

Community Profile

City of Dawson

**Dallas County
Hazard Mitigation Plan 2023**

Local Planning Team

Table DSN.1: Dawson Local Planning Team

Name	Title	Jurisdiction
Robin Wolfe	City Clerk	City of Dawson
Clarence Morman	Councilman	City of Dawson
Colton Morman	Citizen/former Mayor	City of Dawson

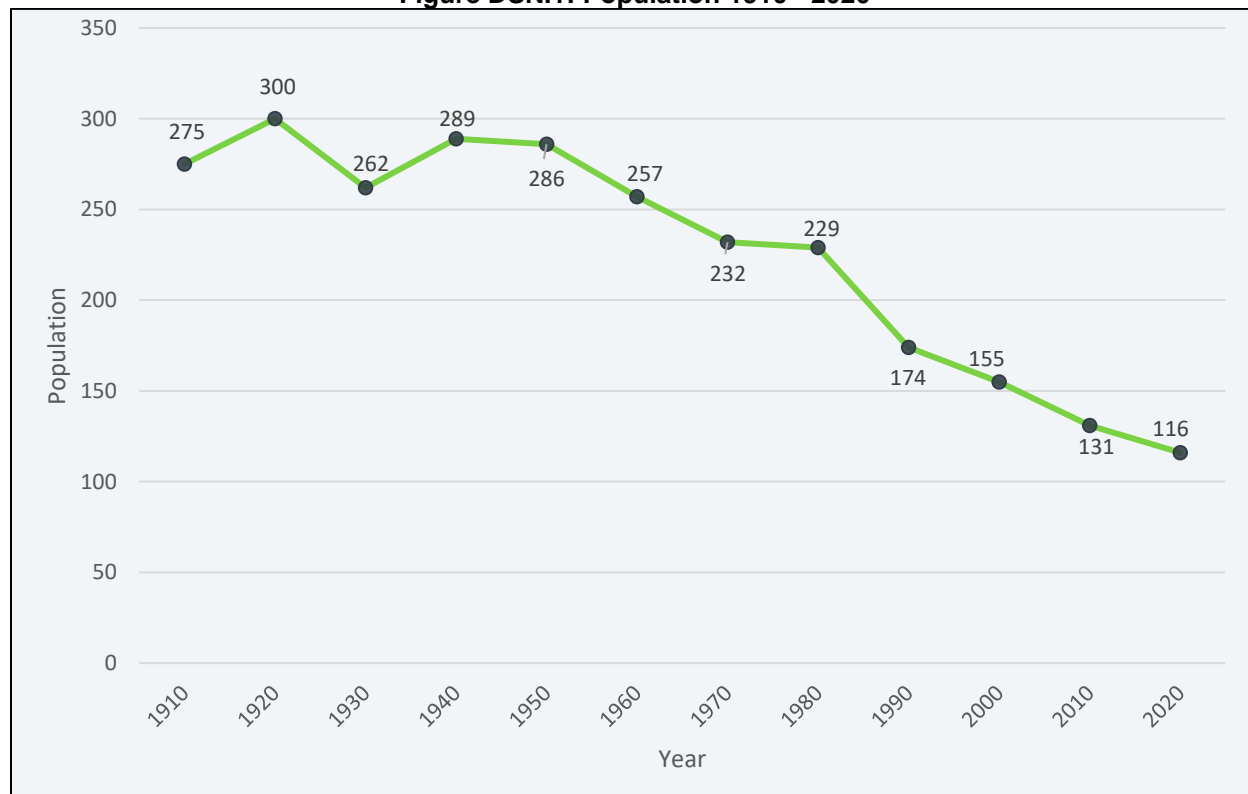
Location and Geography

The City of Dawson is located in northwest Dallas County and covers an area of 0.49 square miles. Major waterways in the area include the North Raccoon River, which runs along the north side of the city.

Demographics

Dawson’s population in 2020 was 116. The following figure displays the historical population trend from 1910 to 2020. This figure indicates that the population of Dawson fluctuated from 1910 to 1940. Since then, the population has gradually decreased. A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which can make implementation of mitigation projects fiscally challenging. Dawson’s population accounted for 0.1% of Dallas County’s population in 2020.¹

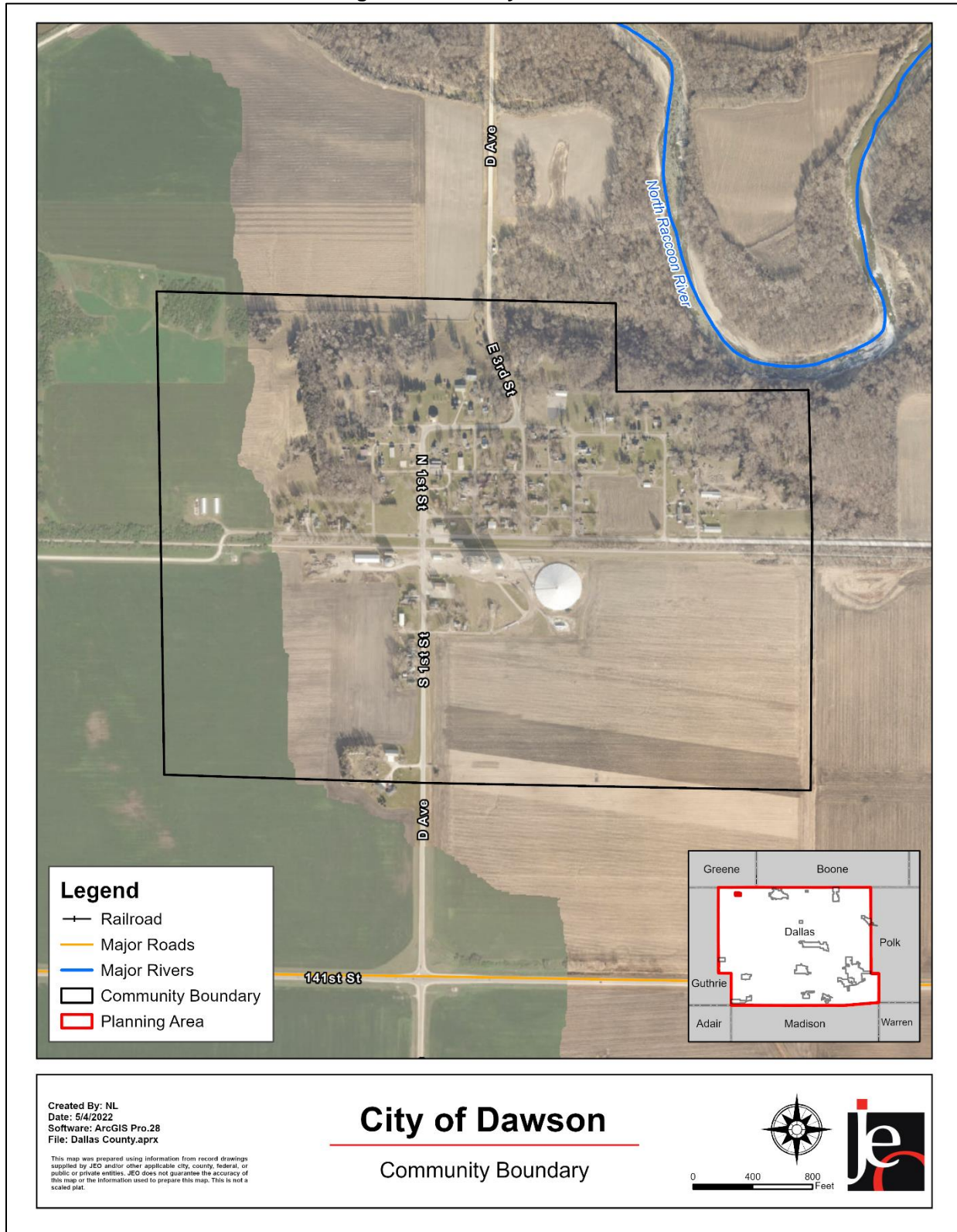
Figure DSN.1: Population 1910 - 2020



Source: U.S. Census Bureau

¹ United States Census Bureau. “2020 Census Redistricting Data (Public Law 94-171): P1: Race.” <https://data.census.gov>.

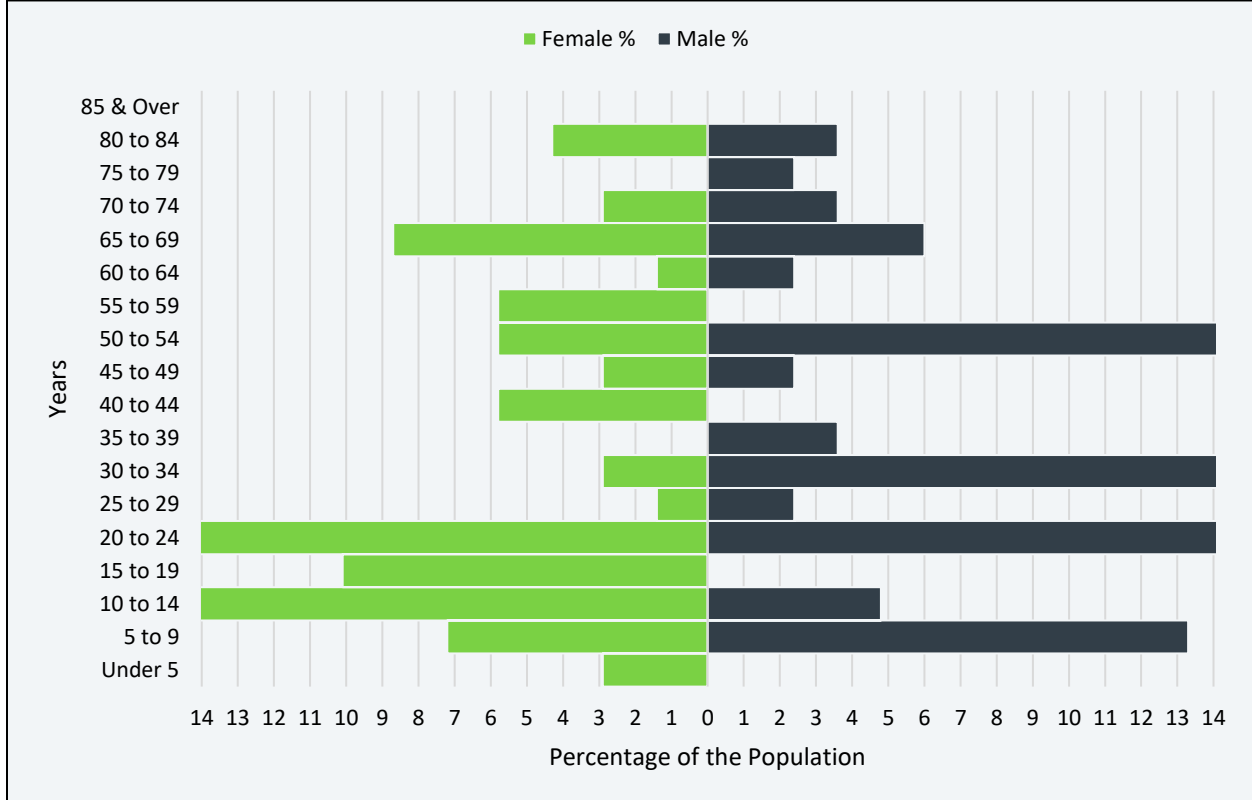
Figure DSN.2: City of Dawson



The young, elderly, and minority populations may be more vulnerable to certain hazards than other groups. Looking at Dawson’s population:

- **11.2% is non-white.** Since 2010, Dawson became more racially diverse. In 2010, 6.9% of the Dawson’s population was non-white. By 2020, 11.2% was non-white.^{2 3}
- **30.4 median age.** The median age of Dawson was 30.4 years old in 2020. The population became younger since 2010, when the median age was 37.7.^{4 5}

Figure DSN.3: Population by Age Cohort and Sex (2020)



Source: U.S. Census Bureau⁴

The figure above shows Dawson’s population percentage broken down by sex and five-year age groups. Dawson’s population is younger with a higher percentage of the population below 40 years of age. This likely indicates a growing population in the years to come.

² United States Census Bureau. “2020 Census Redistricting Data (Public Law 94-171): P1: Race.” <https://data.census.gov>.

³ United States Census Bureau. “2010 Census Redistricting Data (Public Law 94-171): P1: Race.” <https://data.census.gov>.

⁴ United States Census Bureau. “2020 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov>.

⁵ United States Census Bureau. “2010 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov>.

Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards than other groups. Dawson's population has:

- **1.4% of people living below the poverty line.** The poverty rate (1.4%) in Dawson was lower than the state's poverty rate (11.1%) in 2020.⁶
- **\$55,662 median household income.** Dawson's median household income in 2020 (\$55,662) was about \$6,200 lower than the state (\$61,836).⁷
- **0% unemployment rate.** In 2020 Dawson had a lower unemployment rate (0%) compared to the state (3.9%).⁸
- **25.1% of workers commuted 30 minutes or more to work.** Fewer workers in Dawson commuted 30 minutes or more to work than workers commuting less than 15 minutes (25.1% compared to 40.2%).⁹

Major Employers

The city's major employer is the Landus Cooperation. According to the local planning team, approximately 100% of residents commute to other communities for work, including Perry, Des Moines Metro, and Boone.

Housing

The age of housing may indicate which housing units were built prior to the development of state building codes. Vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards.

- **94.8% of housing built prior to 1970.** Dawson has a greater share of housing built prior to 1970 than the state (94.8% compared to 50.4%).¹⁰
- **30.2% of housing units vacant.** Since 2010, Dawson's vacancy rate decreased. In 2010 the vacancy rate was 10.7%. By 2020, 30.2% of housing units were vacant.^{11 12}

⁶ United States Census Bureau. "2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." <https://data.census.gov>.

⁷ United States Census Bureau. "2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." <https://data.census.gov>.

⁸ United States Census Bureau. "2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." <https://data.census.gov>.

⁹ United States Census Bureau. "2020 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." <https://data.census.gov>.

¹⁰ United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov>.

¹¹ United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov>.

¹² United States Census Bureau. "2010 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov>.

Section Seven: City of Dawson Community Profile

- **3.1% mobile and manufactured housing.** The City of Dawson had a smaller share of mobile and manufactured housing (3.1%) compared to the state (3.6%).¹³
- **14.9% renter-occupied.** The rental rate of Dawson was 14.9% in 2020. The percentage increased since 2010, when renter occupied housing was at 10%.^{14 15}

The city has four mobile homes located in different locations, but does not have a large mobile home park.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Dawson has a mayor, a five-member city council, and the following offices.

- Clerk/Treasurer
- Water/Sewer Superintendent

Capability Assessment

The capability assessment consisted of a Capability Assessment Survey completed by the jurisdiction and a review of local existing policies, regulations, plans, and the programs. The survey is used to gather information regarding the jurisdiction's planning and regulatory capability; administrative and technical capability; fiscal capability; and educational and outreach capability.

Table DSN.2: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operations Plan	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	Yes
	Building Codes	No
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	

¹³ United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov>.

¹⁴ United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov>.

¹⁵ United States Census Bureau. "2010 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov>.

Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	
Fiscal Capability	Capital Improvement Plan/ 1 & 6 Year Plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	Yes
	Storm Water Service Fees	Yes
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
Other (if any)		
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
Other (if any)		

Table DSN.3: Overall Capability

Overall Capability	Limited/Moderate/High
Financial resources needed to implement mitigation projects	Limited
Staff/expertise to implement projects	Limited
Community support to implement projects	Limited
Time to devote to hazard mitigation	Limited

Plan Integration

Dawson has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. The city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Funding and Grants

The City of Dawson's funds are sufficient to pursue new capital projects. The city has a large portion of municipal funds dedicated to improving transportation routes that run through town. The city's municipal funds have increased over recent years. All projects identified in the hazard mitigation plan are included in the municipal budget. The county roads department applied for a grant to pay for the new roads being brought through town and was awarded it.

Comprehensive Plan (2019)

The comprehensive plan is designed to guide the future actions and growth of the city. The city recently updated their plan in 2019.

Future Development Trends

Over the past five years, the city has not performed many development projects. Four houses have been demolished and the city has allowed the lots to be transformed into green space. There are currently no housing, business, or industry plans in place for the next five years.

Community Lifelines

Transportation

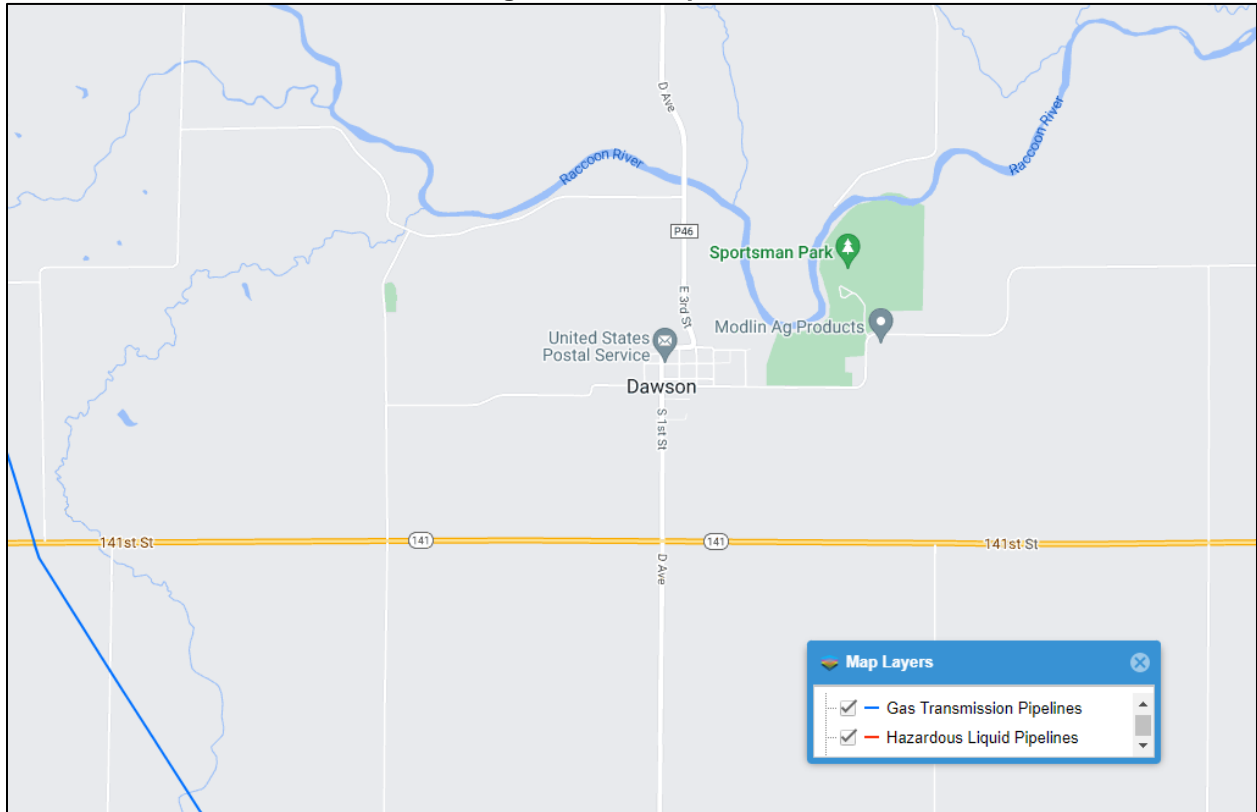
Dawson's major transportation corridors include State Highway 141 and County Highway P46. The most traveled route is Highway 141 with an average of 3,220 vehicles daily, 443 of which are trucks.¹⁶ According to the local planning team, chemicals are regularly transported along local routes such as P46 traveling north and south and Railroad Ave. traveling east and west. These are typically farm chemicals being transported such as anhydrous. The Perry/Dawson fire station, an identified critical facility, is located along a main transportation route of on P46 and 1st Street. The P46 Dawson Water pump house is also located along a main transportation route north out of town. The nearest airport, Perry Municipal Airport, is located about 3 miles east of Dawson. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

¹⁶ Iowa Department of Transportation. 2020. "Iowa Traffic Data". Accessed May 2022.
<https://iowadot.maps.arcgis.com/apps/MapSeries/index.html?appid=0cce99afb78e4d3b9b24f8263717f910>.

Hazardous Materials

A gas transmission pipeline travels near the city and can be seen as a blue line in the figure below.

Figure DSN.4: Pipelines



Source: National Pipeline Mapping System¹⁷

According to the Tier II System reports submitted to the Iowa Department of Natural Resources, there is one chemical storage site in Dawson that contains hazardous chemicals. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table DSN.4: Chemical Storage Sites

Facility Name	Address	Located in Floodplain?
Landus Cooperative - Dawson	212 S First Street	No

Source: Iowa Department of Natural Resources¹⁸

Health and Medical Facilities

According to the Iowa Department of Inspection and Appeals, there are no medical and health facilities located within the community.

¹⁷ National Pipeline Mapping System. 2022. "Public Viewer." Accessed April 2022. <https://pvnpm.phmsa.dot.gov/PublicViewer/>.

¹⁸ Iowa Department of Natural Resources. 2022. "Emergency Response - Tier II Chemical Storage." Accessed April 2022. <https://facilityexplorer.iowadnr.gov/facilityexplorer/>.

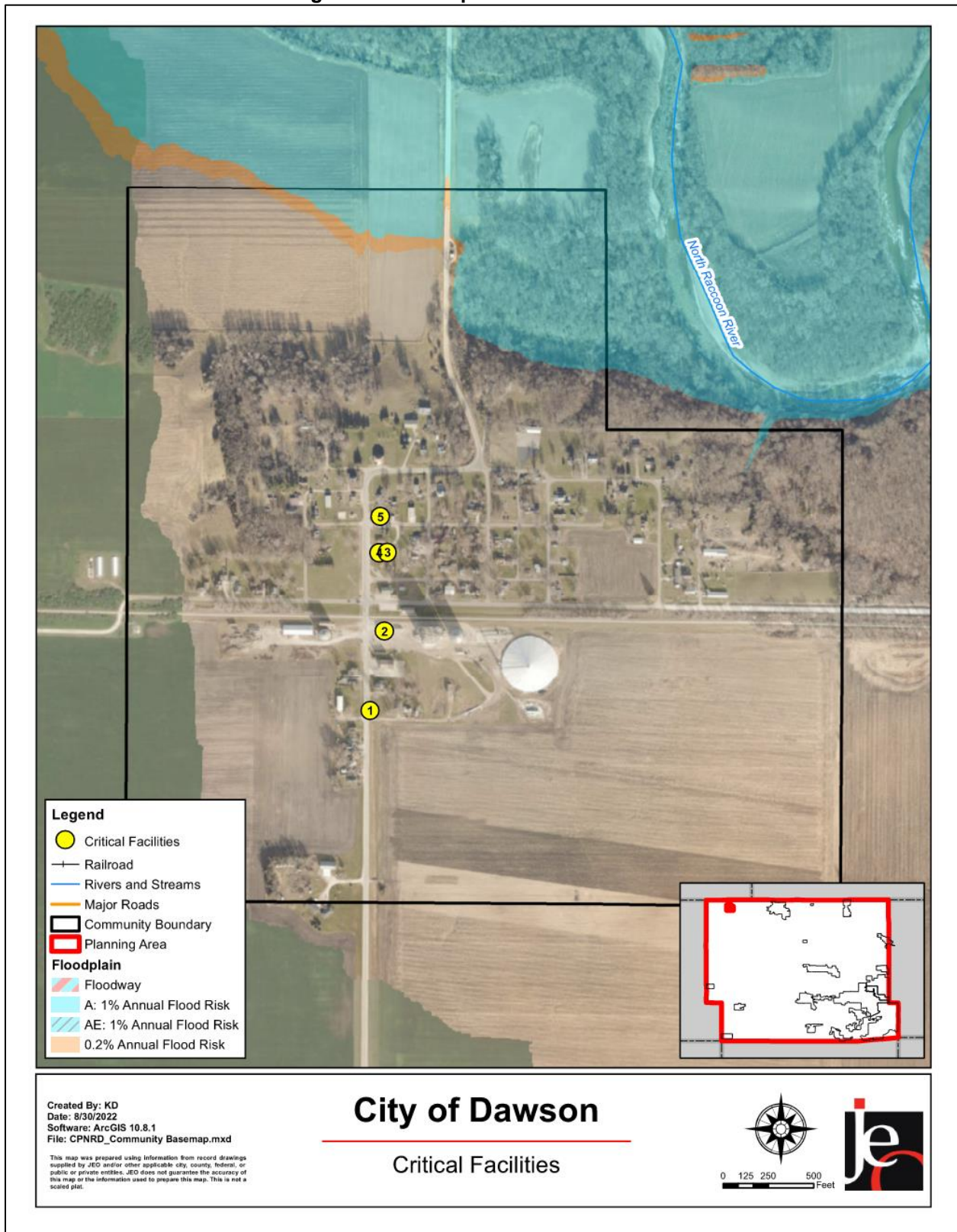
Critical Facilities

The local planning team identified critical facilities that are vital for disaster response, public shelter, and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as a part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table DSN.5: Critical Facilities

CF #	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Dawson Fire Station	Y	N	N
2	Landus Coop - Dawson	N	N	N
3	Water Tower	N	N	N
4	Pump House	N	N	Y
5	City Hall	Y	N	N

Figure DSN.5: Map of Critical Facilities



Parcel Improvements and Valuation

The planning team requested GIS parcel data from the County Assessor as of July 2022. This data allowed the planning team to analyze the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table DSN.6: Dawson Parcel Improvements and Value in the 1% Annual Flood Risk Area

Total Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	% of Improvements in Floodplain
78	\$4,429,480	2	\$85,540	3%

Source: County Assessor, 2022

Table DSN.7 Dawson Parcel Improvements and Value in the 0.2% Annual Flood Risk Area

Total Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	% of Improvements in Floodplain
78	\$4,429,480	1	\$54,020	1%

Source: County Assessor, 2022

Table DSN.8: Dawson Flood Map Products

Type of Product	Product ID	Effective Date	Details
FIS Report	19049CV000B	12/7/2018	Flood Insurance Study

Source: FEMA Flood Map Service Center¹⁹

¹⁹ Federal Emergency Management Agency. 2022. "FEMA Flood Map Service Center." Accessed July 2022. <https://msc.fema.gov/portal/advanceSearch>.

Hazard Prioritization

The hazards discussed in detail below were selected by the local planning team from the county hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities. For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment*.

Severe Thunderstorms (includes Hail and Lightning)

Severe thunderstorms are a regular part of the climate and weather for Dawson. These storms can cause damage through lightning strikes, hail, and high winds. The NCEI reports 22 instances of severe thunderstorms occurring in Dawson from 1998 to 2019. The typical damage seen caused by these severe thunderstorms was toppled trees and power poles due to high winds. These storms caused a total of \$382,000 worth of structural damage. The most damaging storm occurred in 2008 and resulted in numerous trees uprooted and closing all but one road. Three house sustained tree damage, a few LP tanks leaked due to tree damage, and a grain elevator sustained damage in town. The top concern identified by the local planning team was the loss of power. To reduce risk and impacts to this hazard, the city has placed their powerlines underground.

Severe Winter Storms

Severe winter storms are a regular part of the climate and weather for Van Meter. Severe winter storms include blizzards, ice accumulation, heavy snow, and winter storms. These storms can cause power outages during bitterly cold temperatures, road closures, and economic impacts. According to the NCEI, there were 79 winter storm events in Dallas County from 1996 to 2021. These events resulted in \$6,613,680 in property damages, with no injuries or deaths reported. Additionally, the USDA Risk Management Agency reported almost \$375,000 in crop damages from severe winter storm events from 2000 to 2021. According to the local planning team a snowstorm in 2008 closed the town for multiple day. Downed trees covered roads and snow made road impassable.

Significant concerns identified by the local planning team are the loss of power and water plants shutting down. The city has not experienced any structural damage to critical facilities from severe winter storms. To reduce risk and impacts to this hazard, the city has placed 99% of the powerlines underground of them having been buried and arranged for an emergency use generator. According to the local planning team, the city's snow removal resources are sufficient.

Tornado and Windstorm

The local planning team identified tornado and windstorm as a top hazard due to their prevalence in the area and potential for damage and loss of life. Windstorms are common across the county and can cause property and tree damage and brief power outages. Tornadoes are much less common, but the impacts can be far greater. Between 1996 and 2021, the NCEI recorded 31 high wind events in Dallas County. No tornadoes have been reported in Dawson. According to the local planning team, derecho winds have impacted the city and resulted in damage to cars and buildings from downed trees. The top concern of the planning team is the loss of power and damage to the water tower or pumphouse. To minimize the effects of tornadoes and windstorms, the city has placed their powerlines underground.

Mitigation Strategy

New Mitigation and Strategic Actions

Mitigation Action	Backup Generator
Description	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters.
Hazard(s)	All hazards
Estimated Cost	\$40,000+
Funding	City General Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	City Hall
Status	Not started

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (e.g., annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin, including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Mayor and City Clerk. The plan will be reviewed annually. The public will be included in the review and revision process via letters to residents, council meetings, and social media updates.