

ECONOMIC ECOSYSTEM ANALYSIS

Severe Winter Storm, Straight-line Winds, and Flooding (DR-4420)

JUNE 2020

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1 INTRODUCTION

This report examines the effects of the 2019 disasters (severe winter storm, straight-line winds, and flooding) within the context of pre-disaster economic conditions across Nebraska's seven economic development districts:¹

- Central Nebraska Economic Development District;
- Northeast Nebraska Economic Development District;
- Panhandle Area Development District;
- West Central Nebraska Economic Development District;
- Omaha-Council Bluffs Metropolitan Area Planning Agency Economic Development District;
- Southeast Nebraska Development District; and
- South Central Economic Development District.

Three counties are not represented in the economic development districts above, although they are still included in the report: Dakota County, which is part of the Siouxland Interstate Metropolitan Planning Council; Butler County, and Lancaster County.

This analysis will supplement the state's *Long-Term Recovery and Resilience Plan* and its implementation. By analyzing the impacts of the 2019 disaster across key economic drivers: private sector activity, infrastructure, and housing and examining the pre-disaster economic outlook, strategies for recovery can be tailored to regional priorities. This report is intended to provide local and regional decision-makers with a tool to aid in the prioritization of recovery objectives and strategies based on pre-disaster priorities.

The document is organized into subsections that examine the state as a whole; each of the state's seven economic development districts; plus, the three individual counties mentioned above. Sections 0 through 2.9 present a summary of:

- The region's pre-disaster economic outlook and priorities based on the corresponding comprehensive economic development strategy (CEDS). For counties that do not belong to an economic development district, research about pre-disaster priorities was conducted using other planning documents, described further in those sections.
- The severity of regional disaster impacts across the areas mentioned above: infrastructure, housing, and the economy.² These sectors were selected both because of their significance to the state's economy, and because county-level data was available to support analysis of the entire state.
- The regional economic ecosystem based on the pre-disaster priorities and severity of impacts.

¹ United States Economic Development Administration, 2019. "Economic Development Districts." Retrieved at: <https://www.eda.gov/edd/>

² Additional information about the methodology used in this report can be found in Appendix B: Methodology.

- References to specific strategies in the *Long-Term Recovery and Resilience Plan* that speak to that region's unique priorities, challenges, and long-term recovery considerations.

Section 2.1 provides context about the impacts of the disasters to the state as a whole. Overall, this analysis reaffirms the findings from the *Baseline Conditions and Impact Assessment Report* that the most impacted communities are those in the north and east portions of the state. Additionally, the following key takeaways were identified during this analysis.

Infrastructure Systems

- Strengthening infrastructure is a priority in each economic development district.
- Improving the transportation infrastructure is emphasized statewide to enable rapid and low-cost movement of goods and services across the state and country.
- Resilient infrastructure development and restoration should be prioritized to support holistic community recovery.

Housing

- Housing damage was centered in northeast portions of the state; however, housing resilience is a priority throughout the state.
- Housing improvements should focus on appropriate workforce housing that meets community needs and is affordable.

Economy and Agriculture

- The impact of the 2019 disasters on the agricultural industry dramatically affected the economy of the state.
- Economic diversification is a key priority for the majority of the economic development districts. The impact of the disasters on the agricultural industry presents the state with an opportunity to encourage investment in workforce and economic development.

2 ECONOMIC ECOSYSTEM ANALYSIS

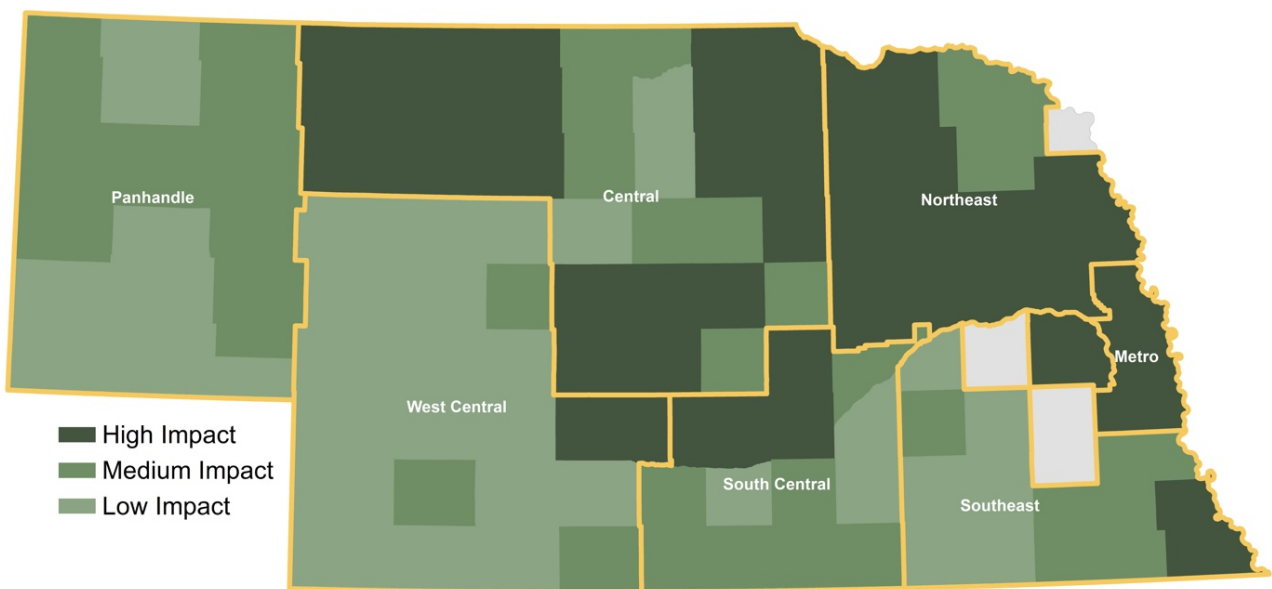
2.1 STATEWIDE ANALYSIS

The impacts of the 2019 disasters are analyzed using a basic scoring system, where the severity was graded on a five-point scale. This analysis was performed statewide two ways:

- Using an average impact score for each county (Figure 1);
- Using an average impact score for each economic development district (Figure 2).

Composite scores, ranging from zero to five, were then split evenly across high, medium, and low categories at both the regional and state level. The findings in this report are limited by a lack of quantifiable data in other important sectors, such as health and social services, and the possibility that damages in the analyzed sectors were underreported or not reported at all.

Figure 1 – Map of the Composite Damage Score per County and Nebraska Economic Development Region



The 2019 disasters primarily impacted central, northeast, and southeast Nebraska (Figure 2). Additional technical assistance and financial support will likely be required in these areas.

Figure 2 – Economic Development District Composite Damage Analysis



Table 1 shows the results of damage assessments in each economic development district. Sectoral impacts vary significantly across regions despite similar composite scores. The three counties that do not belong to an economic development district are excluded in this analysis, but are represented in Figure 1 and Section 2.9

Table 1 – Damage Assessment Results by Sector and Economic Development District

Region	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Northeast	6	5	5	5.33	High
Central	7	4	3	4.67	High
South Central	2	6	5.5	4.50	High
Metro	5	3	4.5	4.17	Medium
Southeast	4	2	2.5	2.83	Medium
West Central	1	1	3.5	1.83	Low
Panhandle	3	0	0.5	1.17	Low

2.2 CENTRAL NEBRASKA ECONOMIC DEVELOPMENT DISTRICT

The following section presents the characteristics of the pre-disaster economy, disaster impacts, and long-term recovery strategies suited to the Central region of Nebraska.

2.2.1 PRE-DISASTER ECONOMIC CONDITION

The economy in Central Nebraska was driven by the agricultural industry, with nine to ten times more agricultural jobs than any other district. Additionally, its central location and highway network supported the transportation of goods and services within and through the state. Residents of the Central region enjoyed a high quality of life, strong schools, an early education program, and a strong work ethic. The top challenges in the region, as outlined in the 2018 CEDS, were:

- Demographic changes and outmigration of skilled workers;
- Low wages and a lack of diverse job opportunities; and
- A shortage of affordable and high-quality housing.³

The decline in a skilled workforce has been a long-standing issue in the region, with two main contributing factors. First, a large portion of the workforce is approaching or entering retirement. Second, highly educated and young people tend to leave the region to pursue opportunities in urban centers, a phenomenon called “brain drain.” The decline is exacerbated by a dearth of quality workforce housing and slow or unavailable broadband.

The CEDS outlines four focus areas to address these challenges:

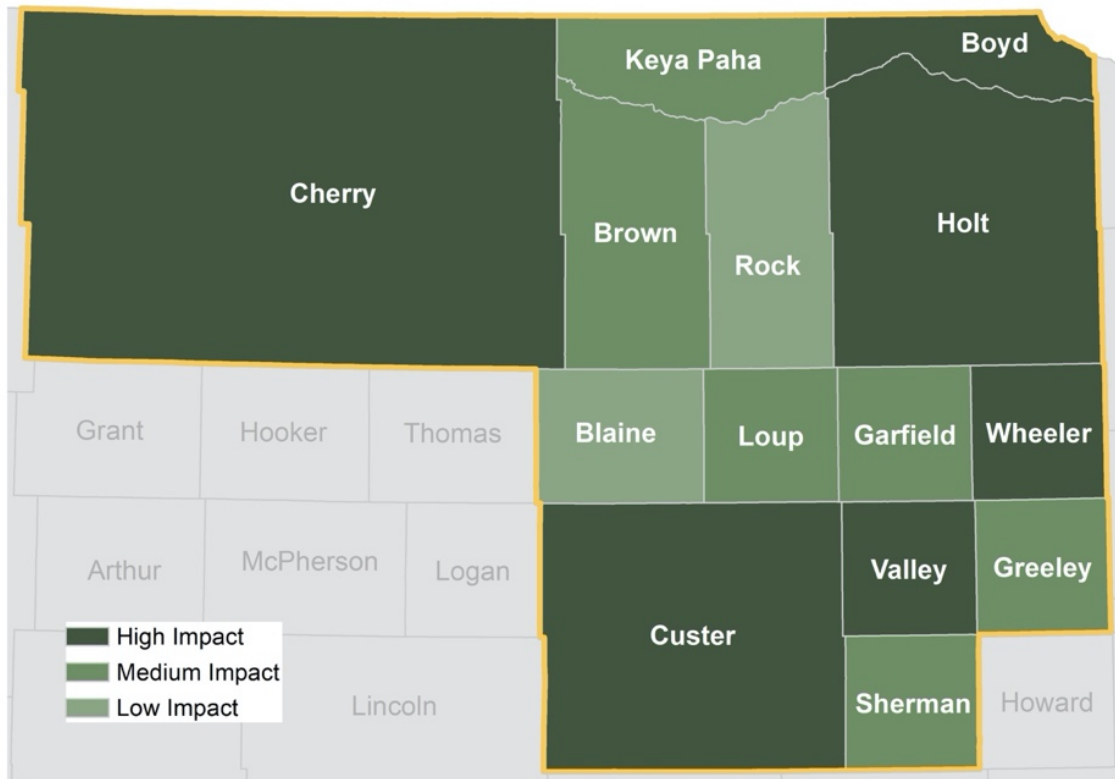
- Business and Industry/Workforce Development;
- Community Development/Housing Development;
- Talent Retention and Attraction/Education; and
- Tourism/Recreation.

³ Central Nebraska Economic Development District, Comprehensive Economic Development Strategy 2018. Retrieved at: <http://cnedd.org/wp-content/uploads/2018/11/2018-CNEDD-CEDS-FINAL-for-EDA.pdf>

2.2.2 2019 DISASTER IMPACTS

Boyd, Cherry, Custer, Holt, Valley, and Wheeler Counties experienced the most significant damage in this region (Figure 3).

Figure 3 – Central Nebraska Economic Development District Composite Damage Analysis



Most of the damage in this region was driven by infrastructure, rather than economic or housing damage (Table 2).⁴

Table 2 – County-Level Analysis for the Central Nebraska Economic Development District

County	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Boyd	5	5	2	4.00	High
Custer	4	3	4	3.67	High
Holt	4	3	2.5	3.17	High
Valley	5	0	2	2.33	High
Wheeler	4	0	2	2.00	High
Cherry	5	0	1	2.00	High
Garfield	5	0	1	2.00	Medium
Greeley	5	0	1	2.00	Medium
Keya Paha	5	0	1	2.00	Medium
Brown	4	0	1.5	1.83	Medium
Loup	4	0	0.5	1.50	Medium
Sherman	2	0	1.5	1.17	Medium
Blaine	3	0	0	1.00	Low
Rock	0	0	1.5	0.50	Low

2.2.3 REGIONAL ECOSYSTEM ANALYSIS

The 2019 disasters caused a high level of infrastructure damage throughout the Central region. Given the importance of transportation routes to the region’s economy, recovering and increasing the resilience of the region’s infrastructure should be prioritized to support both recovery and long-term economic growth.

While the Central Economic Development District generally had a relatively low level of housing damage as a result of the 2019 disasters, Boyd County the second highest concentration of

⁴ Note: a score of 0 in this figure and table does not necessarily mean a county saw no impact from the disasters. A 0 could indicate data were not reported, no damage occurred, or damage was not reported.

relative housing damage in the state.⁵ This housing damage exacerbates pre-existing issues in the region, including access to workforce housing, an aging housing stock, and availability of housing that aligns with community needs.

Economic scores are a composite of two separate factors: agriculture insurance payouts and small business loans. Agriculture is the primary driver of the economic impact score in the region (Table 2). All but one county in the region (Blaine County) recorded some degree of agricultural impact. In contrast, only one county (Custer County) recorded an economic impact separate from the agriculture sector.

The most impacted counties in the region were: Boyd, Custer, Holt, Valley, and Wheeler Counties.

2.2.4 PRIORITIZATION FOR RECOVERY

The analysis in Section 2.2.1 and 2.2.2 can help determine how to allocate resources throughout the region. On a broad level, it indicates that key focus areas for recovery include infrastructure restoration and economic (agricultural) restoration to address sectors that were primarily impacted by the 2019 disasters. Specifically, the following strategies should be prioritized in order to support recovery and resilience in the region:

- Continue to monitor emerging public health trends related to mold and launch appropriate treatment plans in response (Cross-Cutting Issues, 5.1)
- Purchase, demolish, and replace homes destroyed by flooding with innovative and affordable housing types outside of known high risk areas (Housing, 2.1).
- Develop incentive program (e.g., Kansas Rural Opportunity Zones) subsidizing student loan payments, housing costs, or other costs of living to encourage the return and retention of college- and trade-educated individuals to rural communities (Housing, 3.2).
- Promote the uptake of crop, livestock, and equipment, wind, hail, and other types of insurance relevant to agricultural producers (Agricultural, 1.3).
- Encourage local jurisdictions to work with local stakeholders (e.g., businesses, non-profits, faith-based organizations) to incorporate activities related to individual and community-level well-being and resilience and local recovery efforts into local programs and events (Health and Social Services, 2.4).

⁵ Relative housing damage is calculated by comparing the estimated value of housing damage to the pre-disaster property values to determine the relative concentration of damage (adjusted for pre-disaster conditions).

2.3 NORTHEAST NEBRASKA ECONOMIC DEVELOPMENT DISTRICT

The following section outlines how characteristics of the pre-disaster economy in the Northeast region of Nebraska, along with the specific disaster impacts in the region, may inform post-disaster recovery strategies.

2.3.1 PRE-DISASTER ECONOMIC CONDITION

Residents of Northeast Nebraska maintained its small-town atmospheres, low cost of living, a strong industry base, and ample educational opportunities, among other factors. On a broad level, these attributes can be connected directly to the region's community and economic development initiatives, which are supported by the high level of land availability, local incentives for initiatives, and strong leadership. The top challenges in the region, as outlined in the 2019 CEDS, include:

- Lack of skilled laborers across multiple sectors, including:
 - “Blue collar” jobs (e.g., manufacturing),
 - Service industry positions (e.g., retail sales), and
 - Skilled service occupations (e.g., healthcare professionals).
- Long-standing and widespread flood risk complicating economic development and recovery from disaster events.
- Contamination, pollution, hazardous waste, and related concerns at the ten Brownfield Sites within the region to use these sites for economic, housing, or other productive purposes.⁶

The CEDS outlines five goals to address these challenges:

- Adhere to United States Economic Development Administration regulations and perform activities to diversify and strengthen Northeast Nebraska Economic Development District's regional economy.
- Encourage economic development and job creation/retention throughout Northeast Nebraska.
- Continue to provide technical planning assistance in community development activities.
- Assist members in identifying available federal, state, local and private resources to provide safe, affordable, quality housing in Northeast Nebraska.
- Assist members in identifying available federal, state, local and private resources to help with the recovery efforts.

⁶ Northeast Nebraska Economic Development District, 2019-2023 Comprehensive Economic Development Strategy. Retrieved at: <https://www.nenedd.org/Assets/pdflinks/2019-2023%20CEDS.pdf>

2.3.2 2019 DISASTER IMPACTS

All but three counties in this region (Cedar, Dixon, and Wayne) experienced significant disaster impacts (Figure 4).

Figure 4 – Northeast Nebraska Economic Development District Composite Damage Analysis

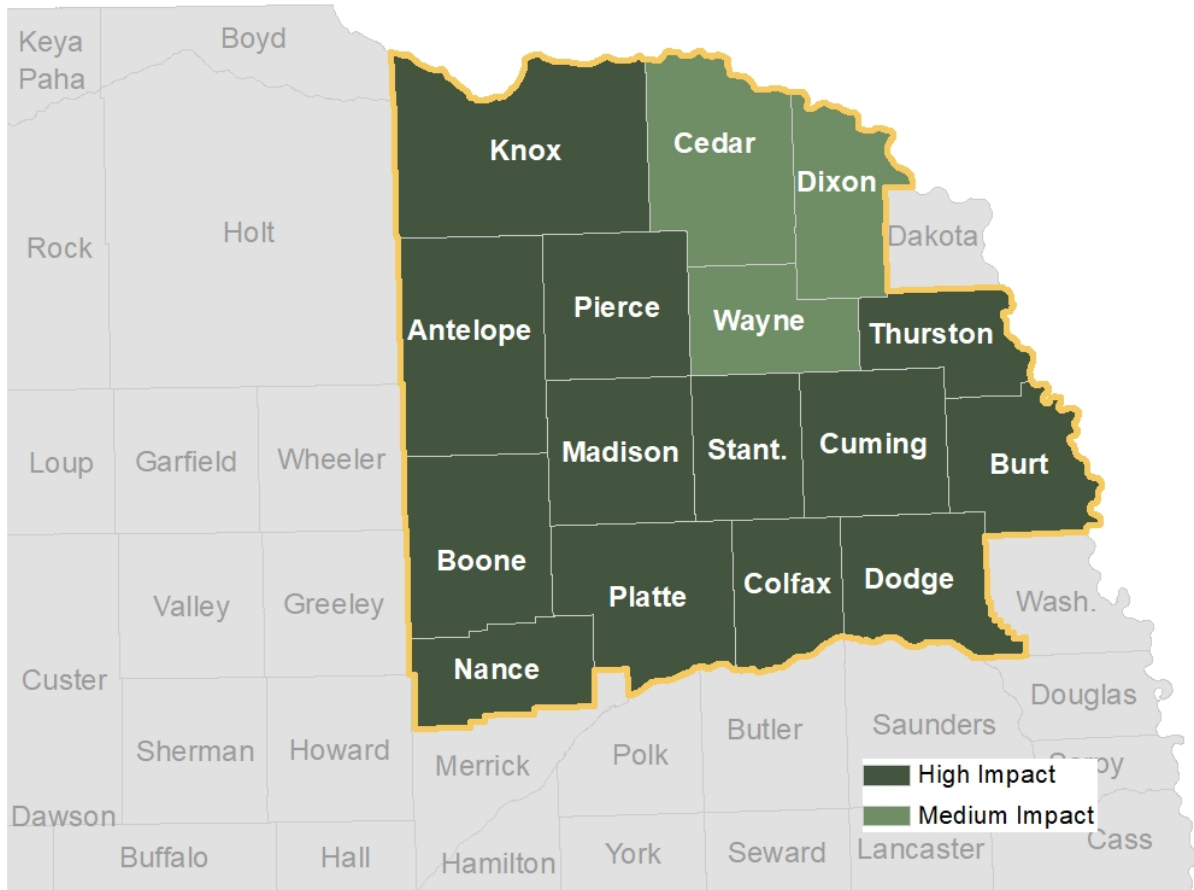


Table 3 shows the breakdown of each composite score for the counties in the region.⁷

Table 3 – County-Level Analysis for the Northeast Nebraska Economic Development District

County	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Dodge	5	5	4.5	4.83	High
Nance	5	5	4	4.67	High
Knox	5	4	3.5	4.17	High
Pierce	4	5	3	4.00	High
Platte	5	2	4	3.67	High
Antelope	4	2	3.5	3.17	High
Thurston	5	4	0.5	3.17	High
Boone	2	5	2	3.00	High
Madison	4	2	2.5	2.83	High
Colfax	4	3	1.5	2.83	High
Burt	3	1	3	2.33	High
Stanton	5	1	1	2.33	High
Cuming	2	2	2.5	2.17	High
Cedar	4	0	1	1.67	Medium
Dixon	3	0	0.5	1.17	Medium
Wayne	3	0	0.5	1.17	Medium

2.3.3 REGIONAL ECOSYSTEM ANALYSIS

The 2019 disasters caused a high level of infrastructure damage in the Northeast Nebraska Economic Development District. This region was the second most impacted district in terms of infrastructure damage, amplifying the pre-existing need for infrastructure investment to improve resilience in the region.

The Northeast region was the second most impacted district in terms of housing. Housing in all but three counties in the region were impacted by the 2019 disasters and approximately one-third

⁷ Note: a score of 0 in this figure and table does not necessarily mean a county saw no impact from the disasters. A 0 could indicate data were not reported, no damage occurred, or damage was not reported.

of the region had a high impact score in the housing sector. Like many regions in Nebraska, the region identified the need for additional affordable workforce housing prior to the disasters. This need is likely to increase, post-disaster.

The economy of the Northeast Nebraska Economic Development District was highly impacted by the 2019 disasters: every county experienced some degree of economic loss. Generally, the economic impact is driven by the damage impact to the agricultural industry; approximately one-third of the counties had the highest possible agricultural impact score. This is especially important because farmland and farming are key drivers of the economy in the region, which already faced decreased cropland prior to the disaster.

The most impacted counties in this region were: Dodge, Nance, Knox, Pierce, and Platte Counties.

2.3.4 PRIORITIZATION FOR RECOVERY

The analysis above can be used to help determine how to allocate resources throughout the region. On a broad level, there is no single recovery priority for the Northeast Economic Development District given the varying impacts across sectors and counties within the district. However, the following strategies could be prioritized to support recovery and resilience in the region:

- Build state capacity to efficiently apply for and manage major federal funding programs (Cross-Cutting Issues, 2.1).
- Leverage all available funding programs to incorporate mitigation measures into infrastructure recovery efforts while building capacity at the local level to do the same (Infrastructure, 1.1).
- Leverage state and federal loans and grants and other sources to help local governments bridge revenue gaps (Economic, 2.1).
- Provide career training for those in disrupted industries and in support of the recovery of impacted communities (Economic, 3.1).
- Develop tools to collect and organize information and resources that will help farmers, ranchers, and agricultural goods processors respond and recover (Agriculture, 1.1).

2.4 PANHANDLE AREA DEVELOPMENT DISTRICT

The following section describes how characteristics of the pre-disaster economy in the Panhandle region of Nebraska, along with the specific disaster impacts in the region, may inform post-disaster recovery strategies.

2.4.1 PRE-DISASTER ECONOMIC CONDITION

The Panhandle region had a strong economy and community, with a low cost of living and low overhead for businesses. The 2019 CEDS notes that the Panhandle region maintained a diversity of industry, including robust telecommunications and health resource sectors.⁸ The economy in the region was supported by strong transportation infrastructure. There was high traffic through the region on Interstate-80 and other roads throughout the region. Additionally, good broadband internet infrastructure supported business attraction and retention. Strong education institutions, from kindergarten through higher education (including a satellite campus of the University of Nebraska), supported workforce development, quality of life, and economic stability. Resilience in the region was supported by the strong regional identity and robust governance. Primary challenges in the region outlined in the CEDS include:

- Lack of economic diversity and the high-paying jobs needed to attract and retain workers;
- A need to update aging housing stock to provide more high-quality, safe, and affordable housing because, despite a declining overall population and affordable housing prices, the aging housing stock in the region doesn't meet the needs of many prospective residents; and
- Shortage of behavioral health resources in rural areas.

To address these issues, the CEDS outlines a “Shrink Smart” strategy that focuses on developing strong fiscal management, budgeting processes, and community self-sufficiency efforts to allow for population to decline while quality of life improves. Other key priorities outlined in the CEDS include:

- Promoting year-round tourism to attract new residents and bolster the workforce;
- Preventing over-development of land;
- Encouraging value-added agriculture products and technology; and
- Increasing the capacity and resilience of drinking and wastewater infrastructure.

2.4.2 2019 DISASTER IMPACTS

No counties in this region received high composite impact scores related to the 2019 disasters (Figure 5).

⁸ Panhandle Area Development District, The Nebraska Panhandle Comprehensive Economic Development Strategy 20196. Retrieved at: <https://nepadd.com/wp-content/uploads/2019/06/CEDS-FINAL-DRAFT.pdf>

Figure 5 – Panhandle Area Development District Composite Damage Analysis

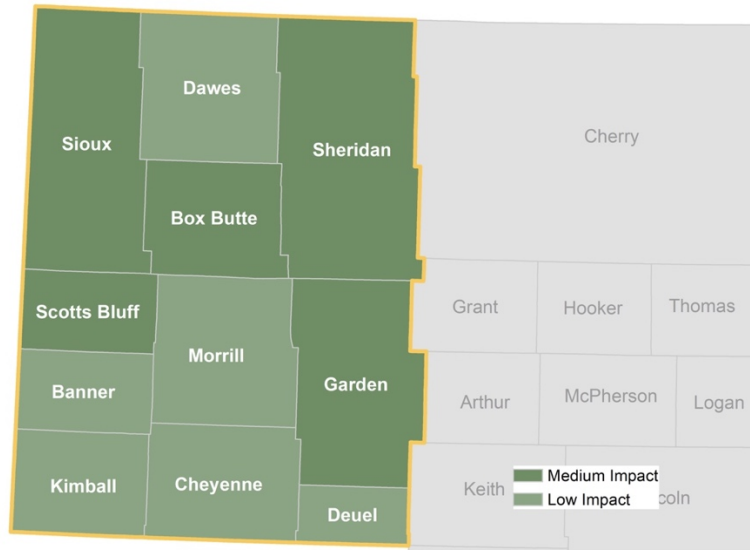


Table 4 provides a breakdown of the composite impact scores within the region.⁹

Table 4 – County-Level Analysis for the Panhandle Area Development District

County	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Scotts Bluff	4	0	1.5	1.83	Medium
Sheridan	3	0	1.5	1.50	Medium
Sioux	3	0	0.5	1.17	Medium
Garden	2	0	1.5	1.17	Medium
Box Butte	1	0	2	1.00	Medium
Banner	2	0	1	1.00	Low
Morrill	2	0	1	1.00	Low
Dawes	2	0	0.5	0.83	Low
Cheyenne	0	0	2	0.67	Low
Deuel	1	0	1	0.67	Low
Kimball	1	0	0.5	0.50	Low

⁹ Note: a score of 0 in this figure and table does not necessarily mean a county saw no impact from the disasters. A 0 could indicate data were not reported, no damages occurred, or damage was not reported.

2.4.3 REGIONAL ECOSYSTEM ANALYSIS

Overall, the 2019 disasters caused low levels of damage in the Panhandle region. Agriculture, which is a key driver of the region's economy, experienced the most notable damage, but despite that, no county rated in the "high" damage category. The whole region experienced low levels of economic damage and no housing damage from the disasters, although pre-existing housing priorities should be integrated into recovery projects. Only one county, Scotts Bluff County, saw a high level of damage to its infrastructure. However, the Panhandle region plays a critical role in regional and national transportation, which could produce a higher-than-expected cascading impact for the state.

The most impacted counties in the region were Garden, Scotts Bluff, Sheridan, and Sioux Counties.

2.4.4 PRIORITIZATION FOR RECOVERY

The analysis above can be used to help determine how to allocate resources throughout the region. On a broad level, it indicates that key focus areas for recovery include infrastructure restoration and economic (agricultural) restoration. Specifically, the following strategies should be prioritized in order to support recovery and resilience in the region:

- Leverage all available funding programs to incorporate mitigation measures into infrastructure recovery efforts while building capacity at the local level to do the same (Infrastructure, 1.1).
- Monitor behavioral health impacts and needs as they evolve over time (Health and Social Services, 1.2).
- Encourage local jurisdictions to work with local stakeholders (e.g., businesses, non-profits, faith-based organizations) to incorporate activities related to individual and community-level well-being and resilience and local recovery efforts into local programs and events (Health and Social Services, 2.4).
- Increase behavioral health treatment availability statewide, including pastoral care and telehealth (Health and Social Services, 3.1).
- Increase treatment capacity for providing evidence-based, trauma-informed care (Health and Social Services, 3.2).

2.5 WEST CENTRAL NEBRASKA ECONOMIC DEVELOPMENT DISTRICT

The following section outlines how characteristics of the pre-disaster economy in the West Central region of Nebraska, along with the specific disaster impacts in the region, may inform disaster recovery strategies.

2.5.1 PRE-DISASTER ECONOMIC CONDITION

Before the 2019 disasters, residents of the West Central Nebraska region enjoyed a high quality of life—thanks to good education systems, clean air, and a sense of safety and security—and low levels of unemployment, driven by the agricultural system.

The 2019 CEDS identified affordable housing and workforce availability as key challenges for the region. Almost three-quarters of the region’s business owners reported difficulty finding qualified workers, and approximately half of them were concerned about worker shortages.¹⁰ These shortages can be attributed to multiple factors, including an aging population and the loss of young and highly educated residents to more urban areas inside and outside the state. The region’s housing stock is aging, with many homes in varying states of disrepair due to inadequate maintenance over time. Key opportunities identified in the region’s CEDS include:

- Business Retention and Transition;
- Housing Rehabilitation;
- Availability of Trade Schools and Technical Agriculture Education;
- Improved Broadband and Increased Remote Employment Opportunities;
- Workforce Development; and
- Public Infrastructure Improvements.

The 2019 CEDS for the West Central region outlined the following objectives:

- Continue collaborations with local, regional, state, and national entities;
- Provide crucial distinguishable resources for members;
- Provide technical planning assistance in community development and infrastructure activities;
- Assist communities in providing safe, affordable, quality housing in West Central Nebraska;
- Enhance the economic resilience of the region;
- Develop entrepreneurial systems throughout the region where business owners and aspiring entrepreneurs can seek assistance in developing and growing their business; and
- Expand the diversity of businesses in the West Central Nebraska region to meet and enhance services to citizens.

¹⁰ West Central Nebraska Development District Inc., WCNDD Comprehensive Economic Development Strategy 2019-2024. Retrieved at: <https://west-central-nebraska.com/wp-content/uploads/2019/04/2019-CEDS.pdf>

2.5.2 2019 DISASTER IMPACTS

Dawson County was the most impacted county in the West Central Nebraska Economic Development District.

Figure 6 – West Central Nebraska Economic Development District Composite Damage Analysis

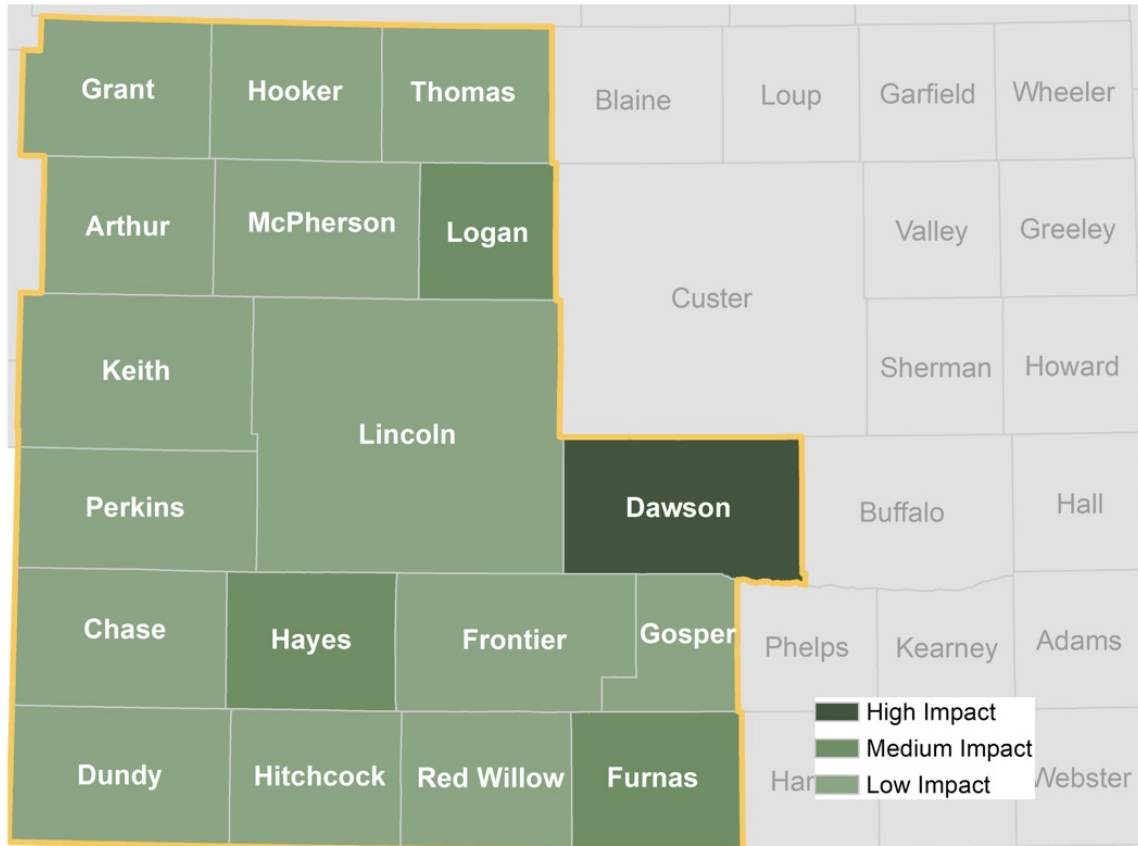


Table 5 provides a breakdown of the composite impact scores in the region.¹¹

Table 5 – County-Level Analysis for the West Central Nebraska Economic Development District

County	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Dawson	1	3	3.5	2.50	High
Hayes	3	0	2.5	1.83	Medium
Furnas	3	0	2	1.67	Medium
Logan	3	0	0.5	1.17	Medium
Lincoln	1	0	2	1.00	Low
Chase	0	0	2.5	0.83	Low
Perkins	0	0	2.5	0.83	Low
Gosper	2	0	0.5	0.83	Low
Frontier	1	0	1	0.67	Low
Grant	2	0	0	0.67	Low
Dundy	0	0	1.5	0.50	Low
Hitchcock	0	0	1.5	0.50	Low
Keith	0	0	1.5	0.50	Low
Arthur	1	0	0.5	0.50	Low
Red Willow	0	0	1	0.33	Low
Hooker	1	0	0	0.33	Low
McPherson	0	0	0.5	0.17	Low
Thomas	0	0	0	0.00	Low

¹¹ Note: a score of 0 in this figure and table does not necessarily mean a county saw no impact from the disasters. A 0 could indicate data were not reported, no damages occurred, or damage was not reported.

2.5.3 REGIONAL ECOSYSTEM ANALYSIS

The primary impacts from the 2019 disasters in the West Central Economic Development District were economic, largely driven by agricultural losses. Almost one third of the counties in the district experienced high agricultural damage, which is an important consideration for the recovery process. Overall, the West Central region received relatively lower levels of infrastructure damage from the 2019 disasters compared to other economic development districts, but focus should be maintained on increasing infrastructure resilience and continually making improvements. The West Central region had no recorded housing damage, but its housing priorities should be integrated into its recovery projects.

The most impacted counties in the region were Dawson, Hayes, Furnas, Logan, Lincoln, and Chase Counties.

2.5.4 PRIORITIZATION FOR RECOVERY

This region's recovery efforts should focus on economic (agricultural) restoration to address the primary impacts from the 2019 disasters. Specifically, the following strategies should be prioritized to support recovery and resilience in the region:

- Build state capacity to efficiently apply for and manage major federal funding programs (Cross-Cutting Issues, 2.1).
- Purchase, demolish, and replace homes destroyed by flooding with innovative and affordable housing types outside of known high risk areas (Housing, 2.1).
- Develop post-disaster housing recovery guidance for the state and local governments (Housing, 2.3).
- Develop tools to collect and organize information and resources that will help farmers, ranchers, and agricultural goods processors respond and recover (Agriculture, 1.1).
- Promote the uptake of crop, livestock, and equipment, wind, hail, and other types of insurance relevant to agricultural producers (Agriculture, 1.3).

2.6 OMAHA-COUNCIL BLUFFS METROPOLITAN AREA PLANNING AGENCY

The following section outlines how characteristics of the pre-disaster economy in the Omaha-Council Bluffs Metropolitan Area of Nebraska, along with the specific disaster impacts in the region, may inform post-disaster recovery strategies.¹²

2.6.1 PRE-DISASTER ECONOMIC CONDITION

Unlike much of the state, where prior to the 2019 disasters there was a heavy dependence upon agriculture, the region had a well-established, diverse economy. Major industry clusters in the region included bioscience, data centers, defense, financial and insurance services, food processing and packaging, business headquarters, information technology, manufacturing, retail, and transportation and distribution.¹³ This has put the region in a good position to encourage additional economic development. The area had a well-trained and productive workforce, supported by finely tuned regional workforce development programs. Moreover, the region had strong economic development practices across both Nebraska and Iowa, along with the financial resources necessary for investment, a comparatively low cost of living, and high-quality education programs.

Being Nebraska's largest urban center and most urban region, this region faced unique challenges. Some of the challenges identified in the region's CEDS include:

- Inadequate infrastructure to support new businesses and business expansion (including bridge capacity between Nebraska and Iowa);
- Limited availability of affordable workforce and family housing, particularly near new job centers;
- Increasing sewer rates harming lower-income residents as a result of Omaha's combined sewer overflow issues;
- Disconnect between available job training and the current and projected training needs;
- Lack of available resources and incentives encouraging new entrepreneurial activity; and
- Projected workforce issues resulting from an aging population and outmigration.

The CEDS also outlined 9 goals and associated goals to address these challenges:

- Retain business and industry and encourage expansion;
- Expand manufacturing base and diversify into other economic sectors;
- Provide more opportunities for growth and redevelopment in areas of the region experiencing relatively high poverty rates, unemployment rates, disinvestment, lack of private investment, and environmental challenges;

¹² This region includes areas in two states including Nebraska and Iowa.

¹³ Omaha-Council Bluffs Metropolitan Area Planning Agency, 2014. Comprehensive Economic Development Strategy (CEDS). Retrieved at: <https://mapacog.org/reports/comprehensive-economic-development-strategy-ceds/>

- Provide infrastructure, including state-of-the-art technology, to support business growth and expansion;
- Enhance public-private partnerships to address economic development needs in the region;
- Promote quality of life opportunities;
- Strengthen economic planning and management capabilities of rural local units of government in the region;
- Develop a regional development/redevelopment action plan; and
- Improve transportation accessibility in the Metropolitan Area Planning Agency region.

2.6.2 2019 DISASTER IMPACTS

All of the counties in this region were significantly impacted by the 2019 disasters (Figure 7).

Figure 7 – Omaha-Bluffs Metropolitan Area Planning Agency Composite Damage Analysis

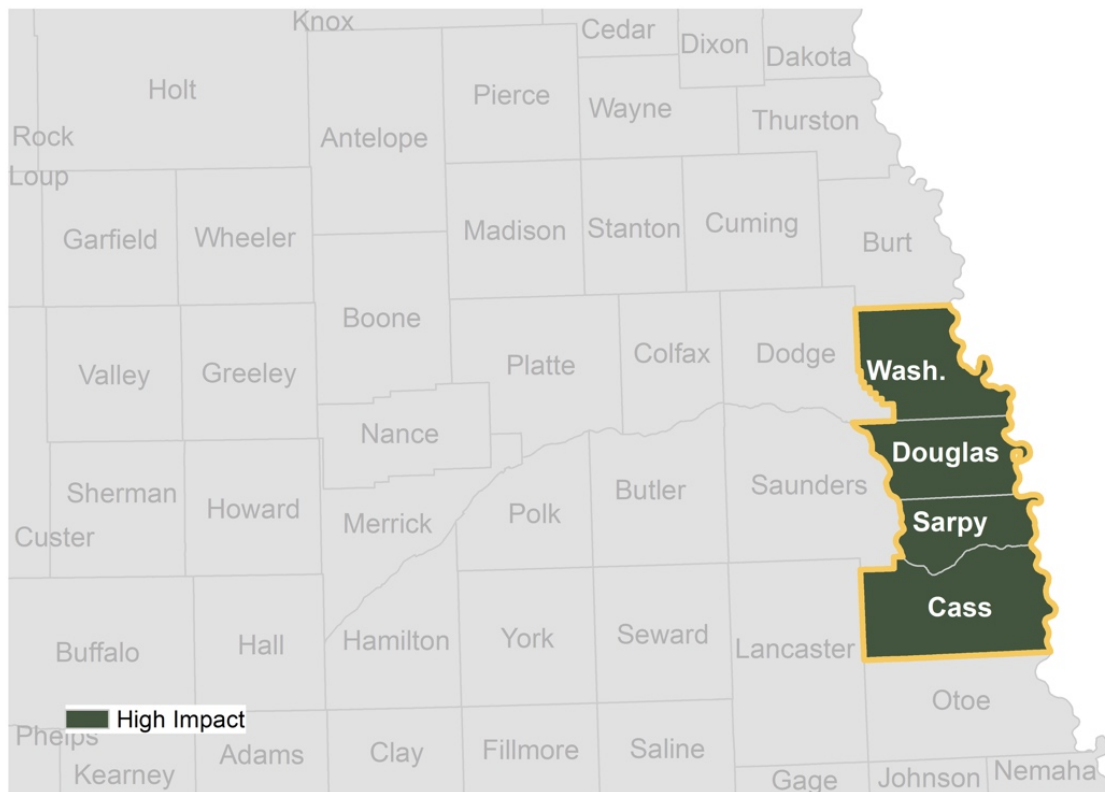


Table 6 provides a breakdown of scoring across each sector within the region.¹⁴

¹⁴ Note: a score of 0 in this figure and table does not necessarily mean a county saw no impact from the disasters. A 0 could indicate data were not reported, no damages occurred, or damage was not reported.

Table 6 – County-Level Analysis for the Omaha-Council Bluffs Metropolitan Area Planning Agency

County	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Cass	5	4	3	4.00	High
Sarpy	4	4	3.5	3.83	High
Douglas	4	1	4	3.00	High
Washington	3	2	3.5	2.83	High

2.6.3 REGIONAL ECOSYSTEM ANALYSIS

The 2019 disasters caused a high level of infrastructure damage in the region. Infrastructure is well utilized in this region to support the urban environment, which offers credence to the region’s preexisting goal of enhancing infrastructure resilience. Cass and Sarpy Counties saw a lot of housing damage, while Douglas and Washington Counties had more limited damage. This makes Cass and Sarpy good target areas to foster housing recovery that is sustainable, inclusive, and aligns with the unique characteristics of local communities.

There was a moderate amount of economic impact in the region from the 2019 disasters. Like other regions in the state, this impact was primarily driven by agriculture. However, this region also had a comparatively high level of additional economic impact, as measured by Small Business Association disaster loan data. Business recovery, particularly for small businesses, will be critical to supporting comprehensive community recovery.

Cass County was the most severely impacted in this region.

2.6.4 PRIORITIZATION FOR RECOVERY

On a broad level, infrastructure needs seem slightly more urgent in this area than those associated with housing or agriculture, though the region felt impacts across all sectors. The following strategies should be prioritized to support recovery and resilience in the region:

- Build state capacity to efficiently apply for and manage major federal funding programs (Cross-Cutting Issues, 2.1).
- Identify sources to meet gaps in funding related to open and standing disasters (Cross-Cutting Issues, 2.2)
- Develop post-disaster housing recovery guidance for the state and local governments (Housing, 2.3).
- Target key businesses driving economic vitality (e.g., major businesses, essential businesses) or providing vital goods and services in individual communities across the state to encourage preparedness, mitigation, response, and recovery planning (Economic, 1.4).
- Support long-term recovery groups to strengthen disaster case management and match identified needs to available funding programs and other support mechanisms (Health and Social Services, 2.2).

2.7 SOUTHEAST NEBRASKA DEVELOPMENT DISTRICT

The following section describes how characteristics of the pre-disaster economy in the Southeast region of Nebraska, along with the specific disaster impacts in the region, may inform disaster recovery strategies.

2.7.1 PRE-DISASTER ECONOMIC CONDITION

Southeast Nebraska's economy was driven by the agricultural industry, with much of the region's agricultural success attributed to the topography and soil type. The region is well-situated in the central corridor of the state and country, with ample highway, railroad, and interstate infrastructure supporting the transportation of goods within and across the region.

The region's 2018 CEDS highlights the strength of the region's robust education system.¹⁵ Schools in the region provided a strong foundation preparing students to join the workforce and offer valuable direct employment opportunities for educators, administrators, and other support staff. The CEDS also noted the quality and affordability of healthcare as a key strength, with numerous hospital and care facilities within the region and proximity to facilities in both Lincoln and Omaha. The 2018 CEDS for the region identified key challenges facing the region, including:

- Lack of available workforce housing;
- Physical health issues with a population that has a high prevalence of obesity;
- An aging population with significant projected increase in the proportion of residents age 65 or older in the coming decades;
- Increasing demand for rural transportation infrastructure and providers; and
- Need for increased broadband access and quality.

The CEDS also outlines action plans for the economic development district including corresponding objectives and strategies addressing the following elements:

- Place making (including health and wellness, housing, education, and quality of life);
- Infrastructure (including transportation, water, power, and broadband);
- Community resilience (including disaster preparedness and mitigation and response and recovery); and
- Economic development (including local business, agriculture, regional perspectives, and regional engagement).

¹⁵ Southeast Nebraska Development District. Comprehensive Economic Development Plan 2018-2023. Retrieved at: https://static1.squarespace.com/static/5ca4d6587046803ee9637bce/t/5d938546176984415a20f41e/1569949091862/CEDS_20190418_final_noprintersmarks.pdf

2.7.2 2019 DISASTER IMPACTS

Nemaha, Richardson, and Saunders counties were the most significantly impacted counties in the region (see Figure 8).

Figure 8 – Southeast Nebraska Development District Composite Damage Analysis

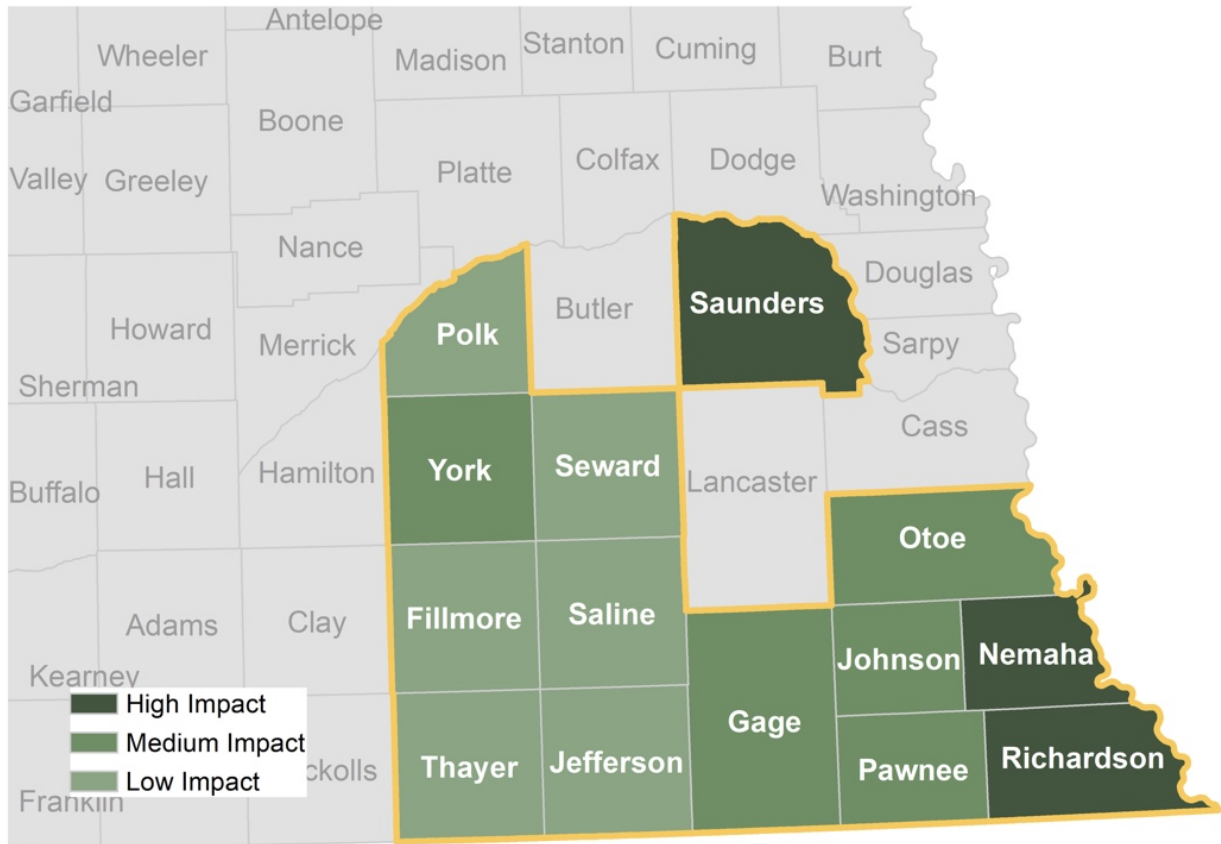


Table 7 provides an overview of the impacts across each sector and the breakdown of composite scores within the region.¹⁶

Table 7 – County-Level Analysis for the Southeast Nebraska Development District

County	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Nemaha	5	3	4	4.00	High
Saunders	4	3	3.5	3.50	High
Richardson	2	1	3	2.00	High
Johnson	5	0	1	2.00	Medium
Pawnee	4	0	1.5	1.83	Medium
York	5	0	0.5	1.83	Medium
Otoe	3	0	2	1.67	Medium
Gage	2	0	1.5	1.17	Medium
Polk	1	0	1.5	0.83	Low
Saline	1	1	0.5	0.83	Low
Seward	2	0	0.5	0.83	Low
Thayer	1	0	1	0.67	Low
Fillmore	1	0	0.5	0.50	Low
Jefferson	1	0	0.5	0.50	Low

2.7.3 REGIONAL ECOSYSTEM ANALYSIS

Almost a quarter of the counties in the region had a high level of infrastructure damage, and half had a medium or high level of infrastructure damage. The recovery process presents an opportunity to support pre-existing regional infrastructure priorities.

Pre-disaster, there was limited housing impact throughout the region. Four counties saw moderate-to-low housing impact, but increasing the availability of affordable, quality housing should remain a priority.

Only two counties had high levels of economic impact, primarily driven by agriculture.

¹⁶ Note: a score of 0 in this figure and table does not necessarily mean a county saw no impact from the disasters. A 0 could indicate data were not reported, no damages occurred, or damage was not reported.

Nemaha, Saunders, Richardson, Johnson, and Pawnee Counties were the most significantly impacted counties in the region.

2.7.4 PRIORITIZATION FOR RECOVERY

On a broad level, there is no single recovery priority for the Southeast Economic Development District given the varying impacts across sectors and counties within the district. Specifically, the following strategies should be prioritized in order to support recovery and resilience in the region:

- Promote infrastructure resilience at the local level by providing education and technical assistance to build awareness of best practices (Infrastructure, 2.2).
- Create public campaigns that educate homeowners, landlords, and renters on National Flood Insurance Program requirements, emphasizing the importance of maintaining flood insurance coverage (Housing, 2.2).
- Conduct outreach to business owners to help increase awareness of hazard vulnerability and risk-reduction activities (Economic, 1.1).
- Promote the uptake of crop, livestock, and equipment, wind, hail, and other types of insurance relevant to agricultural producers (Agriculture, 1.3).
- Support long-term recovery groups to strengthen disaster case management and match identified needs to available funding programs and other support mechanisms (Health and Social Services, 2.2).

2.8 SOUTH CENTRAL ECONOMIC DEVELOPMENT DISTRICT

The following section outlines how characteristics of the pre-disaster economy in the South Central region of Nebraska, along with the specific disaster impacts in the region, may inform disaster recovery strategies.

2.8.1 PRE-DISASTER ECONOMIC CONDITION

The South Central region was characterized by its strong agricultural sector and closely linked industries, including manufacturing, transportation, and wholesale trade. According to the region's 2019 CEDS, the area possessed strong transportation infrastructure well-suited to agricultural and manufacturing businesses.¹⁷ The region also faced significant challenges highlighted in the 2019 CEDS, including:

- Increasing prevalence of low-wage industries;
- Outmigration of highly educated and skilled workers aged 25 or younger;
- Inadequate high-quality and affordable housing; and
- Lack workers with the specific skills needed to fill vital positions (e.g., healthcare professionals).

The CEDS identified industry growth and innovation, workforce development, and housing as the region's top three priority areas for economic development, with the following goals:

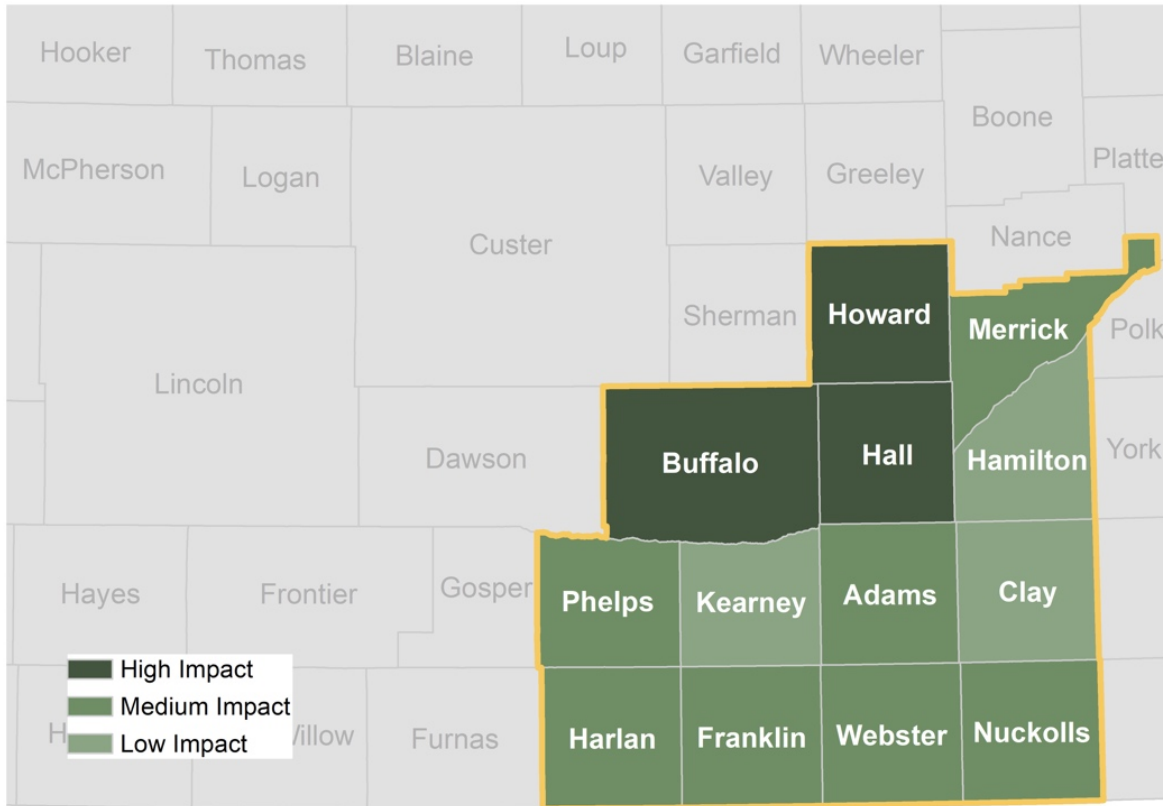
- To grow, sustain, and integrate efforts related to diversifying the regional economy, particularly in the agriculture-manufacturing-wholesale trade industry cluster.
- To attract, develop, and retain a skilled, competitive, and entrepreneurial workforce that meets the needs of the regional business community, particularly in the agriculture, manufacturing, and health care industries.
- To increase diverse and affordable housing options.

¹⁷ South Central Economic Development District. Comprehensive Economic Development Plan 2019-2023. Retrieved at: https://scedd.us/wp-content/uploads/2019/04/SCEDD_NE_CEDS-2019-2023-with-Action-Implementation-Plan.pdf

2.8.2 2019 DISASTER IMPACTS

Buffalo, Hall, and Howard counties were the most impacted counties in this region of the state (see Figure 9).

Figure 9 – South Central Economic Development District Composite Damage Analysis



The following table breaks down the composite scores for each county in the region.¹⁸

Table 8 – County-Level Analysis for the South Central Economic Development District

County	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Buffalo	2	5	4.5	3.83	High
Howard	3	4	3.5	3.50	High
Hall	3	2	4	3.00	High
Adams	3	0	2.5	1.83	Medium
Webster	3	0	2.5	1.83	Medium
Harlan	2	0	2.5	1.50	Medium
Nuckolls	2	0	2	1.33	Medium
Phelps	2	0	2	1.33	Medium
Merrick	1	0	2.5	1.17	Medium
Franklin	1	0	2	1.00	Medium
Kearney	1	0	1.5	0.83	Low
Clay	0	0	2	0.67	Low
Hamilton	0	0	0.5	0.17	Low

2.8.3 REGIONAL ECOSYSTEM ANALYSIS

The 2019 disasters primarily caused damage to the economy in this region. Every county in the region experienced some degree of economic impact, with a significant range in the degree of impact per county. The top three counties experiencing damage in the region—Buffalo, Howard, and Hall—all experienced high levels of economic damage. The remaining counties saw low-to-moderate damage. Economic impact in the region was driven by agriculture.

Prior to the 2019 disaster, the agricultural sector in the region was strong. Restoring this should be a key priority for recovery to restore the economic community and integrating resilience in development should be key priorities for recovery. Overall, the South Central Economic Development District had a low-moderate level of infrastructure damage; no counties in the region

¹⁸ Note: a score of 0 in this figure and table does not necessarily mean a county saw no impact from the disasters. A 0 could indicate data were not reported, no damages occurred, or damage was not reported.

experienced damage in the high category. While the majority of the region saw no housing damage, three counties did experience quantified damage

Two counties experienced high impact from housing damage, including Buffalo and Howard Counties. Recovery in these areas should account for the pre-existing challenges related to affordable and entry-level housing options as the recovery process progresses.

Buffalo, Howard, Hall, and Adams were the most affected counties in the region.

2.8.4 PRIORITIZATION FOR RECOVERY

Analysis of this region indicates that key focus areas for recovery include economic (agricultural) restoration, followed by infrastructure restoration to address sectors that were primarily impacted from the 2019 disasters. Specifically, the following strategies should be prioritized in order to support recovery and resilience in the region:

- Identify affordable housing solutions for individuals experiencing homelessness (or at risk-of homelessness) (Housing, 3.2).
- Target key businesses driving economic vitality (e.g., major businesses, essential businesses) or providing vital goods and services in individual communities across the state to encourage preparedness, mitigation, response, and recovery planning (Economic, 1.4).
- Develop tools to collect and organize information and resources that will help farmers, ranchers, and agricultural goods processors respond and recover (Agriculture, 1.1).
- Monitor behavioral health impacts and needs as they evolve over time (Health and Social Services, 1.2).
- Engage in recovery actions that conserve, rehabilitate, and restore natural and environmental assets (Natural and Cultural Resources, 1.1).

2.9 INDIVIDUAL COUNTIES

The following section describes characteristics of the pre-disaster economy in the remaining counties in Nebraska and may inform disaster recovery strategies.

2.9.1 PRE-DISASTER ECONOMIC CONDITION

2.9.1.1 Butler County

Butler County does not participate in an economic development district. The county's 2007 Comprehensive Plan includes the following focus areas for future land use and development:

- Expanding land uses that are compatible with existing uses;
- Encouraging economic expansion both within and outside of agricultural sectors;
- Supporting development contributing to improved quality of life; and
- Protecting and preserving the environment.¹⁹

2.9.1.2 Dakota County

Dakota County is part of the Siouxland Interstate Metropolitan Planning Council. Key strengths identified in the region's draft 2020 CEDS include its:

- Culture of embracing new manufacturing technology;
- Central location within the state and region and strong transportation infrastructure;
- High quality and diverse education opportunities supporting workforce development; and
- Strong quality of life including low housing costs, quick access to outdoor recreation activities, and accepting and diverse community.²⁰

The CEDS includes an action plan with the following goals, each of which include associated objectives and detailed actions:

- To create high-skill, higher-wage jobs within innovative clusters as a means to diversify the regional economy and improve economic conditions in the area for years to come.
- To develop and retain a highly trained, competitive, and entrepreneurial workforce that addresses and compliments the growing needs of the regional business community.
- To invest in infrastructure improvements such as roads, bridges, sewers, water facilities, broadband, and multi-modal transportation systems that will strengthen and diversify the regional economy.
- To develop diverse housing options for all income levels to ensure the availability of housing supply for workers brought in by expanding businesses and new firms in the Region.

¹⁹ Butler County, 2007 Comprehensive Plan, Future Land Use Plan. Retrieved at: https://co.butler.ne.us/pdfs/planning/comp_plan_7.pdf

²⁰ Siouxland Interstate Metropolitan Planning Council, Draft SIMCO Comprehensive Economic Development Strategy (CEDS) 2020-2024. Retrieved at: <https://simpc.org/divisions/economic-development/comprehensive-economic-development-strategy/>

- To encourage resident retention and to develop cost-effective, regional solutions to local problems that better serve residents while providing a high quality of life.

2.9.1.3 Lancaster County

Lancaster County does not participate in an economic development district. The Economic Development of the county's 2016 Comprehensive Plan (LPlan 2040) highlight key industries targeted for growth in the coming years, including:

- Biotechnology;
- Value Added Agriculture;
- Specialty Electronics;
- Technology ;
- Technical Customer Support;
- Insurance and Financial Services; and
- Healthcare.²¹

Key strategies for economic development identified in LPlan 2040 include:

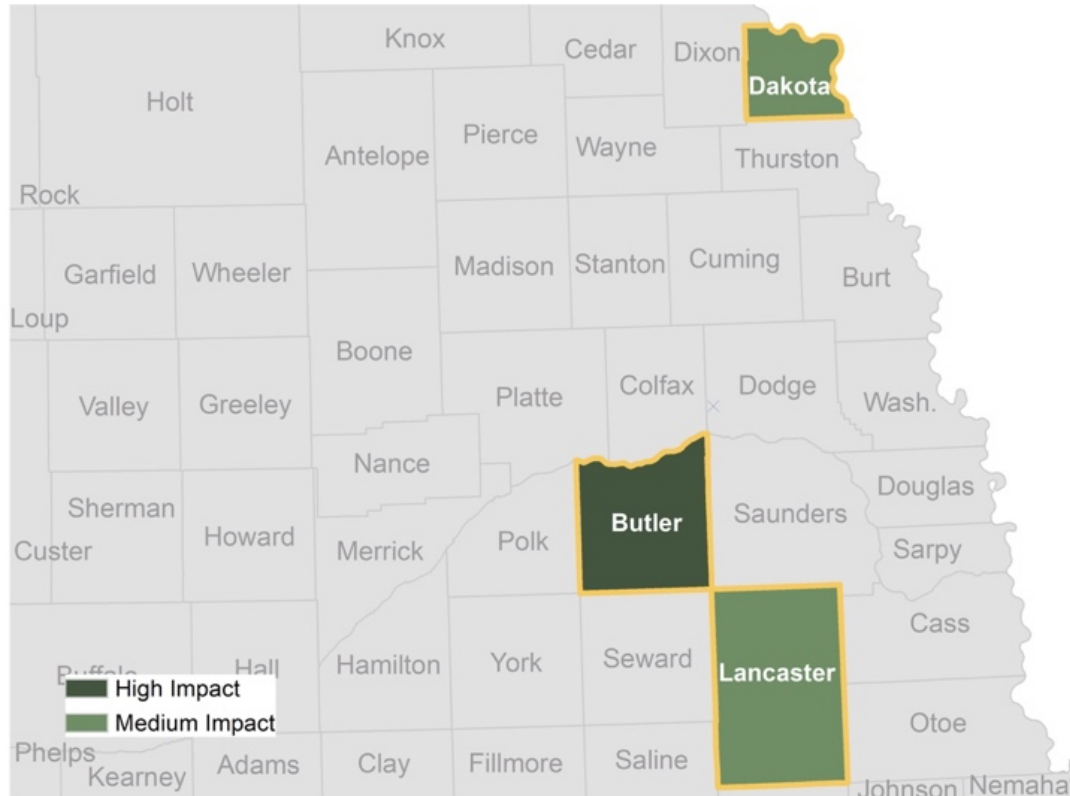
- Developing a policy on the use of incentives (e.g. Tax Increment Financing) for primary employers;
- Continuing close coordination with the Lincoln Partnership for Economic Development to maintain an inventory of potential economic development sites; and
- Increasing broadband access and speeds through the "Fiber to Home Project."

²¹ Lincoln Metropolitan Planning Organization, LPlan 2040. Retrieved at: <https://www.lincoln.ne.gov/city/plan/plan2040/2016%20update/business.pdf>

2.9.2 2019 DISASTER IMPACTS

Of the counties that do not belong to an economic development district, Butler County was the most significantly impacted.

Figure 10 – Non-Economic Development District County Composite Damage Analysis



The table below provides a breakdown of the composite scoring represented in Figure 10.²²

Table 9 – County-Level Analysis for Individual Counties

County	Infrastructure Impact Score	Housing Impact Score	Economic Impact Score	Composite Impact Score	Damage Category
Butler	3	4	4	3.67	High
Lancaster	4	0	1	1.67	Medium
Dakota	3	0	1	1.33	Medium

²² Note: a score of 0 in this figure and table does not necessarily mean a county saw no impact from the disasters. A 0 could indicate data were not reported, no damages occurred, or damage was not reported.

2.9.3 COUNTY ECOSYSTEM ANALYSIS

2.9.3.1 Butler County

Butler County experienced a high level of impact from the 2019 disasters—especially to housing and the economy. Although infrastructure was also damaged, housing and the economy should be priority target areas for recovery. The county should mirror the priorities of the state in order to promote a resilient recovery process.

2.9.3.2 Dakota County

Dakota County experienced a moderate level of impact from the 2019 disasters, mostly due to infrastructure damage. Dakota County is part of Siouxland Interstate Metropolitan Planning Council and therefore needs to balance county, state, and interstate (Iowa and South Dakota) priorities to promote successful recovery. The priorities outlined by Siouxland Interstate Metropolitan Planning Council reflect the need to ensure infrastructure is accessible and mobility is increased in the region. These should be priorities as the county moves forward with recovery.

2.9.3.3 Lancaster County

Lancaster County experienced a moderate level of impact from the 2019 disasters, driven by a high level of infrastructure damage. Similar to Dakota County, the priorities of the county reflect the need to ensure infrastructure is resilient and accessible. These priorities should be central as the county moves forward with recovery.

APPENDIX A: LONG-TERM RECOVERY STRATEGY MATRIX

This matrix provides at-a-glance overview of strategies from the *Long-Term Recovery and Resilience Plan* that align with pre-disaster priorities of each of the economic regions identified in the report.

Recovery Support Function	Strategy Number	Central	Northeast	Panhandle	West Central	Metro ²³	Southeast	South Central
Cross-Cutting Issue	2.1		X		X	X		
Cross-Cutting Issue	2.2					X		
Cross-Cutting Issue	5.1	X						
Infrastructure	1.1		X	X				
Infrastructure	2.2						X	
Economics	1.1						X	
Economics	1.4					X		X
Economics	2.1		X					
Economics	3.1		X					
Housing	2.1	X			X	X		
Housing	2.2						X	
Housing	2.3				X	X		
Housing	3.2	X						X
Agriculture	1.1		X		X			X
Agriculture	1.3	X			X		X	
Health and Social Services	1.2			X				X
Health and Social Services	2.2						X	
Health and Social Services	2.4	X		X				
Health and Social Services	3.1			X				
Health and Social Services	3.2			X				
Natural and Cultural Resources	1.1							X

²³ Refers to Omaha-Council Bluffs Metropolitan Area.

APPENDIX B: METHODOLOGY

To determine each county’s impact score, the raw data in Table 10 were divided into six even quantiles, or groups, that correspond with a numerical score from zero to five. Impacts were categorized as follows:

- Impacts that fell into the lowest quantile received a score of 0 (indicating no damage or no data).
- Impacts that fell into the highest quantile received a score of 5 (the most severe damage).
- Impacts between the lowest and highest range received scores between one and four.

The economic sector was analyzed using two datasets (small business loan data and crop indemnity data), the economic impact score is the average of the two sub-scores. When data were not available, districts received a score of zero.

The composite scores presented in the tables throughout the report are an evenly weighted average of the individual sector scores (housing, infrastructure, economic). The impacts to specific counties were determined by creating three equal groups corresponding to high, medium, and low categories of damage.

The findings in this analysis are limited by a lack of quantifiable data in other important sectors, such as health and social services, and the possibility that damages were underreported or not reported at all.

Table 10 – Composite Data Sector Category Information

Sector	Data Type	Data Source
Infrastructure	Value of eligible Public Assistance projects divided by pre-disaster value of public infrastructure, by county	Federal Emergency Management Agency Public Assistance Data for DR-4420 (2020) Nebraska Department of Revenue (2018)
Housing	Value of eligible housing damage divided by the pre-disaster property values, by county	Federal Emergency Management Agency Individual Assistance Data for DR-4420 (2020) Small Business Association Data for DR-4420 (2020) Nebraska Department of Revenue (2018)
Economy	Small Business Association Loan Data, by county	SBA Data for DR-4420 (2020)
	Crop indemnity for corn, grain, sorghum, oats, soybeans, and wheat, by county	United States Department of Agriculture Risk Management Agency (2020)