow-up email reminder and phone calls <b>Materials:</b> Agenda, project concepts
<b>Vulnerable Populations Committee</b>	See above	Phase 2 Vulnerable Populations Committee meeting 2: Aug. 13, 2015 (9 in attendance)	<b>Notification:</b> initial email and follow-up email reminder <b>Materials:</b> List of NDRC projects
<b>Vulnerable Populations Committee</b>	See above	Phase 2 Vulnerable Populations Committee meeting 3: Aug. 27, 2015 (12 in attendance)	<b>Notification:</b> initial email and follow-up email reminder <b>Materials:</b> Revised projects, homeless shelter project planning
<b>Vulnerable Populations Committee</b>	See above	Phase 2 Vulnerable Populations Committee meeting 4: Oct. 8, 2015 (13 in attendance)	<b>Notification:</b> initial email and follow-up email reminder <b>Materials:</b> Information on final NDRC projects

<p><b>Community Advisory Committee</b>  <i>Members are listed at the end of the Public Meetings section of this table.</i></p>	<p>Representatives from local government, state and local nonprofit agencies, business and professional organizations, private businesses, and other community leaders</p>	<p>Phase 2 Community Advisory Committee meeting 1: July 13, 2015 (49 in attendance)</p>	<p><b>Notification:</b> initial email and follow-up email reminder  <b>Materials:</b> Presentation on reviewing NDRC Phase 1 proposal: vision for Minot, threats and hazards; what makes a great neighborhood; Phase 2 application overview and project requirements; importance of leverage. In small groups: discuss projects that meet NDRC requirements, leverage opportunities</p>
<p><b>Community Advisory Committee</b></p>	<p>See above; also 10 students from the Burdick Job Corps attended this meeting as guests to provide views from young adults who are new to Minot</p>	<p>Phase 2 Community Advisory Committee meeting 2: Aug. 12, 2015 (51 in attendance)</p>	<p><b>Notification:</b> initial email and follow-up email reminder  <b>Materials:</b> Presentation on reviewing quality neighborhoods criteria; discussion of filters for evaluate proposed NDRC projects; small group review of proposed project list</p>
<p><b>Community Advisory Committee</b></p>	<p>See above</p>	<p>Phase 2 Community Advisory Committee meeting 3: Oct. 8, 2015 (41 in attendance)</p>	<p><b>Notification:</b> initial email and follow-up email reminder  <b>Materials:</b> prioritization handout, presentation: final NDRC projects</p>
<p><b>Minot State University students</b></p>	<p>n/a</p>	<p>Resilient Neighborhood design charrette at MSU on Sept. 22, 2015 (31 in attendance)</p>	<p><b>Notification:</b> MSU Office of the President invited participants from student government, student residence groups, and other student leaders   <b>Materials:</b> Presentation on resilient and affordable neighborhoods and homes; individual and small group</p>

			worksheets for design exercises <a href="#">See materials here</a> (password: minotndrc)
<b>Community citizens</b>	Seniors, young singles and families, Minot Air Force Base personnel, and essential workforce representatives	Resilient Neighborhood design charrette at St. Mark's Lutheran Church on Sept. 23, 2015 (25 in attendance)	<b>Notification:</b> Participants were invited by Souris Valley United Way, Minot Young Professionals, Minot Air Force Base, and the City of Minot (firefighters, police, and teachers) <b>Materials:</b> Presentation on resilient and affordable neighborhoods and housing; individual and small group worksheets for design exercises <a href="#">See materials here</a> (password: minotndrc)
<b>Community citizens</b>	Residents of Minot, Ward County, and the Souris River Basin, including residents of flood-impacted areas	Phase 2 Public meeting 1 on Aug. 13, 2015 at Minot Municipal Auditorium (27 in attendance)	<b>Notification:</b> press release from City sent to area radio, newspaper, and television media; notice on City Facebook page and website. <b>Materials:</b> review of Phase 2 application <a href="#">Phase 2 projects presentation</a> (password: minotndrc)
<b>Community citizens</b>	Residents of Minot, Ward County, and the Souris River Basin, including residents of flood-impacted areas	Phase 2 Public meeting 2 on Oct. 1, 2015 at Parker Senior Center in downtown Minot (13 in attendance)	<b>Notification:</b> email invitation to members of Vulnerable Populations and Community Advisory committees; public notice in Minot Daily News; notice on City Facebook page and website. <b>Materials:</b> review of Phase 2

			application; handout on Minot's NDRC effort <a href="#">Phase 2 projects presentation</a> (password: minotndrc)
<b>Community citizens</b>	Residents of Minot, Ward County, and the Souris River Basin, including residents of flood-impacted areas	Phase 2 Public meeting 3 on Oct. 6, 2015 at Minot Municipal Auditorium (90 in attendance)	<b>Notification:</b> email invitation to members of Vulnerable Populations and Community Advisory committees; public notice in Minot Daily News; articles in Minot Daily News; three electronic billboards around the city; mention on local radio show; notice on City Facebook page and website; local TV live feed from auditorium just prior to meeting. <b>Materials:</b> review of Phase 2 application; handout on Minot's NDRC effort; <a href="#">Phase 2 projects presentation</a> (password: minotndrc)
<b>Community citizens</b>	Residents of Minot, Ward County, and the Souris River Basin, including residents of flood-impacted areas	Phase 2 Public meeting 4 on Oct. 1, 2015 at Perkett Elementary School (51 in attendance)	<b>Notification:</b> email invitation to Vulnerable Populations and Community Advisory committees; public notice and articles in Minot Daily News; 3 electronic billboards around the city; mention on local radio show; notice on City Facebook page and website. <b>Materials:</b> Presentation on moving from Phase 1 to Phase 2; review of Phase 2 application
<b>Minot area business leaders</b>	Business leaders, economic development professionals	Luncheon sponsored by Minot Area Development Corporation and Minot Area Chamber of	<b>Notification:</b> invitations sent to business leaders by MADC and Minot Chamber of Commerce

		Commerce on Aug. 13, 2015 (31 in attendance)	<b>Materials:</b> Brochure on the NDRC competition and importance of leverage
<b>Minot area community and business leaders</b>	Community agencies, education, Minot Air Force Base, business leaders, and community foundations	Community LEADership Summit, held at ND State Fairgrounds in Minot on at 8 am, Aug. 13, 2015 (24 in attendance)	<b>Notification:</b> invitations sent to community and business leaders <b>Materials:</b> Presentation on HUD NDRC competition overview; stakeholder presentations; breakout groups discussion of priorities
<b>Downtown Minot Business Association</b>	Small businesses	Downtown Minot Business Association meeting on Aug. 17, 2015 (28 in attendance)	<b>Notification:</b> invitations sent to downtown businesses
<b>Rotary Club of Minot</b>	Community organization	Rotary Club of Minot meeting on Aug. 31, 2015 (45 in attendance)	<b>Notification:</b> regular meeting of the Rotary Club of Minot
<b>Sunrise Rotary Club</b>	Community organization	Sunrise Rotary Club meeting on Sept. 3, 2015 (21 in attendance)	<b>Notification:</b> regular meeting of the Sunrise Rotary Club
<b>Minot Retired Railroaders</b>	Community organization	Retired Railroaders meeting on Sept. 1, 2015 at the Moose Lodge (33 in attendance)	<b>Notification:</b> regular meeting of the Retired Railroaders
<b>Minot Republican Women</b>	Community organization	Minot Republican Women's meeting on Sept. 11, 2015 (30 in attendance)	<b>Notification:</b> regular meeting of Minot Republican Women
<b>Minot Young Professionals</b>	Community business organization	Minot Young Professionals meeting on Oct. 14, 2015 (20 in attendance)  Meeting on Oct. 21, 2015 (30 in attendance)	<b>Notification:</b> regular meeting of the Minot Young Professionals

NDRC COMMUNITY ADVISORY COMMITTEE MEMBERS		
Agency or organization	Name	Position
Souris River Joint Board	David Ashley	Chairman
Minot Housing Authority	Tom Alexander	Executive Director
Souris Basin Planning Council	Lyndsay Ulrickson	Executive Director
Minot Chamber of Commerce	John MacMartin	President
Burlington Economic Development Corporation	Terry Zeltinger	Director
North Dakota Housing Finance Agency	Jolene Kline	Executive Director
North Dakota Dept. of Commerce, Community Services	Bonnie Malo	Division of Community Services Director
North Dakota Dept. of Commerce, Community Services	Sherry Leno	CDBG Program Manager
State Historical Society of North Dakota	Fern Swenson	Division Director
State Historical Society of North Dakota	Lisa Steckler	Historic Preservation Planner
First Western Bank & Trust	Jason Zimmerman	Business Banking Officer
Beyond Shelter, Inc.	Dan Madler	Chief Executive Officer
City of Minot	Kevin Ternes	Property Assessor
Minot Air Force Base	Tim Knickerbocker	Assistance Chief, Capital Asset Element
Minot State University	Dr. Steven W. Shirley	President
Minot State University	Kevin Harmon	Assistant Vice Pres. for Enrollment Management
First District Health Unit	Jim Heckman	Dir. of Environmental Health
North Dakota Housing Finance Agency	Max Wetz	Dir. of Public Affairs
Private citizen	Shane Goettle	Lobbyist
Trinity Health	Randy Schwan	VP Marketing
Trinity Health	Tom Warsocki	VP Physician Services
St. Joseph's Community Health Foundation	Shelly Weppler	President
Coldwell Banker 1st Minot Realty	Todd Fettig	Minot Association of Realtors
Coldwell Banker 1st Minot Realty	Bruce Walker	Minot Association of Realtors
Real Builders, Inc.	Joel Feist	President
Century 21 Action Realtors	Dorothy Martwick	Realtor
Hight Construction	Jay Hight	President
Liechty Homes	Tom Erie	President
Minot Association of Builders	Mitch Kraft	Past President
Minot Association of Builders	Eric Wanner	President
USDA Rural Development	Alisa Dahl	Area Director

Theodore Roosevelt Expressway Association	Cal Klewin	Executive Director
Minot Area Community Foundation	Megan Laudenschlager	Finance and Program Director
Minot Area Community Foundation	Ken Kitzman	President
Senator Hoeven's office	Sally Johnson	Minot office
CDJ Opportunities	Chris Lindbo	CEO
Minot State University, North Dakota Center for Persons with Disabilities	Brent Askvig, Ph.D.	Executive Director
Independence, Inc.	Scott Burlingame	Executive Director
Minot Area Community Land Trust	Carrie Welnel	Executive Director
Ward County Historical Society	Bruce Brooks	President
Minot Downtown Business and Professional Association	Clyde Thorne	President
Minot Veterans Center	Brian Wallin	Acting Team Leader
Ward County Social Services Board	Melissa Bliss	Director
North Central Human Services Center	Laurie Gotvaslee	Region II Director
Lutheran Social Services North Dakota	Jessica Thomasson	VP, Social Enterprise
Minot Commission on Aging	Roger Reich	Executive Director
Minot Area Homeless Coalition	Louis (Mac) McLeod	Executive Director
Legal Services of North Dakota	Breezy Schmidt	Staff Attorney
Community Works North Dakota	Brent Ekstrom	Executive Director
City of Minot Fire Department	C. J. Craven	Fire Chief
Ward County Emergency Services	Amanda Schooling	Emergency Management Coordinator
City of Minot	Donna Bye	Chief Resiliency Officer
Ward County	Dana Larsen	County Engineer
Ward County	Amber Turnquest	Planning/Zoning Administrator
Minot Convention and Visitors Bureau	Phyllis Burchard	Executive Director
Minot Public Schools	Dr. Mark Vollmer	Superintendent
Private citizen	Connie Philipenko	Community Volunteer, flood area resident
Ward County	Colleen Houmann	Human Resources Coordinator
SRT Communications	Nancy J. Davis	Human Resources
Verendrye Electric	Tom Rafferty	Minot Community Relations/Communications Manager
Xcel Energy	Kathleen Aas	Community Relations Manager
Mainstream Boutique	Pam Karpenko	Owner

North Dakota State University North Central Research Extension Center	Jay Fisher	Director
Ward County Schools	Jodi Johnson	Superintendent
Williston Economic Development	Shawn Wenko	Executive
City of Williston	Donald Kress	Principal Planner
Minot Park District	Ron Merritt	Executive Director
Heartland Developers	Mike Duffy	Principal
Heartland Developers	Nathan Smith	Principal
Farmers Union Insurance	Shaun Sipma	Principal
Private citizen	Lianne Zeltinger	Community Volunteer, flood area resident
Minot Housing Authority	Mark Austin	Occupancy Director
Private citizen	Bob Saunders	Community Volunteer, flood area resident
Lutheran Social Services North Dakota	Shirley Dykshoorn	
United Way	Pat Smith	Executive Director
Souris River Joint Board	Tom Klein	Board member
Souris River Joint Board	Clif Issendorf	Board member
Souris River Joint Board	Roger Sauer	Board member
North Dakota State Water Commission	Tim Fay	Commissioner
Odney Advertising	Mark Lyman	President
City of Minot	Steve Borjeson	
Ward County	Travis Schmit	Assistant County Engineer
City of Minot	Sybil Tetteh	Planning Department
City of Minot	Lance Meyer	Chief Engineer
City of Minot	Chuck Barney	Mayor
Minot Area Community Arts	Terry Aldrich	Chairman
Souris River Joint Board	Ryan Ackerman	Board member
City of Minot Fire Department	Jason Olson	
Minot Recreation Department	Scott Collins	
Ward County	Alan Walter	Board of Commissioners

# Certification of Consistency with the Consolidated Plan

U.S. Department of Housing  
and Urban Development

I certify that the proposed activities/projects in the application are consistent with the jurisdiction's current, approved Consolidated Plan. (Type or clearly print the following information.)

Applicant Name: City of Minot, North Dakota

Project Name: Minot National Disaster Resilience Competition Phase 2

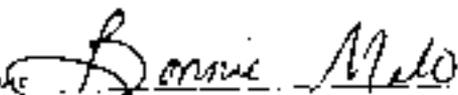
Location of the Project: Minot, North Dakota

Name of the Federal Program to which the applicant is applying: HUD National Disaster Resilience Competition Grant Program

Name of Certifying Jurisdiction: State of North Dakota Department of Commerce

Certifying Official of the Jurisdiction Name: Bonnie Malo

Title: Director of Division of Community Services

Signature: 

Date: 10/14/2015

# City of Minot

Engineering Department

September 24, 2015

City of Minot  
1025 31st Street SE  
Minot, ND 58702

Subject: City of Minot 2035 Transportation Plan

*Dear NDRC Panel:*

Minot has advanced to the phase 2 application for the National Disaster Resiliency Competition as a result of the 2011 Souris River flooding. Minot has updated its Transportation Plan approved in January 2015 with the support of FHWA and North Dakota Department of Transportation (DOT) each serving on the Project Management Team. As a result, both the State and Federal level DOT agency representatives insured the Plan was consistent with state and federal requirements.

In support of the National Disaster Resiliency Competition phase 2 application, this letter confirms that the approved Minot 2035 Transportation Plan adheres to State and Federal DOT requirements.

Sincerely,



Lance Meyer, PE  
Minot City Engineer  
Minot, North Dakota

★ The Magic City ★

**WARD COUNTY EMERGENCY MANAGEMENT AGENCY**

315 3<sup>RD</sup> STREET SE  
PO BOX 5005  
MINOT ND 58702-5005

**TO:** NDRC Panel  
**FROM:** Director of Ward County Emergency Management  
**DATE:** September 25, 2015  
**SUBJECT:** FEMA Approved County Hazard Mitigation Plan

Ward County has been an active participant in the development of the City of Minot's phase 2 application for the National Disaster Resiliency Competition. This MEMO confirms that the Ward County Hazard Mitigation Plan was approved by FEMA in September 2013 and remains in compliance.

If you have any questions please feel free to contact our office at (701) 857-6560 or email me at [Amanda.schooling@wardnd.com](mailto:Amanda.schooling@wardnd.com).

Sincerely,



Amanda Schooling, Director



March 9, 2015

Cindy Hemphill  
City of Minot  
515 2nd Ave. SW  
PO Box 5006  
Minot, ND 58702-5006

"Letter of Clearance" In Conformance with the North Dakota Federal Program Review System -  
State Application Identifier No.: ND150309-0054

Dear Ms. Hemphill:

SUBJECT: City of Minot National Disaster Resiliency Competition Application FR-5880-N-  
29

The above referenced application has been reviewed through the North Dakota Federal Program Review Process. As a result of the review, clearance is given to the project only with respect to this consultation process.

If the proposed project changes in duration, scope, description, budget, location or area of impact, from the project description submitted for review, then it is necessary to submit a copy of the completed application to this office for further review.

We also request the opportunity for complete review of applications for renewal or continuation grants within one year after the date of this letter.

Please use the above SAJ number for reference to the above project with this office. Your continued cooperation in the review process is much appreciated.

Sincerely,

Rikki Roehrich  
Program Specialist  
Division of Community Services

cmh

# City of Minot



October 12, 2015

City of Minot  
515 2nd Avenue SW  
Minot, ND 58702

Re: Intent to Participate

This letter is to confirm the City of Minot's commitment of at least \$337 million over the next 30 years to fund the local cost share for the Mouse River Enhanced Flood Protection Project for the entire Souris River basin in the United States. These funds will come from a special 1/2 cent sales tax approved by the Minot City Council. In addition, the City of Minot has committed \$152,933 to fund the development of the NDRC Phase I grant application.

The design for Phases 1-3 for the Mouse River Flood Enhancement Protection Plan is being completed and construction on these phases will begin by February 2017, within one year of the Phase 2 grant award announcement. The remaining phases of this flood protection plan are covered under a Joint Powers Agreement finalized in January 2014 and approved by the Minot City Council. The City will begin design work on phase 4 of this project by 2019 with construction to follow completion of the detailed construction plans. The remaining design and construction phases will be completed in accordance with the plan.

The City of Minot is firmly committed to this authorization of funding for flood control and resilient eligible activities.

Sincerely,



Mark Jantzer  
Council President

NOTICE IS HEREBY GIVEN that the City of Minot will be a PUBLIC REVIEW and COMMENT PERIOD for the purpose of soliciting citizens' views and comment on the submission of a PHASE 2 application for the National Disaster Resilience Competition (NDRC) to the U.S. Department of Housing and Urban Development (HUD) and will allocate up to \$1.6 million toward this competition nationwide. The City of Minot was identified as an eligible community in the Notice of Funding Availability, and was invited to participate in Phase 2. Public activities for this competition must be located within the most impacted and distressed areas Minot has held meetings throughout the city and the region including four (4) Community Advisory Committee Meetings and four (4) Neighborhood Populations Committee Meetings. In Phase 2 Minot has held one (1) public meeting and will hold three (3) public hearings to receive input from the public on their Phase 2 application. The first Phase 2 Public Hearings will be held as follows:

October 1 from 12:30-1:45 p.m. in the Parish Senior Center  
October 6 from 6:00-8:00 p.m. at the Minot Auditorium in 201  
October 8 from 6:00-8:00 p.m. at Park Elementary School

Projects and activities proposed in this application include roads, flood risk and improve water management; basic affordable housing; neighborhood and local economic resilience and development. Citizens have given their input on these issues and necessary projects in their public meetings. All projects funded by the grant must meet at least one Community Development Block Grant (CDBG) National Objective Criteria and have an additional opportunity to provide input and comment during the public review and comment period.

NOTICE IS HEREBY GIVEN that a draft of the NDRC Phase 2 application will be available on October 5, 2015 on the City of Minot web site at <http://www.minotndrc.org>. On October 6, 2015 at the City of Minot Administration Office, 515 2nd Ave. SW, Minot ND during normal business hours, and at the Minot Public Library during small business hours.

THE PUBLIC REVIEW PERIOD is October 5 through October 2, 2015. The City of Minot will receive all comments on its document no later than 3:00 p.m. on October 20, 2015. Minot comments can be submitted via electronic mail through the City of Minot web site at <http://www.minotndrc.org>. The date may also send their com-

ments via U.S. Mail to the following address: Bob Lodge, City of Minot Public Information Office, P.O. Box 5006, Minot, North Dakota. A limited number of copies of this document will also be available to citizens or individuals unable to access one of the above sources by contacting the City of Minot Executive Secretary at 701-857-4750.

If you plan to submit a comment and request accommodation because of a disability or mobility impairment, or have need for an interpreter, please contact the City of Minot Executive Secretary at 701-857-4750 to arrange for these accommodations. Two days prior to the end of the public comment period, the City of Minot promotes fair housing and makes all programs available regardless of age, race, color, religion, sex, national origin, or handicap. Questions about access to the document should be directed to Bob Lodge, Director of Public Information Office, City of Minot, 701-857-4727. Equal Housing Opportunity.  
[Revised: 25 2015]

**AFFIDAVIT OF PUBLICATION  
STATE OF NORTH DAKOTA**

SS.

County of Ward

AMANDA STARBUCK-MATTSON of said

County and State, being first duly sworn, on oath says: That the **MINOT DAILY NEWS** is a daily newspaper of general circulation, printed and published in the City of Minot, in said County and State. That the **MINOT DAILY NEWS** now is and during all times in the foregoing affidavit mentioned has been a newspaper qualified to do legal printing, in accordance with the Statutes of the State of North Dakota, and that I am clerk of the **MINOT DAILY NEWS** and during all such time covering the publication of this notice have occupied such position on said newspaper, and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed

**OCTOBER 1-6-8, 2015 NDRC PHASE 2  
APPLICATION HEARINGS**

is a printed copy of which is hereunto attached was printed and published in said newspaper

ONE times to-wit:

SEPTEMBER 25, 2015

Amanda Starbuck-Mattson Clerk

Subscribed and sworn to before me this

25<sup>th</sup> day of September 2015

Shannon Sirota

Notary Public, Ward Co., N.D.

D20682

**PUBLICATION FEES**

No. Lines 127

Times ONE \$ 92.71

127 ST LINES x .73 = \$92.71

SHANNON SIROTA  
Notary Public  
State of North Dakota  
My Commission Expires First Quarter 2016

## Minot NDRC Phase 2 Application: Comments and Responses

Response	Comment	Commenter	Organization
<b>Topic 1:</b>			
<p>The City of Minot appreciates the outstanding participation of our community in this process. The projects and activities contained in our NDRC application reflect your ideas and dreams for our city's future. Resilience must be part of our future efforts, in everything that we do.</p> <p>It is important for the community to remain engaged in this process. HUD will announce the grant awards in late February, and then the hard work begins!</p>		Wes Black President	Bremer Bank PO Box 1548 20 - 1st St. SW Minot, ND 58701
	There are no illusions in the Magic City –we're the real thing.	Kayla Schmidt	Private Citizen, grew up in Minot
	This is what makes Minot's challenges unique and Minot's application unique.	Marv Semrau	Minot State University
	appreciate the community outreach the City of Minot has achieved for the NDRC awareness and application process; City officials have demonstrated enormous efforts to involve the Minot community during this process.	Mia Camarata Marketing Director	Minot Area Development Corporation
	This thoughtful and inclusive plan will be a great thing for Minot and our surrounding communities. The impact will be felt for many years to come.	Mark Hildahl- 2401 11th Ave NW Phone: 701-852-1032	Resident of Minot
	I have enjoyed playing a part in	Alex Richards	Spherion Staffing,

	<p>this growing city and the community for the past 1.5 years and am proud to see it growing the way it has. I am in full support of the NDRC application submitted by the City of Minot!</p>	<p>Branch Manager 629 20th Ave SE Minot, ND 58701 T: (701)-839-7660 F: (701)-839-7688</p>	<p>Minot, ND</p>
	<p>I just watched the video on our NDRC application and was so impressed! Thank you for taking the time to keep the community informed and included throughout this process.</p>	<p>Jill Wald 700 North Broadway Minot, ND 58703 (p) 701.852.3648 ext. 16 (f) 701.852.9107 <a href="http://www.immapartments.com">www.immapartments.com</a></p>	<p>Investors Management &amp; Marketing</p>
	<p>Attached are comments on our letterhead for the resiliency grant.</p>	<p><b>Tom Rafferty</b> <b>Community Relations Mgr.</b> <b>1-800-472-2141</b></p>	<p><b>Verendrye Electric Cooperative</b></p>
	<p>And – I love the different ideas to help move some of the LMI housing out of the valley into new neighborhoods. This has a great potential to truly help those most impacted by the flood.</p>	<p><b>Mark Lyman</b> Marketing Consultant 21 South Main Street, # 101 Minot, ND 58701 Office: 701.857.7205 Cell: 701.630.1443 <a href="http://www.odney.com">www.odney.com</a></p>	<p>Odney Communications, Minot, ND</p>
	<p>We are so blessed to be in this Competition. I look Forward to participating in some small way of providing our engineering services To undergird the developments planned for the recovery.</p>	<p>John Mercer, Jr., PE SECB 111 11th Ave SW Minot, ND 58701 701-839-1056 fon 701-838-8986 fax</p>	<p>Mercer Engineering PC</p>
	<p>I think it is wonderful how the City of Minot’s NDRC application covers many aspects of the community, from flood recovery to housing to quality of life. All of</p>	<p><b>Jaime Hauge, Administrative Assistant</b> 1020 20th Ave SW Minot, ND 58701 (701) 852-1075</p>	<p>Minot Area Development Corporation</p>

	these are crucial for a successful city.	<a href="mailto:jhauge@minotusa.com">jhauge@minotusa.com</a> <a href="http://www.minotusa.com">www.minotusa.com</a>	
	I shared with Lee Staab last week that I was truly impressed with the vision and power behind Minot's proposal. It will provide the next generation of Minot residents, and the greater Minot community, a tremendous place to live, learn and work. The theme of Provide. Protect. Power really sums up who our community is and will be.	Teresa Loftesnes, MSM Director of Marketing 500 University Ave W Minot ND 58707 701.858.3062 800.777.0750	Minot State University
	What a fantastic effort on behalf of Minot to assist with a wide range of the community's current needs.	<b>Missy Feist-Erickson</b> <i>Asst. Vice President</i> <i>NMLS # 786947</i> PO Box 1907 Minot, ND 58702 Phone: (701) 852-0328	Peoples State Bank of Velva
	I support Minot's application for the resiliency grant.	Bethany Quarne <a href="mailto:bethany.d.quarne@gmail.com">bethany.d.quarne@gmail.com</a> (651) 230-3476	Citizen
	The idea of combining the needed flood protection with spaces that are also useable to enhance quality of life in Minot is an exceptional idea. As a lifelong residence of Minot and someone who has a vested interest in our community, I am hopeful that these plans can be implemented as soon as possible.	DeLynn Weishaar <b>Real Estate Broker</b> <b>701-833-7477</b>	Brokers 12 LLC, Minot ND
	What a great effort for Minot and for our cities continued	Jonh Knecht Regional President	American Bank Center Minot, ND

	efforts of “lets move forward!” Minot’s “Magic” is truly the resiliency of it’s citizens.	2201 15th St SW Minot, ND 58701 701-837-5000	
	It appears we are working in the right direction.	<i>Lynn Jehlicka, Shareholder Services Coordinator</i> 1400-31st Avenue SW, Suite 60 Minot, ND 58702-1988	<b>Investors Real Estate Trust</b>
	I am writing to support the application from Minot in the NDRC. Having been flooded myself, I believe the components of the plan will better serve our community in the future.	L. John MacMartin, CCE President (o) 701-857-8203 (c)701-833-7603	Minot Area Chamber of Commerce
	Minot is very fortunate to be part of this competition. I believe city leaders have produced a great application as it provides new projects for Minot’s quality of life.	<i>Stephanie Hoffart, EDFP</i> President/CEO 1020 20th Ave SW Minot, ND 58701 Phone: (701) 852-1075 Fax: (701) 857-8234	Minot Area Development Corporation
	I am a female business owner of 31 years in the bridal industry. The flood directly hit me and half of my staff. We moved out of a 10,000 square foot building and ran our business out of a garage, while our staff was misplaced. The show or AKA "the weddings" must go on. I appreciate all your hard work on this project and am very proud of you and your team for all their endless hours and hard work. This community can really use this funding and I hope we	Debbie Harris Fiancee 6 South Main Minot, ND 58701	Downtown business owner, Fiancee

	are all blessed with winning!		
	<p>Lee came to our community at the right time. The experience he brought to the table, along with his ability to bring people and organizations together is a good fit. The flood followed by the impact that the Bakken Formation created was a perfect storm scenario. Both situations caused our community to dig deep to see what we were made of, exposing our strengths and weaknesses. Regardless of how you view these two phenomenons, we have been gifted with an opportunity to not only bring Minot back to where it was, but to a level we would have never achieved if they hadn't happened. That is not to say we were glad it flooded, but we are saying we will make the best of what has been given, and we believe we have the leadership in our community to see that it happens.</p>	<p>Roger Mazurek Executive Director 3515 16th Street Southwest Minot, ND 58701 (P) Work: 701-852-0141</p>	<p>Minot Family YMCA</p>
	<p>I just wanted to let you know I attended the public information meeting on October 6 at the Minot Municipal Auditorium. I was impressed by Lee Staub's presentation and I left the meeting more enthusiastic about</p>	<p>Mark Anderson President/CEO • P.O. Box 4448 • Minot, ND 58702 • (701) 852-9444</p>	<p>Mainstream Investors, LLC</p>

	<p>Minot's future than ever. The plan the City has developed is spot-on and the funding program makes a lot of sense. Count me in as an enthusiastic supporter of the City's renewal and revitalization plan</p>		
	<p>Minot has been through a lot the last couple years since the flood and I am so impressed to see where the community is today. I am so excited to see what can be done with this moving forward, Minot is at such an important time in its history and this will re shape the identity of this great city for many years to come. I am proud to live in one of the greatest cities in America and thank you for the opportunity to participate in this competition.</p>	<p>Kent Kirkhammer US Operations Manager 701.500.1659</p>	<p>NewKota Services &amp; Rentals</p>
	<p>Thank you Lee Staab and City of Minot for pursuing funding in the National Disaster Resilience Competition. I fully support the application process, hard work, and efforts everyone is doing get funding to help in the recovery efforts. Housing, transit, public safety, infrastructure, and quality of life is still a struggle. We are the mighty Minot and I'm proud to be part of a community that continues to</p>	<p>Stephanie Schoenrock</p>	<p>Citizen</p>

	work hard to get Minot back.		
	I have reviewed the updated plan and have no suggestions. I thank all who have put effort into this project.	Mike Uran 528 27th St. NW Minot, ND 58703	Citizen
	I have reviewed the Phase II draft submission however, it is imperative that the vulnerable population which was heavily impacted during the flood be given the utmost consideration. Affordable housing is a must but it should be appropriate and meet the needs of all.	Louis (Mac) McLeod MAHC Executive Director 105 1st St. SE PO Box 1062 Minot, ND 58702 Phone: 701-852-6300	Minot Area Homeless Coalition Member Vulnerable Population Committee
	Nice effort on putting together the application for the National Disaster Resilience Competition! Reducing flood risk and improving water management is imperative for this city and region moving forward. Along with building affordable housing these two issues are being addressed in the application. Economic revitalization is also necessary so we can sustain and continue to diversify our economy. Continuing to complete the critical infrastructure needs for our community is also vitally important that were damaged from the flood. Funds from this competition will go a long way in	Blaine DesLauriers President – Vice Chairman Direct: (701) 837-2211 bdeslauriers@firstintlbank.com	First International Bank and Trust, Minot, ND

	helping this community recover from the disaster of 2011.		
	This would be a great opportunity for Minot! Best of luck!	Christy Wald Loan Servicing Associate 701-420-6752	Town and Country Credit Union
	I am so proud of our community leaders who have invested time and energy into applying for this grant. Any funding from this grant would have a major impact on our community to make it a better place to live for future generations. Everyone in the community suffered from the devastation of the flood but I truly believe the community became stronger from the experience and is even more determined to make Minot a great place to live.	Lindsay Wagner Business Loan Assistant 615 S Broadway Minot, ND 58701 Phone 701-420-6724	Town & Country Credit Union
	Minot is a tremendously resilient community already, and deserves to be granted the resources to take the next necessary steps to put itself in a position to triumph over future flood events, and to make the river and asset rather than a liability. The planned activities are well thought out and very achievable. They address the needs of the vulnerable population segments in our community. They make Minot	Mark J. Jantzer Ward 6 Alderman Minot	Elected Official Minot, ND

	<p>better by improving our livability and aesthetics. There is a great opportunity to set Minot on a positive course for the next century. All that is needed are the financial resources. On a personal note, none of us who were on the City Council in 2011 could have imagined the tragedy we would face. It was a terrible thing to live through, but I am proud of our citizens and our leaders for the toughness, tenacity and ability to keep their spirits up that we witnessed. These folks deserve a gift that will allow our community to continue the renewal.</p>		
	<p>I received the e-mail from Lisa Moldenhauer and went to the City of Minot site. Believe it or not, I read all of Phase 1 &amp; 2. What comes through to me is that the people of Minot are a proud people and although being hit by a flood disaster and an oil boom that nearly sent us to our knees, it didn't. We got busy and started to repair and fix what was broken. Now the only thing holding us back is the funds and resources that we need to complete the job. The application is nicely done</p>	<p>Jacqueline L. Case Human Resource Mgr PO Box 500 Minot ND 58702</p>	<p>Corridor Investors, LLC, Minot</p>

	and I know we are good enough to receive the prize, we just have to convince those that are judging the competition that we deserve it.		
	I have reviewed the videos as well as the other information provided on the website. I am glad I had the opportunity to attend some of the meetings and provide input. After reviewing the latest version, I'm very proud of the representation we have from the City of Minot and the document that is being submitted. Thanks for allowing me to be a part of the process.	Phyllis M. Burckhard Executive Director (800) 264-2626 (701) 857-8207	Visit Minot
	I am glad the city is taking part in efforts to be more resilient after the 2011 flood. Getting these grant funds would do a lot to make our city more strong and vibrant. There are lots of good things in this plan. I especially like how the plan calls for creating more greenspace along the river and how it proposes to give a boost to the downtown area. The city needs more parks, and the green space kills two birds	Tom Rafferty 2408 Brookside Drive Minot, ND 58701	Citizen

	<p>with one stone by creating recreation areas that can also be flooded if needed. Our downtown is becoming a more happening place with new stores and a vibrant nightlife. Once we get some more work finished, downtown will come to life even more.</p>		
	<p>Being born, Raised and Residing in Minot all my life and living thru the many floods. I whole heartedly support the resilience and recovery process our city is taking, which is essential in creating a vibrant and growing Community for many years to come.</p>	<p>Myron Feist P.O. box 479 Minot N.D. 701-852-2181</p>	<p>Minot Sash and Door Inc.</p>
	<p>Just wanted to let you know how impressed I was with the quality and importance of the message you have prepared for Phase 2. I respect and admire our current efforts and think the presentation materials speak for themselves on the importance our small community plays on the world stage. Good luck and go get them!</p>	<p>Paul Siebert, Agent/Owner 1125 N Broadway Minot, North Dakota 58703 Phone: 701.852.1060</p>	<p>State Farm Insurance, Minot, ND</p>
	<p>I hope that Minot is able to obtain the grant needed to restore the area to pre-flood and make the changes needed to</p>	<p>Tammy Hein-Sack   Account Executive Phone: (701) 838-1617 Email: <a href="mailto:Tammy@KKBOLD.com">Tammy@KKBOLD.com</a> 216 South Broadway, Ste 101</p>	<p>KKBOLD Minot, ND</p>

	<p>protect itself from future floods. We relocated from Wisconsin to Minot in 2014 and made Minot home because of the variety of small businesses, close knit community, and lack of crime. We love Minot and the surrounding area.</p>	<p>Minot, ND 58701</p>	
	<p>At age 70 and having lived in Minot for nearly all of those 70 years, has given me a deep love of our city. Minot has weathered many storms and hurdles, and our people are dedicated to our city with great energy. My husband Gary and I have raised our family of eight children in Minot, and believe Minot offers families the best of educational opportunities and our children return to Minot often to speak highly of their growing up in Minot. The 2011 flood demonstrated to our people that we "can do it," that is, we can fix up our flood-damaged city over time and come back better than ever. Minot has made great progress and our people will continue to do what we can to forge on to our goal of our</p>	<p>Glory Kramlich</p>	<p>Citizen</p>

	city being "back" to the "best that we can be."		
	I'd like to add my comments and support for the fantastic work done by the City of Minot in submitting our application to the NDRC. The objectives in the application have been well thought out and when achieved we will be the first rate community that our citizens strive for every day.	Connie Feist	Citizen
	As a young professional I am encouraged to see our community leaders proactively looking towards the future, while identifying how we can be more resilient in our continued growth and recovery. This competition has allowed us to look at our community with a fresh perspective while reimagining what our future may hold. Thank you to our city manager, city staff and everyone who has played a roll in the resiliency application. I know it has been a lot of work and you've done a tremendous job at engaging the community	Shannon Webster SVP Marketing	Town & Country Credit Union
	I just finished watching the video. I appreciate that the entire community perspective	Dr. Lori Willoughby Dept. of Business Information Technology, Professor & Chair	MSU Graduate School, Assistant Dean MSIS Program Director

	was included and that we are speaking about the future and not the past. Job well done.	Old Main 318 500 University Avenue West Minot, ND 58701	
	The NDRC is imperative to the continued growth of our city. We are truly a resilient city. These funds will help us turn a feared river in our city into a positive leisure activity. This will enable us to see our vision of revitalizing downtown. We truly do need NDRC dollars to see this vision through.	Tyler Neether	Citizen
	I've been to countless public input meetings for this project and couldn't be more excited. I think it's a great plan and I look forward to watching our community change for the better once this money is granted. GO MINOT!	McKenna Larson	Citizen
	Thank you to all involved! A lot of hard work, time, input, meetings, discussion, etc...went in to getting to where you are now! This plan is comprehensive, detailed and with more hard work and a monetary boost, this will definitely be a positive for Minot and the surrounding areas! Best of luck to the City of Minot! We are resilient!	Dusty Wald	Citizen
	I am in support of Minot's phase 2 proposal for the resiliency	<i>Ryan G. Quarne 17 First Avenue S.E.</i>	<i>Olson &amp; Burns, P.C.</i>

	grant. In particular, I think the plans relating to the greenway route along the river make a great deal of sense.	<i>P.O. Box 1180 Minot, ND 58702-1180</i>	
	Please support the City of Minot in their application for the Resilience and Recovery Fund. With the devastating flood of 2011 and the oil impact that our City has been going through we have a definite need. Minot has invested many dollars into housing needs after the flood, but it does not run a housing recovery program. Please consider the City of Minot's application for the National Disaster Resilience Competition.	<i>Rena Korslien</i>	<i>Citizen</i>
	Minot needs a lot of work. We need more mobility, understanding, and involvement. We need to fight this disease of apathy, as we cannot afford it. After attending public meetings, listening to Lee Staab's presentation at the auditorium, and reading Phase II of the draft submission, I feel an overwhelming sense of pride for the lofty goals our community leaders have set forward. The projects and initiatives outlined are expectations that I have of a	Carissa Botton Admission Counselor/Recruiter 500 University Ave West Minot, ND 58707 701-858-3351/1-800-777-0750	Minot State University

	community. The draft submitted has a citizen-centered focus for the health, well-being and economic stability for all of Minot.		
	As a community member I support the City of Minot's efforts at flood recovery and it is important to me to maintain a sustainable, diverse economy in Minot.	Jessica L. Merchant 17 1st Ave. SE P.O. Box 1180 Minot, ND 58702-1180	Olson & Burns P.C.
<b>Topic 2:</b>			
Many projects and activities have been considered throughout both phases of this NDRC process. The goal of this funding competition is both recovery and future resilience--increasing our capacity as a community to respond to future hazards and shocks more quickly and think strategically about changes and challenges we will encounter in the future. More and more of our non-oil businesses tell us that training and education are vital to their future competitiveness, which translates to our future economic success. We propose to use the majority of the funding requested on flood risk reduction and affordable housing activities. We can appreciate your perspective and hope you will remain engaged in future public involvement efforts.	The report is encouraging in some ways, discouraging in many others. The inclusion of SCAPE and KLJ projects is encouraging. The rebuilding of the riverfront with improved greenspace and trails connecting E/W Minot along the river should be a focus of this effort for recovery. Too many projects/areas are listed. Though I teach CTE in the Minot Public Schools, I see no reason this funding should be used to build a facility for CTE training. Recovery money should be spent on the restoration and buy-outs of the impacted areas of Minot that existed before 2011.	Cindy McKay	Teacher, Minot

## Attachment E: Maps and Drawings

*City of Minot, North Dakota*

AttachmentE\_MapsDrawings.pdf

Maps and drawings are in our cloud storage ; access them by clicking [here](#) (password: minotndrc)



## Attachment F: Benefit Cost Analysis

*City of Minot, North Dakota*

AttachmentF\_BCA.pdf



# City of Minot – National Disaster Resilience Competition, Phase 2

## Narrative Description for Flood Protection Benefit-Cost Analysis

*Note: Because the BCA spreadsheets and other documents are large, we have stored them in our cloud account for easier viewing. Access them by clicking [here](#) (password: minotndrc)*

### 1. Process for Preparing the Flood Protection Benefit-Cost Analysis

The flood protection benefit-cost analysis (BCA) was prepared by CDM Smith, which has worked with the City of Minot since 2011 as its recovery program consultant. The City of Minot was extensively involved in developing, preparing, and evaluating the benefits and costs contained in this BCA. This involvement consisted of numerous meetings, discussions, conference calls, and field visits with CDM Smith staff. The City's Chief Financial Officer, Cindy Hemphill, also reviewed the BCA materials that were posted for public comment in early October.

### 2. Full Proposal Cost

See page 77 of the application.

### 3. Description of the Current Situation and Problem to Be Solved

See pages 39-41 of the application.

### 4. Description of the Proposed Project

See pages 41-46 of the application.

### 5. Description of Risks without Project Implementation

See pages 39-41 of the application.

### 6. Benefits and Costs

This BCA considered several benefits and costs associated with the flood protection system proposed for the City of Minot. These benefits and costs are listed below according to the five categories required in Attachment H to the NOFA. A brief description of each benefit and cost is given below, unless page numbers indicating where a description can be found elsewhere in the application is provided.

#### A. Lifecycle Costs

##### 1. Development of Flood Wall and Levee System

See page 77 of the application.

##### 2. Operation and Maintenance Costs for Flood Wall and Levee System

Once the flood walls and levees are constructed, costs will be incurred on an annual basis over their service life for operations and maintenance. Examples of the types of maintenance that will need to be conducted include the removal of debris and unwanted growth from levees and areas adjacent to flood walls; filling of animal burrows on levees; painting and greasing of metal gates and other components; repair of concrete damage;

addition of stone to control erosion problems; perform earthwork operations to repair embankments; replacement of metal culverts running through levees; and overhaul of pump stations.<sup>1</sup>

3. Buyouts

See page 77 of the application.

4. Ecological Restoration in Flood Storage Areas

See page 77 of the application.

5. Construction of Greenway/Oak Park Improvements/Eco-Restoration

See page 77 of the application.

## B. Resilience Value

1. Flood-Related Economic Loss Avoided – Implementation of Buyouts

The 2011 Souris River flood devastated the City of Minot, generating severe economic loss and mental anguish for its residents. Investment in the flood wall/levee system and buyout program will protect the safety and livelihoods of the City of Minot's residents from future floods. The best available information at this time indicates that the flood protection system will be constructed in phases over a period of approximately 20 years.<sup>2</sup> Because the buyout program will be completed before a significant portion of the flood protection system has been constructed, a HAZUS analysis was conducted to estimate flood-related economic loss that would be avoided through successful implementation of the buyout program.

2. Flood-Related Economic Loss Avoided - Implementation of Buyouts & First Four Phases of Flood Wall and Levee System

A HAZUS analysis was conducted to estimate flood-related economic loss that would be avoided with the buyout program implemented and the first four phases of the flood wall/levee system in place.

3. Flood-Related Economic Loss Avoided - Implementation of Buyouts and Entire Flood Wall and Levee System

A final HAZUS analysis was conducted to estimate flood-related economic loss that would be avoided with the buyout program implemented and the entire length of the City of Minot's flood wall/levee system in place.

<sup>1</sup> [http://www.nws.usace.army.mil/Portals/27/docs/emergency/LeveeOwnersManual\(final\).pdf](http://www.nws.usace.army.mil/Portals/27/docs/emergency/LeveeOwnersManual(final).pdf)

<sup>2</sup> Ackerman-Estvold Engineering & Management Consulting, Inc.

## C. Environmental Value

### 1. Environmental Benefits Associated with the Greenway

Construction of the 3.1 mile- (10 acre-) greenway will result in numerous environmental benefits that will be realized each year long after construction is complete.<sup>3</sup> These benefits are listed below:

- a. Aesthetic value
- b. Air quality
- c. Biological control
- d. Climate regulation
- e. Erosion control
- f. Flood hazard reduction
- g. Food provisioning
- h. Habitat
- i. Water filtration

### 2. Environmental Benefits Associated with the Buyouts

Similar to construction of the greenway, removing 740 residences from the Souris River floodplain will result in the creation of 785 acres of green open space. Numerous environmental benefits will be realized each year long after the buyout, demolition, and relocation process is complete.<sup>4</sup> The benefits associated with the green open space to be created are as follows:

- a. Aesthetic value
- b. Air quality
- c. Climate regulation
- d. Erosion control
- e. Pollination
- f. Recreation/tourism

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<sup>3</sup> [http://www.fema.gov/media-library-data/20130726-1920-25045-4319/environmental\\_benefits\\_policy\\_june\\_18\\_2013\\_mitigation\\_policy\\_fp\\_108\\_024\\_01.pdf](http://www.fema.gov/media-library-data/20130726-1920-25045-4319/environmental_benefits_policy_june_18_2013_mitigation_policy_fp_108_024_01.pdf)

<sup>4</sup> Ibid.

## g. Storm water retention

**D. Social Value**1. Health Benefits Associated with the Greenway

The waterfront greenway from Roosevelt Park to Oak Park will provide pedestrian and bike trails between neighborhoods north and south of the Souris River and downtown. Eventually plans are to extend these trails to communities outside Minot. Scientific research has shown that parks and recreation services provide physical activity health benefits.<sup>5</sup> It is anticipated that the trails associated with the proposed greenway will provide physical activity health benefits to residents and visitors to Minot.

**E. Economic Revitalization**1. Avoided Increase in Flood Insurance Premiums for Homes in Buyout Areas

Fewer than 10 percent of the homeowners in the flood inundation area in 2011 had flood insurance, because their homes were outside the mapped floodplain at that time. FEMA will be releasing revised floodplain maps in the summer or fall of 2017, which will likely result in substantial increases in flood insurance premiums. The buyout program will remove 740 homes from the floodplain, resulting in the avoidance of the need to buy flood insurance for these homeowners. This is a significant economic benefit to these homeowners and to Minot, since it will result in more disposable income and an increase in local expenditures.

2. Increased Property Values for Residences Adjacent to Buyout Areas

Greenspace has been shown to increase the property values of surrounding homes.<sup>6</sup> It is anticipated that the property values of residences adjacent to the buyout areas will increase, since green open space will be created once the homes in the buyout program are acquired and demolished.

3. Increased Property Values for Residences Adjacent to the Greenway

Greenspace, including greenways, has been shown to increase the property values of surrounding homes.<sup>7 8</sup> It is anticipated that the property values of residences located adjacent to the proposed greenway will increase.

4. Tourism/Community Revenue from the Greenway

Many communities that construct greenways experience significant increases in tourism and community revenue from their investment.<sup>9 10</sup> This revenue typically results from recreation rentals (e.g., bicycles, kayaks, and canoes), recreation services (e.g., shuttle

<sup>5</sup> [http://www.nrpa.org/uploadedFiles/nrpa.org/Publications\\_and\\_Research/Research/Papers/Godbey-Mowen-Research-Paper.pdf](http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/Godbey-Mowen-Research-Paper.pdf)

<sup>6</sup> [http://www.wrlandconservancy.org/documents/conference2014/Economic\\_Benefits\\_of\\_Greenspace.pdf](http://www.wrlandconservancy.org/documents/conference2014/Economic_Benefits_of_Greenspace.pdf)

<sup>7</sup> <http://www.nwabikepedplan.com/uploads/7/8/3/3/7833643/economicbenefits.pdf>

<sup>8</sup> <http://www.greenways.com/benefits-of-greenways>

<sup>9</sup> <http://www.nwabikepedplan.com/uploads/7/8/3/3/7833643/economicbenefits.pdf>

<sup>10</sup> <http://www.greenways.com/benefits-of-greenways>

buses and guided tours), historic preservation, and restaurants and lodging.<sup>11</sup> The greenway proposed for the City of Minot is expected to have a similar effect on tourism and community revenue for the City.

5. Annual Labor Income Generated by Greenway Tourism/Community Revenue

The revenue generated by the greenway will result primarily from expenditures by residents and visitors that take place in the food/beverage, hotel/motel, entertainment, retail, and transportation sectors of the economy. These expenditures will support jobs in the local economy, such as employees at restaurants, hotels, and retail establishments. The annual labor income associated with these jobs will be an important economic benefit for the City of Minot.

## 7. Description of Risks to Ongoing Benefits of the Proposed Project

There are risks to the ongoing benefits in this BCA. These are briefly explained below.

### A. Resilience Value

1. Flood-Related Economic Loss Avoided – Implementation of Buyouts

If the buyout program is not fully implemented, the avoided economic losses estimated in the HAZUS analysis will not be realized.

2. Flood-Related Economic Loss Avoided - Implementation of Buyouts & First Four Phases of Flood Wall and Levee System

If the buyout program and first four phases of the flood wall and levee system are not successfully implemented, the avoided economic losses estimated in the HAZUS analysis will not be realized.

3. Flood-Related Economic Loss Avoided - Implementation of Buyouts and Entire Flood Wall and Levee System

If the buyout program and entire flood wall and levee system are not fully implemented, the avoided economic losses estimated in the HAZUS analysis will not be realized.

### B. Environmental Value

1. Environmental Benefits Associated with the Greenway

None of the environmental benefits associated with the greenway would be realized without its construction. If the greenway is constructed, the level of benefits could be less than anticipated in this BCA due to the effects of climate change or due to retail, residential, industrial, or commercial development being permitted to encroach upon the greenway.

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<sup>11</sup> Ibid.

## 2. Environmental Benefits Associated with the Buyouts

Similar to the environmental benefits associated with the greenway, none of the environmental benefits associated with the buyouts would be realized without the buyout program's implementation. If fewer homes are included in the buyout program, the environmental benefits would be less. Also, the level of benefits could be less than anticipated in this BCA due to the effects of climate change or due to retail, residential, industrial, or commercial development being permitted to encroach upon or be developed within the floodplains that are created after the homes are bought out.

## C. Social Value

### 1. Health Benefits Associated with the Greenway

If the greenway is not constructed, there would be no associated health benefits. If the greenway is constructed, the level of associated health benefits would depend on how many people use it and how often.

## D. Economic Revitalization

### 1. Avoided Increase in Flood Insurance Premiums for Homes in Buyout Areas

If the buyout program is not implemented, the residents who currently live in the proposed buyout areas would have to pay the increased flood insurance premiums that will result from FEMA's release of the revised floodplain maps in 2017. If fewer homes are included in the buyout program, the estimate of avoided increase in flood insurance premiums would be less than shown in this BCA due to some homes being required to pay the higher premiums. There is also uncertainty regarding how high flood insurance premiums could go. These premiums could end up being less than what is estimated in this BCA.

### 6. Increased Property Values for Residences Adjacent to Buyout Areas

If the buyout program is not implemented, there would be no associated increase in property values of adjacent residences. If fewer homes are included in the buyout program, the number of adjacent residences experiencing an increase in property values would be less than shown in this BCA. Also, if the buyout program is fully implemented, the increase in property values could be less than estimated in this BCA.

### 7. Increased Property Values for Residences Adjacent to the Greenway

If the greenway is not constructed, there would be no associated increase in property values of adjacent residences. Also, if the greenway is constructed, the increase in property values could be less than estimated in this BCA.

### 8. Tourism/Community Revenue from the Greenway

The tourism/community revenue estimated in this BCA would not be generated without construction of the greenway. If the greenway is constructed, factors that could impact the level of benefits estimated in this BCA include fewer than anticipated users of the greenway and lower expenditures by these users.

### 9. Annual Labor Income Generated by Greenway Tourism/Community Revenue

The jobs and associated annual labor income estimated in this BCA would not be generated if the greenway is not constructed. If the greenway is constructed, factors that could impact the number of jobs and associated payroll estimated in this BCA include fewer than anticipated users of the greenway and lower expenditures by these users.

## 8. Assessment of Challenges Faced with Implementing the Proposal

See pages 40-48 of the application.

## 9. Analysis Period

The analysis period we use for the flood protection BCA is 2015 to 2085. This analysis period was selected because construction began this summer on the flood walls and levees that will protect the City of Minot's water treatment plant. The remaining sections of the City's flood wall and levee system won't be completed until approximately 2035. According to the project's engineer, Ackerman-Estvold Engineering & Management Consulting, Inc., the flood walls and levees each have a service life of approximately 50 years. We therefore added 50 years to 2035 in order to include the service life of the last sections of the flood wall and levee system to be constructed.

## 10. Sensitivity Analysis

A sensitivity analysis was performed for the flood protection BCA due to the uncertainty of costs associated with constructing sections of the flood wall and levee system that would not be built for 10 or more years in the future. We created a "what-if" scenario that assumed the costs of constructing, operating, and maintaining the flood wall and levee system were 50 percent greater than estimated in the flood protection BCA. Within the spreadsheet for the flood protection BCA, we increased Cell CD73 by 50 percent. This resulted in the Net Present Value decreasing from \$243.7 million in the flood protection BCA to \$36.3 million and the Benefit-Cost Ratio (BCR) decreasing from 1.59 to 1.06. Therefore, a BCR of greater than 1.0 is still achieved even if we underestimated the costs for constructing, operating, and maintaining the flood wall and levee system by 50 percent. We include a spreadsheet with the results of this sensitivity analysis along with the spreadsheet for the flood protection BCA.

# City of Minot – National Disaster Resilience Competition, Phase 2

## Narrative Description for Housing Benefit-Cost Analysis

*Note: Because the BCA spreadsheets and other documents are large, we have stored them in our cloud account for easier viewing. Access them by clicking [here](#) (password: minotndrc)*

### 1. Process for Preparing the Benefit-Cost Analysis

The housing benefit-cost analysis (BCA) was prepared by CDM Smith, which has worked with the City of Minot since 2011 as its recovery program consultant. The City of Minot was extensively involved in developing, preparing, and evaluating the benefits and costs contained in this BCA. This involvement consisted of numerous meetings, discussions, conference calls, and field visits with CDM Smith staff. The City's Chief Financial Officer, Cindy Hemphill, also reviewed the BCA materials that were posted for public comment in early October.

### 2. Full Proposal Cost

See page 77-78 of the application.

### 3. Description of the Current Situation and Problem to Be Solved

See pages 47-49 of the application.

### 4. Description of the Proposed Project

See pages 49-57 of the application.

### 5. Description of Risks without Project Implementation

See pages 47-49, 57-58 of the application.

### 6. Benefits and Costs

This BCA considered several benefits and costs associated with the housing projects proposed for the City of Minot. These benefits and costs are listed below according to the five categories required in Attachment H to the NOFA. A brief description of each benefit and cost is given below, unless page numbers indicating where a description can be found elsewhere in the application is provided.

#### A. Lifecycle Costs

1. Construction of Three Neighborhoods of Affordable Housing

See pages 52-56, 77 of the application.

2. Construction of Minot State University Downtown Student Housing

See pages 50-51, 78 of the application

3. Construction of Student Housing Adjacent to Minot State University Campus

See pages 52, 77 of the application.

#### 4. Construction of Homeless Shelter and Commercial Kitchen

See pages 57, 78 of the application.

### **B. Resilience Value**

#### 1. Avoided Loss of Household Income in Minot

Many Minot residents live in low-lying areas at risk of future flooding. They remain in the neighborhoods where they lived before the 2011 flood, often because it is not financially feasible for them to purchase or rent a new home. Selling a previously flooded home also proves difficult to many homeowners. Additionally, as a result of the oil boom, housing prices in Minot are well above the national average for a city of its size. With the scarcity of affordable housing in Minot, individuals in areas at risk of flooding are left with few options. When FEMA releases the new flood zone maps (which will become effective in 2017), and flood insurance is required (and the cost of that insurance increases incrementally on an annual basis), some residents may be forced to relocate outside of Minot. This jeopardizes the economic well-being of these residents as well as the economic and social health of the City and the region. A proposed buyout program includes the potential relocation of 400 mobile homes to a mobile home park in the City outside the flood zone, and the acquisition and relocation of an additional 340 single family homes. The buyout program targeted to the most vulnerable areas to flooding, coupled with the affordable and resilient neighborhood projects, also included in this proposal, will enable residents to move out of harm's way but remain in Minot. By keeping these residents in Minot, the City and the region avoid the loss of a substantial amount of aggregate household income, which will improve the region's economic resilience.

#### 2. Annual Minot State University Student Expenditures Retained in/Brought to Minot

The 2011 flood displaced 567 Minot State University students, and overall enrollment fell 7.3 percent. The loss of affordable student housing continues to impact Minot State University enrollment, as many prospective students are unable to afford the available housing in Minot and ultimately choose to attend other schools with more reasonably priced housing. The lack of available and affordable student housing has prevented many students from returning to Minot State University, and the decline in student population has had a negative impact on Minot's economy. By providing affordable housing for Minot State University students, the potential exists for more students to stay in Minot as well as attract students from outside the region to study. These students will have annual expenditures associated with their college experience that will improve the region's economic resilience.

### **C. Environmental Value**

#### 1. Annual Savings in Motor Vehicle Fuel Consumption, Delay and Congestion Costs

The affordable, resilient neighborhoods envisioned in this proposal will be connected to the regional transit system, which the City of Minot is expanding. Savings in motor vehicle

fuel consumption, motor vehicle delay, and motor vehicle congestion costs will result from a percentage of residents of these communities using transit rather than personal motor vehicles. This will not only benefit the environment, but also vulnerable residents such as the elderly, youth, disabled, and financially burdened who rely on transit connections to access jobs and services.

2. Annual Energy Savings – Affordable Single Family Homes

The homes in the new affordable neighborhoods will be built appropriately for the Minot climate and will meet high construction standards, including Green Building Standards for Replacement and New Construction of Residential Housing and Energy Star certification. Significant energy savings will be realized on an annual basis as these standards are met.

3. Annual Energy Savings – Affordable Multifamily Homes and Townhomes

The multifamily homes and townhomes in the new affordable neighborhoods will be built appropriately for the Minot climate and will meet high construction standards, including Green Building Standards for Replacement and New Construction of Residential Housing and Energy Star certification. Significant energy savings will be realized on an annual basis as these standards are met.

4. Annual Energy Savings – Minot State University Student Housing – Downtown and Campus Apartments

The Minot State University downtown and campus apartments will be built appropriately for the Minot climate and will meet high construction standards, including Green Building Standards for Replacement and New Construction of Residential Housing and Energy Star certification. Significant energy savings will be realized on an annual basis as these standards are met.

5. Annual Energy Savings – Homeless Shelter

The homeless shelter will be built appropriately for the Minot climate and will meet high construction standards, including Energy Star certification. Significant energy savings will be realized on an annual basis as these standards are met.

**D. Social Value**

1. Health Benefits Associated with Affordable Housing

Affordable housing has several health benefits for children, adults, and the elderly living in low-income households. Examples include freeing up family resources for nutritious food and health care expenditures; greater residential stability, which can reduce stress and related adverse health outcomes; and reduced exposure to stressors and infectious disease by alleviating crowding.<sup>1</sup> The proposed affordable housing developments will have similar positive health benefits for families in Minot.

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<sup>1</sup> [http://www2.nhc.org/HSGandHealthLitRev\\_2015\\_final.pdf](http://www2.nhc.org/HSGandHealthLitRev_2015_final.pdf)

## **E. Economic Revitalization**

### **1. Increase in Money Available for Purchasing Goods and Services in the Local Economy Due to the Provision of Affordable Housing**

An important benefit of providing affordable housing in a community is that it brings housing costs below market rates, which creates residual income in low-income families' budgets to spend on health care, groceries, and other essential items.<sup>2</sup> These purchases generate an immediate economic benefit for the community. The affordable housing developments in Minot will provide a similar benefit to the local and regional economy.

### **2. Annual Labor Income – Minot State University Downtown Student Apartment Employees**

Minot businesses documented the loss of 800 employees after the flood, and these businesses continue to report challenges in retaining employees. As such, jobs are a critical component of the region's economic revitalization and long-term recovery. The influx of oil industry jobs to the region has been an asset in many ways, but the City risks becoming dependent on these oil jobs and vulnerable to the volatility of the price of oil. If that happens, when the next downturn in the oil industry hits, Minot would likely face significant unemployment, loss of businesses, and other economic impacts affecting communities that depend too heavily on a single industry sector. Job creation in industry sectors outside of the oil industry will therefore be especially beneficial to stabilizing the region's long-term economic well-being. Construction of the Minot State University downtown student apartment community will create permanent jobs required to manage its daily operations.

### **3. Annual Labor Income – Minot State University Campus Apartment Employees**

Similar to the downtown student apartments, construction of the Minot State University campus apartment community will generate long-term jobs that will be involved in the community's daily operations. Jobs are a critical component of the region's economic revitalization and long-term recovery.

### **4. Annual Labor Income – Homeless Shelter Employees**

Similar to the Minot State University apartment community projects, construction of the homeless shelter will not only provide a safe, temporary home for individuals and families who have become homeless, it will also require employees to manage the shelter's operations. Jobs are a critical component of the region's economic revitalization and long-term recovery.

## **7. Description of Risks to Ongoing Benefits of the Proposed Project**

There are risks to the ongoing benefits in this BCA. These are briefly explained below.

### **A. Resilience Value**

#### **1. Avoided Loss of Household Income in Minot**

If the affordable housing neighborhoods are not constructed to allow the residents in the buyout program to buy new homes in Minot, a significant percentage of the household

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<sup>2</sup> <http://www2.nhc.org/media/files/Housing-and-Economic-Development-Report-2011.pdf>

income of the residents in the buyout program could be lost as those residents seek housing outside of Minot. A similar result could occur if fewer affordable housing units are constructed.

2. Annual Minot State University Student Expenditures Retained in/Brought to Minot

If the affordable housing projects for Minot State University (MSU) students are not constructed, potential gains in student enrollment could be lost since students seeking off campus housing may not be able to find affordable housing in Minot and ultimately seek attending colleges and universities outside of Minot. A similar result could occur if an insufficient number of affordable housing units are constructed. Also, the expenditure per student used in this BCA could be less than we estimated.

**B. Environmental Value**

1. Annual Gallons of Motor Vehicle Fuel Saved

This benefit would not be realized if the housing projects are not constructed. The level of benefits could be less than we estimated if fewer units of affordable housing are constructed and fewer people in the affordable homes use transit.

2. Annual Hours of Motor Vehicle Delay Saved

This benefit would not be realized if the housing projects are not constructed. The level of benefits could be less than we estimated if fewer units of affordable housing are constructed and fewer people in the affordable homes use transit.

3. Annual Hours of Motor Vehicle Congestion Saved

This benefit would not be realized if the housing projects are not constructed. The level of benefits could be less than we estimated if fewer units of affordable housing are constructed and fewer people in the affordable homes use transit.

4. Annual Energy Savings – Affordable Single Family Homes

There would be no benefits if the housing units are not constructed. The level of benefits would be less if fewer housing units are constructed or the price of oil decreases.

5. Annual Energy Savings – Affordable Multifamily Homes and Townhomes

There would be no benefits if the housing units are not constructed. The level of benefits would be less if fewer housing units are constructed or the price of oil decreases.

6. Annual Energy Savings – Minot State University Downtown and Campus Housing

There would be no benefits if the housing units are not constructed. The level of benefits would be less if fewer housing units are constructed or the price of oil decreases.

7. Annual Energy Savings – Homeless Shelter

There would be no benefits if the housing units are not constructed. The level of benefits would be less if fewer housing units are constructed or the price of oil decreases.

### **C. Social Value**

#### **1. Health Benefits Associated with Affordable Housing**

This benefit would not be realized if the affordable housing projects are not constructed. Similarly, fewer people would realize these benefits if fewer units of affordable housing are constructed.

### **D. Economic Revitalization**

#### **1. Increase in Money Available for Purchasing Goods and Services in the Local Economy Due to the Provision of Affordable Housing**

This benefit would not be realized if the affordable housing projects are not constructed. The level of benefits would decrease if fewer units of affordable housing are constructed.

#### **2. Annual Labor Income – Minot State University Downtown Student Apartment Employees**

If the downtown apartments are not constructed, this benefit would not be realized.

#### **3. Annual Labor Income – Minot State University Campus Apartment Employees**

If the downtown apartments are not constructed, this benefit would not be realized.

#### **4. Annual Labor Income – Homeless Shelter Employees**

If the homeless shelter is not constructed, this benefit would not be realized. If the homeless shelter is constructed, the number of future employees working at the shelter could be less than estimated in this BCA if Minot's population (and therefore people who are homeless) doesn't grow at the rate we used in our analysis.

## **8. Assessment of Challenges Faced with Implementing the Proposal**

See pages 47-58 of the application.

## **9. Analysis Period**

The analysis period we use for the housing BCA is 2016 to 2097. This analysis period was selected because construction of the housing projects occurs in the 2016 to 2022 timeframe. According to Census data, the median age of occupied housing units in the U.S. in 2013 was 38 years.<sup>3</sup> We therefore estimated the useful life of the housing developments in this BCA as 75 years (approximately twice the 2013 median age of housing units). We added 75 years to 2022, the year when the last housing projects would be completed.

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<sup>3</sup> [http://www2.census.gov/programs-surveys/ahs/2013/factsheets/ahs13-1\\_UnitedStates.pdf](http://www2.census.gov/programs-surveys/ahs/2013/factsheets/ahs13-1_UnitedStates.pdf)

# City of Minot – National Disaster Resilience Competition, Phase 2

## Narrative Description for Economic Revitalization Benefit-Cost Analysis

### 1. Process for Preparing the Benefit-Cost Analysis

The economic revitalization benefit-cost analysis (BCA) was prepared by CDM Smith, which has worked with the City of Minot since 2011 as its recovery program consultant. The City of Minot was extensively involved in developing, preparing, and evaluating the benefits and costs contained in this BCA. This involvement consisted of numerous meetings, discussions, conference calls, and field visits with CDM Smith staff. The City's Chief Financial Officer, Cindy Hemphill, also reviewed the BCA materials that were posted for public comment in early October.

### 2. Full Proposal Cost

See pages 75-76 of the application.

### 3. Description of the Current Situation and Problem to Be Solved

See pages 58-59 of the application.

### 4. Description of the Proposed Project

See pages 59-62 of the application.

### 5. Description of Risks without Project Implementation

See pages 58-62 of the application.

### 6. Benefits and Costs

This BCA considered several benefits and costs associated with the economic revitalization projects proposed for the City of Minot. These benefits and costs are listed below according to the five categories required in Attachment H to the NOFA. A brief description of each benefit and cost is given below, unless page numbers indicating where a description can be found elsewhere in the application is provided.

#### A. Lifecycle Costs

1. Construction of The Minot State University and Dakota College Center for Technical Education

See page 78 of the application.

2. Construction of a Downtown Public Gathering Place

See page 77 of the application

3. Construction of the Minot State University Art Department Complex

See page 78 of the application.

4. Relocation of Minot City Hall, Central Dispatch Offices, Regional Social Services Facility, and Vulnerable Populations Community Hall

Minot City Hall is currently located in the Souris River floodplain. Realizing the critical role Minot City Hall plays in the daily operations of the City and especially during times of a disaster, the City of Minot proposes to relocate City Hall to a new 42,000-square foot facility located downtown and outside of the floodplain. This facility would also house the Central Dispatch offices and serve as the central location for social services, such as North Central Social Services, Community Action Partnership, Veterans Center, and Homeless Coalition.

**B. Resilience Value**

1. Relocation of Minot City Hall from the Souris River Floodplain

As explained above, Minot City Hall is currently located in the Souris River floodplain. Relocating City Hall outside of the floodplain will enable the City of Minot's government to continue operations during a future flood without interruption, which is a critical component of making the region more resilient to future disasters.

2. Annual Center for Technical Education Student Expenditures Retained in/Brought to Minot

Development of the Center for Technical Education will allow students pursuing one- and two-year certificate programs, customized technical training services for area businesses, and associate degree programs to stay in Minot or come to Minot from outside the region to study. These students will have annual expenditures for personal items, recreation, books, supplies, transportation, and housing, which will assist with improving the region's economic resilience.

3. Annual Expenditures Retained in/Brought to Minot by Additional Minot State University Art Department Students

The 2011 flood displaced 567 Minot State University students, and enrollment fell 7.3 percent. The decline in student population has had a negative impact on Minot's economy. The Minot State University Art Department has distinguished itself as a center for regional art and art education. Enrollment in the department has increased, which has resulted in a lack of space at its current facility on campus. Additional space is needed to grow the Art Department, meet increased student demands, and help rebuild the University's enrollment. Constructing the downtown Art Department complex will allow students interested in studying in the department to stay in Minot, thereby increasing retention, as well as attract students from outside the region to the University to study. The additional Art Department students will have annual expenditures for personal items, recreation, books, supplies, transportation, and housing, which will assist with improving the region's economic resilience.

**C. Environmental Value**

1. Annual Energy Savings – Minot State University and Dakota College Center for Technical Education

The Center for Technical Education will be built appropriately for the Minot climate and will meet high construction standards, including Energy Star certification. Significant energy savings will be realized on an annual basis as these standards are met.

2. Annual Energy Savings – Minot State University Art Department Complex

The Art Department Complex will be built appropriately for the Minot climate and will meet high construction standards, including Energy Star certification. Significant energy savings will be realized on an annual basis as these standards are met.

3. Annual Energy Savings – Minot City Hall, Central Dispatch Offices, Regional Social Services Facility, and Vulnerable Populations Community Hall

The relocated Minot City Hall and other offices to be co-located with it will be built appropriately for the Minot climate and will meet high construction standards, including Energy Star certification. Significant energy savings will be realized on an annual basis as these standards are met.

#### D. Social Value

1. Improved Community Cohesion Associated with The Downtown Public Gathering Place

As we explained in our Phase 1 application, one of the benefits of living in smaller communities is that people know their neighbors and have a tendency to look after one another. A common concern raised by Minot's residents at the public workshops held during the Phase 1 process, however, was that people did not know their neighbors as well as they used to due to the tremendous growth the region has experienced due to the oil boom. Residents stated that when people do not unfamiliar with their neighbors, they are less likely to check in on one another, which weakens community cohesion. It is expected that the public gathering place will improve community cohesion in Minot by providing a central location where residents and visitors interact through recreation and cultural activities and form strong and positive relationships.

#### E. Economic Revitalization

1. Annual Additional Income Retained in/Brought to Minot Due to Increased Initial Earnings of New Graduates of the Center for Technical Education

The new Center for Technical Education in Minot would enable a significant number of students to advance their education by pursuing one- and two-year certificate programs, customized technical training services for area businesses, and associate degree programs. Each year a certain percentage of students attending the Center for Technical Education would graduate, and of those students, a percentage would stay in the Minot region to live and work. These students who graduate and stay in Minot would have higher starting salaries (i.e., more income) than they would if they only possessed a high school education.<sup>1</sup> It can be assumed that much of this additional income will be spent in Minot, which will assist with revitalizing the regional economy. The analysis only captures the additional income of students who stay in the Minot region each year for the first year after graduation and begin their careers. No attempt is made to estimate how

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<sup>1</sup> [http://www.air.org/sites/default/files/Value\\_of\\_an\\_Associate\\_Degree\\_10.13.pdf](http://www.air.org/sites/default/files/Value_of_an_Associate_Degree_10.13.pdf)

long students stay in the Minot region after graduation and how their salaries increase over time as they advance in their careers.

2. Annual Labor Income – Center for Technical Education Faculty and Staff

The Center for Technical Education would employ faculty and staff involved in instruction, administration, and building maintenance. The salaries paid to these faculty and staff would assist with revitalizing the regional economy through these employees' expenditures for basic living expenses.

3. Annual Labor Income – Additional Art Department Faculty and Staff at the New Minot State University Art Department Complex

Similar to the Center for Technical Education, the downtown Art Department Complex would employ faculty and staff involved in instruction, administration, and building maintenance. These faculty and staff would be additional employees hired to supplement the faculty and staff that are already employed within the Art Department. The salaries paid to these additional faculty and staff would assist with revitalizing the regional economy.

4. Tourism/Community Revenue Generated by the Downtown Public Gathering Place

Many communities that construct greenways experience significant increases in tourism and community revenue from their investment.<sup>2 3</sup> Often connected with these greenways are downtown public gathering places that include greenspace and host various cultural events and farmer's markets, which also generate tourism and community revenue. An excellent example is the Town Square in Grand Forks, North Dakota, which is directly adjacent to the Greater Grand Forks Greenway. The Town Square hosts numerous cultural events and a farmer's market each year.<sup>4 5</sup> Similar to the Town Square in Grand Forks, the proposed downtown public gathering place in Minot will be intricately connected to the riverfront greenway and is anticipated to generate tourism and community revenue for the region, which will assist with the City's efforts to revitalize the downtown and regional economy.

5. Annual Labor Income Supported by Downtown Public Gathering Place Tourism and Community Revenue

The revenue generated by the downtown public gathering place will result primarily from expenditures by residents and visitors that take place in the food/beverage, hotel/motel, entertainment, retail, and transportation sectors of the economy. These expenditures will support jobs in the local economy, such as employees at restaurants, hotels, and retail establishments. The annual labor income associated with these jobs will be an important economic benefit for the City of Minot as food/beverage, hotel/motel, entertainment, retail, and transportation employees spend their salaries for basic living expenses.

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<sup>2</sup> <http://www.nwabikepedplan.com/uploads/7/8/3/3/7833643/economicbenefits.pdf>

<sup>3</sup> <http://www.greenways.com/benefits-of-greenways>

<sup>4</sup> <http://www.greenwayggf.com/calendar.html>

<sup>5</sup> <http://www.tsfarmersmarket.com/>

## 7. Description of Risks to Ongoing Benefits of the Proposed Project

There are risks to the ongoing benefits in this BCA. These are briefly explained below.

### A. Resilience Value

#### 1. Relocation of Minot City Hall from the Souris River Floodplain

If Minot City Hall is not relocated outside of the Souris River floodplain, it remains at high-risk to be damaged or lost in a future flood, which would negatively impact the City of Minot's recovery from the disaster.

#### 2. Annual Enrollment of the Center for Technical Education

There would be no enrolled students if the Center for Technical Education is not constructed. If the facility is constructed, future enrollment could be less than we estimated in the BCA due to lower-than-expected population growth in Minot.

#### 3. Annual Center for Technical Education Student Expenditures Retained in/Brought to Minot

If the Center for Technical Education is not constructed, there would be no student expenditures. If the facility is constructed, student expenditures could be less than we estimated in the BCA if either enrollment or the expenditure per student is less than anticipated.

#### 4. Annual Additional Students Enrolled in the Minot State University Art Department Due to Development of the Art Department Complex

There would be no additional students if the Art Department Complex is not built. If the facility is constructed, the number of additional students in the future could be less than we estimated due to the assumptions we used in our analysis.

#### 5. Annual Expenditures Retained in/Brought to Minot by Additional Minot State University Art Department Students

If the Art Department Complex is not constructed, there would be no student expenditures. If the facility is constructed, student expenditures could be less than we estimated in the BCA if either the number of additional students or the expenditure per student is less than anticipated.

### B. Environmental Value

#### 1. Annual Energy Savings – Center for Technical Education

There would be no benefits if the facility is not constructed. The level of benefits would be less if the price of oil decreases.

#### 2. Annual Energy Savings – Minot State University Art Department Complex

There would be no benefits if the facility is not constructed. The level of benefits would be less if the price of oil decreases.

3. Annual Energy Savings – Minot City Hall, Central Dispatch Offices, Regional Social Services Facility, and vulnerable Populations Community Hall

There would be no benefits if the facility is not constructed. The level of benefits would be less if the price of oil decreases.

### C. Social Value

1. Improved Community Cohesion Associated with the Downtown Public Gathering Place

If the public gathering place is not constructed, there would be no associated improvement in community cohesion. If the public gathering place is constructed, the level of improved community cohesion could be less if the facility is not used for events on a regular basis or if the facility does not attract the interest of the public.

### D. Economic Revitalization

1. Annual Center for Technical Education Students who Graduate

If the Center for Technical Education is not constructed, there would be no graduates. If the facility is constructed, a smaller percentage of students may graduate each year than estimated in this BCA.

2. Annual Center for Technical Education Graduates who Stay in the Minot Region One Year After Graduation

If the Center for Technical Education is not constructed, there would be no graduates. If the facility is constructed, there may be a smaller percentage of graduates who stay in the Minot region for at least one year than we estimated in this BCA.

3. Annual Additional Income Retained in/Brought to Minot Due to Increased Initial Earnings of New Graduates of the Center for Technical Education

If the Center for Technical Education is not constructed, there would be no graduates. If the facility is constructed, graduates may start at a lower average starting salary than we assumed in this BCA.

4. Annual Faculty and Staff at the Center for Technical Education

There would be no employees if the Center for Technical Education is not constructed. If the facility is constructed, there may be fewer initial employees than we estimated and there may be a higher number of students per employee than we assumed in this BCA.

5. Annual Labor Income – Center for Technical Education Faculty and Staff

There would be no salaries paid to employees if the Center for Technical Education is not constructed. If the facility is constructed, the average salary could be less than we assumed in our analysis.

6. Annual Additional Art Department Faculty and Staff at the Minot State University Art Department Complex

There would be no additional employees if the Art Department Complex is not constructed. If the facility is constructed, there may be fewer additional employees than we estimated during the analysis period due to the assumptions we made in this BCA.

7. Annual Labor Income – Additional Minot State University Art Department Complex Faculty and Staff

There would be no salaries paid to employees if the Art Department Complex is not constructed. If the facility is constructed, the average salary could be less than we assumed in our analysis.

8. Tourism/Community Revenue Generated by the Downtown Public Gathering Place

The tourism/community revenue estimated in this BCA would not be generated without construction of the public gathering place. If the public gathering place is constructed, factors that could impact the level of benefits estimated in this BCA include fewer than anticipated users and lower expenditures by these users.

9. Annual Labor Income Supported by Downtown Public Gathering Place Tourism/Community Revenue

The jobs and associated annual labor income estimated in this BCA would not be generated if the public gathering place is not constructed. If the public gathering place is constructed, factors that could impact the number of jobs and associated payroll estimated in this BCA include fewer than anticipated users and lower expenditures by these users.

## 8. Assessment of Challenges Faced with Implementing the Proposal

See pages 59-62 of the application.

## 9. Analysis Period

The analysis period we use for the economic revitalization BCA is 2018 to 2097. This analysis period was selected because construction activities for the projects included in the BCA begin in 2018 and extend through 2022. One of the projects in this BCA is the Minot State University Art Department Complex. Construction of this facility will be completed by 2022. Research shows the average expected service life for non-residential buildings constructed primarily of masonry, concrete, and steel in North America is between 77 and 87 years.<sup>6</sup> We assume the Art Department Complex will be constructed of a combination of these materials. Therefore, since construction of this facility will be complete by 2022, we used a conservative estimate of 75 years for its service life (adding 75 years to 2022 yields 2097).

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<sup>6</sup> <http://www.woodworks.org/wp-content/uploads/2012/02/fpi-survey-actual-service-lives.pdf>