INCREASE COMMUNITY RESILIENCY

Resilience and resource efficiency measures identified for the city's comprehensive plan will improve its ability to respond and recover quickly from natural disasters, and reduce vulnerabilities to future disasters using conservation, community design, and engineering technology solutions. Good stewardship of natural areas and forward-thinking about building resilient communities and supporting infrastructure (referred to as "blue sky planning") should also help West Fargo adapt to changing climate conditions or extreme, unexpected weather events.

The city's commitment to resilience and resource efficiency measures starts with implementation of the strategies and partnerships identified in the North Dakota Multi-Hazard Mitigation Plan and the Cass County Emergency Operations Plan. The West Fargo Police Department oversees emergency preparedness activities for the city at this time, which should expand in the future to include other departments in pre-disaster planning activities. The goal of these efforts should be to make the community more resilient and resource efficient by way of preferred development types, patterns, locations and intensities depicted in the Deferred Development and Growth Map, and by way of infrastructure strategies (natural and man-made systems) that provide multiple lines of defense against hazardous events.

Generally speaking, the city should promote resilience and resource efficiency measures through encouragement, incentives, regulation and leading by example. The topics below identify early targets for improving readiness and addressing environmental/infrastructure vulnerabilities in West Fargo. A Pre-Disaster Mitigation Plan for West Fargo developed after adoption of the comprehensive plan should evaluate the overall capability of the city to reduce or eliminate vulnerabilities to natural hazards and outline a coordinated mitigation strategy for pre-disaster planning and disaster response (complementing the work completed for the statewide and countywide initiatives before).

RECOMMENDATIONS

Manage Inland Flooding

The Red River regularly floods and spills into surrounding cities and towns, reaching flood stage in 49 of the last 110 years. In 2008, studies and partner agreements in the region were signed to complete environmental studies, and begin permitting and design processes for a permanent solution to the problem.

The FM Area Diversion Project (the result of the studies and plans started in 2008) is an initiative to reduce flooding vulnerabilities in the Red River Valley. The project, extending thirty-six miles and measuring 1,500 feet across, will cost $2.2 billion with funding from federal, state and local resources (and potentially a public-private partnership). The Flood Diversion Authority will oversee the project, working with the U.S. Army Corps of Engineers. Completion of the FM Area Diversion Project would significantly reduce inland flooding vulnerabilities for western portions of West Fargo and surrounding areas.

Thinking more-locally, the city should also implement a community-wide stormwater management strategy that spans the boundaries of individual parcels to collect and store stormwater in local lakes, ponds, streams and swales for groundwater infiltration. An interconnected stormwater retention system — connected by either gravity or pump station technology — could help manage flood events.

- Next Step: City officials should carefully monitor studies, permitting, funding, etc. for the FM Area Diversion Project and plan local policies and resources accordingly. Continue to implement plans, programs, policies, and projects to meet the city's requirements under the Municipal Separate Storm Sewer Systems (MS4) Phase II Permit; highlighting opportunities to connect stormwater infrastructure throughout the community into a single system.
- Responsible Party: City Administrator with support from the Planning Department. Public Works Department with support from the Planning Department

Improve Emergency Preparedness

The North Dakota Multi-Hazard Mitigation Plan evaluates the probability and extent of potential statewide threats to people and property. High-level threats identified for the State include: severe winter weather, severe summary weather, flooding and wildland fire. The Plan addresses the overall capability of state and local governments to reduce or eliminate the vulnerability of communities to these hazards, and outlines a coordinated mitigation strategy for pre-disaster planning and disaster response.

Cass County Emergency Management and the City of West Fargo Police Department oversee emergency preparedness activities for the community. Memorandums of Understanding with Cass County and the City of Fargo provide shared resources for pre-disaster planning and disaster response. City of West Fargo officials should continue to streamline MOUs and other processes to eliminate potential inefficiencies before to an emergency declaration. A local Hazard Mitigation Committee — working with county, state and federal partners — should also be formed to study and embed resiliency in future city initiatives: land development, infrastructure planning, conservation planning, etc. Ultimately, resiliency-thinking should spread to all city departments.

- Next Step: Develop a Pre-Disaster Mitigation Plan for West Fargo after adoption of the comprehensive plan to evaluate the overall capability of the city to reduce or eliminate vulnerabilities to natural hazards and outline a coordinated mitigation strategy for pre-disaster planning and disaster response.
- Responsible Party: City Administrator with support from the Police, Planning, Engineering and Public Works Departments

Consider Zero Waste Initiative

The city currently contracts with Waste Management of North Dakota for single stream, curbside recycling in residential neighborhoods. The program is very popular throughout the community and participation is high at this time. A zero waste initiative in West Fargo — promoting reduction, reuse, recycle and compost components — would strengthen the city's leadership for waste reduction in North Dakota, and help brand the community as forward-thinking with the likes of Boulder, CO; Minneapolis, MN; and Austin, TX.

Several programs are available to divert waste from the landfill, including aggregate recovery, a 'drop and swap' programs, various recycling programs, and food and landscape waste composting initiatives. City officials should study the merits of a zero waste initiative for West Fargo in terms of environmental, social and economic benefits, and visit other cities throughout the U.S. with successful programs underway to learn more.

- Next Step: Study the feasibility of implementing a zero waste initiative in West Fargo, and act on reasonable findings and recommendations from the study in future years.
- Responsible Party: City Administrator with support from the Public Works Department

MENDATIONS

- Increase Energy Conservation and Efficiency

Many developers and cities throughout the U.S. are incorporating LEED — Leadership in Energy and Environmental Design — principles into the design of buildings, blocks, neighborhoods and development activity centers. LEED-certified projects are resource efficient, especially in terms of water and energy use, greenhouse gas emissions, and off-site impacts.

West Fargo can promote energy conservation and efficiency through methods of encouragement, incentives, regulation and leading by example. Government operations and buildings should be models for resource efficiency and renewable sources, and provisions should be made in local rules and policies to promote renewable energy options for homes and businesses in the area. Reinvestment in existing areas of the city — either through infill development or redevelopment — can also more energy efficient compared to low-density, sprawling development patterns.

- Next Step: Complete an energy audit of government operations and buildings in West Fargo to identify opportunities that let the city lead by example in terms of energy conservation and efficiency. The audit should also include a review of existing rules and policies that promote or prohibit energy conservation in the community for developers, residents and business owners. Act on reasonable findings and recommendations from the audit in future years.

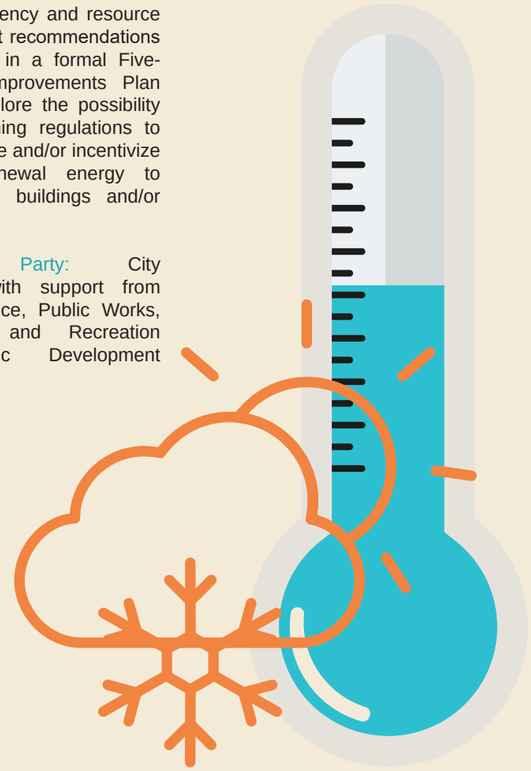
- Responsible Party: City Administrator with support from the Planning Department

- Considering Climate and Infrastructure

Eastern North Dakota experiences extreme weather changes throughout the year, from warm/hot summers to extremely cold, windy winters. Drastic changes in seasonal conditions — West Fargo's climate — may increase stress and shock on built infrastructure like stormwater, water and sewer systems; road networks; and bridges. This may increase maintenance and rehabilitation costs for existing infrastructure, damage private property, disrupt services, or inconvenience residents, business owners, etc. in extreme cases.

- Next Step: Complete an Infrastructure Investment Strategy Study for the city that evaluates construction, operation, maintenance and rehabilitation costs for infrastructure in terms of resiliency and resource efficiency. Adopt recommendations from the Study in a formal Five-Year Capital Improvements Plan for the city. Explore the possibility of updating zoning regulations to include allowance and/or incentivize sources of renewal energy to be installed on buildings and/or properties.

- Responsible Party: City Administrator with support from the City's Finance, Public Works, Park District and Recreation and Economic Development Departments



Moving Forward

Incorporating resilience and resource efficiency measures into city policies, functions and operations does not mandate radical or expensive solutions to see immediate impacts. City officials should identify a mix of big and small solutions in the forthcoming Pre-Disaster Mitigation Plan for West Fargo that could be implemented by different levels of government, the development community, volunteer organizations, or residents' willing to change activities and behaviors. Recommendations should include plans, policies and design standards that build more resilient communities and supporting infrastructure, and work to ensure individual decisions and investments reinforce a citywide initiative to be more resilient and resource efficient in the future.