

CHAPTER 7: RESILIENCE

RESILIENCE SUMMARY

This chapter of the Comprehensive Plan addresses Rosemount’s ability to withstand disruptions created not only by our changing climate but also due to shifting demographics, economic volatility, and impacts to the reliability of the community’s energy grid. A resilient community has strategies in place to respond, adapt, and thrive under changing conditions. Often resiliency has been coupled with sustainability. While they are both important to a community, they differ in outcomes and strategies. In reality Rosemount has worked to become more sustainable in policies and goals, implemented in the adoption of various ordinances, and has therefore become more resilient. Similar to concepts tied to resiliency, sustainability can be related to community and resident economics, energy, and programmatic sustainability.

TABLE 7-1: EXISTING ORDINANCES THAT SUPPORT RESILIENCY

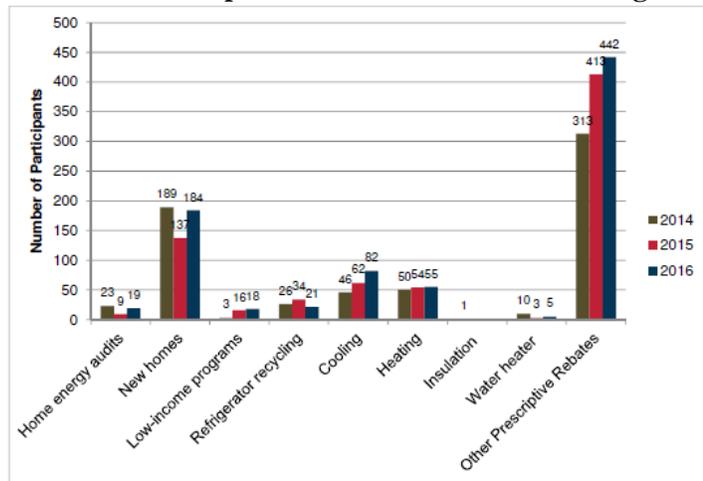
| Infrastructure and Environment | Energy Infrastructure | Healthy Communities | Economy and Society |
|--|--|---|--|
| 5-1-7: Collection Requirements; <i>Waste collectors are required to collect recyclables at no additional cost to their residential customers.</i> | 11-2-12: Alternative Energy Systems; <i>encourages the development of alternative energy systems that have a positive impact on energy production and conservation</i> | 5-4-1: Composting; <i>Allows composting in residential districts</i> | 11-4-11: Downtown Zoning District; <i>Encourages pedestrian oriented development with no minimum parking requirements or setbacks.</i> |
| 10-1-5: Surface Water Management; <i>Requires stormwater and wetland management plans be submitted prior to all subdivision approvals and grading permits.</i> | | 7-4B-11: Maintenance of Fowl and Birds; <i>Allows for the keeping of chickens on any residential property in the City</i> | |
| 10-1-14: Lawn Fertilizer Regulations; <i>Limits the amount of phosphorus in lawn fertilizers and establishes buffer zones.</i> | | | |
| 11-6-3: Landscaping Requirements; <i>Sets minimum number of plantings, identifies tree preservation and replacement requirements, and parking lot landscaping.</i> | | | |

Since the 2008 Comprehensive Plan update, the City has moved forward with a number of recommended implementation strategies aimed at making Rosemount more resilient. One of the primary ways to become resilient is to have a continuous review cycle for the Comprehensive Plan to ensure the land use plan is consistent with the community needs and market demands. The City has processed several amendments since 2008, which is reflective of an economy different than the one during the mid-2000’s. From an energy standpoint, the City has promoted development of clean industry by approving private community solar gardens, participated in energy subscription programs and assisted site selectors in identifying locations that would be ideal for light industrial or

data center developments. These actions clarify community expectations and recognize the changing dynamic in the City. The community is growing and opportunities to promote new land uses, such as the solar farms is important in ensuring the community is vital. The City revised the Zoning Ordinance to allow for alternative energy development such as solar power and combined heat and power plants, projects not anticipated in the previous Comprehensive Plan or zoning ordinances. The ability to forecast trends and modify regulations to provide space for new technologies is an important goal of the City. This is just one example of the more proactive approach the community has embraced as it works to be more resilient, benefiting residents and the community ecosystem.

Most recently, the City Council convened an environment and sustainability task force (REST) that works with City staff to develop policies and ordinances to enhance the City’s environment and natural resources. The Task Force is also partnering with local businesses and energy companies to promote energy and water conservation and highlighting programs that are available to residents and businesses. In May of 2018, REST collaborated with Xcel Energy’s Partners in Energy program to develop an energy action plan for the City of Rosemount. The action plan sets measurable targets that, if met, will reduce city-wide energy use by 5% by 2020 and could save Rosemount residents and businesses \$1 million dollars annually on energy costs. The action plan provides data regarding city-wide energy consumption as well as past participation in existing programs to reduce community energy consumption. Table 7-2 shows residential participation rates in conservation programs from 2014-2016.

Table 7-2: Participation Rates in Conservation Programs



Several programs exist to help communities benchmark the efforts they have made toward local sustainability, and Rosemount has been a part of three such programs. One initiative is the STAR Community Rating System (STAR). This framework and certification program encompasses economic, environmental, and social performance measures. Rosemount joined the STAR network as a leadership community in January 2014. On March 9, 2015, the City became a 3-STAR Community. The City continues to use the benchmarking process to identify areas for additional attention that complement the goals of the City Council. Areas such as pedestrian access, local jobs, and availability to local amenities have all been incorporated into community goals and often shaped policies and regulations. The City has made a commitment to implementation of strategies through the budgeting and capital improvement program.



The STAR Framework is divided into eight areas with goals, objectives, and evaluation measures included in each area. Rosemount scored the highest in Health and Safety in large part due to the development of the Active Living Plan included in the 2030 Comprehensive Plan. The City also scored strongly in the area of the Built Environment. Rosemount earned points due to the water and wastewater systems in the City as well as efforts to provide a mix of densities in residential development. It was noted through the STAR benchmarking process that some of the criteria relates to areas beyond the purview of the City. In other words, to be a resilient community oftentimes there must be partnerships with the adjoining communities, the County, the State, educational institutions, and local businesses. The City has actively participated in collaborative programs, often at the County level. These activities have resulted in a countywide 911 center, countywide right of way permitting, and soon, a countywide commercial fiber internet system.



In addition to the STAR Communities Program, the City of Rosemount participates in the GreenStep Cities, a program administered by the Minnesota Pollution Control Agency. Minnesota GreenStep Cities is a voluntary challenge, assistance and recognition program to help cities achieve their sustainability and quality-of-life goals. GreenStep is a free continuous improvement program based upon 29 best practices that are divided into 5 different functional areas. In 2011, the Rosemount City Council passed a resolution to authorize the City to participate in the program, and Rosemount gained STEP 2 status in June, 2012. The City scored strongly on the benchmarks related to Land Use and Environmental Management. A total of 9 best practices have been adopted. The Council continues to be committed to GreenStep and has pledged to complete additional benchmarks to achieve STEP 3 status in the near future.

In 2014, the City was chosen through a competitive process, to participate in the University of MN Resilient Communities Program. This program allows

communities to benefit from a partnership with graduate, professional, and advanced undergrad students on a myriad of topics that were identified in the initial application process. The program coordinator matched specific university classes with the topics raised in the City's application. The initial application listed 39 potential issue areas which ranged from how to attract and maintain more volunteer firefighters to how to have better community communications strategies to what an eco-green business park would look like. City staff and relevant stakeholders from the community worked closely with University of Minnesota faculty and students to provide local knowledge and deeper insight into the issues to ensure projects were not only innovative but also relevant to the community. Students from the identified classes, in either the spring or fall, or both semesters worked on the various topics and were required to have a final project outcome. Most provided written information, some provided visuals, with all groups making a presentation to the City. After, the City took these studies and prioritized recommendations for future implementation.



UNIVERSITY OF MINNESOTA

Building on the previous plan, the concept of a resilient community addresses environmental concerns as well as the ability for a community to address and plan for shifts in social and economic patterns. The goals contained within this resiliency plan are organized into 4 components: infrastructure and environment, energy infrastructure and resources, healthy communities, and economy and society. Many of the following goals can be found in other sections of the Comprehensive plan. As such, the Rosemount shamrock will be used to identify where the policies and goals within those sections overlap these goals.



RESILIENCY GOALS

INFRASTRUCTURE AND ENVIRONMENT

Climate change has the potential to have major impacts on infrastructure and natural resources in communities of all sizes. The biggest threats to these assets are increased frequency and intensity of rainstorms and heat waves, potentially leading to flooding and power outages, respectively. Roadways, being ground zero for automobile greenhouse gas emissions, can play a major role in both adding to and alleviating the impacts of climate change.

Stormwater/Wastewater

1. Continue developing stormwater capacity requirements that accommodate more frequent and intense storms.
2. Incorporate planning for municipal services to all lots in areas currently served by private well and septic system, as needed due to existing system functionality.
3. Explore effluent reuse opportunities in partnership with the Metropolitan Council for future development, especially Business Park development.

Road Infrastructure

1. Follow a complete streets approach and critically evaluate anticipated traffic volumes to avoid overbuilding roadways.
2. Investigate opportunities to reduce the use of salt and sand on city roads during winter months.

Natural Resources

1. Preserve, protect and restore the natural environment with emphasis on the conservation of needed and useful natural resources for the present and future benefit of the community.
2. Utilize natural resource areas to provide an overall open space system that satisfies the needs of the community and its residents.
3. Create a livable community where future development respects and integrates the natural, cultural, and historic resources of the community while maintaining or enhancing the economic opportunities and community well-being.
4. Moderate City-wide water consumption to promote aquifer recharge.

ENERGY INFRASTRUCTURE

Resilient energy infrastructure relies on increasing the number of smaller-scale sources of energy such as solar, wind power, and cogeneration plants. Systems that rely on a centralized supply of energy are vulnerable to numerous threats such as regulatory changes to fossil fuels in energy production, cyber security attacks, and shortages of water used in cooling processes. Increased diversity of energy sources will allow the grid to withstand disruptions to one segment of the energy supply chain.

Renewable Energy

1. Look for opportunities to remove barriers and increase renewable energy use in order to strengthen and diversify the energy grid and mitigate climate related impacts.
2. Continue monitoring solar garden subscriptions and City power use to identify ways to support emerging technology.

Energy Efficiency and Conservation

1. Share and promote opportunities and resources with residents and business owners to increase City-wide energy efficiency and renewable energy use.
2. Identify ways to modify City ordinances to encourage developments that are consistent with LEED standards, including LEED Neighborhood Development standards.
3. Investigate potential ways to incorporate green building standards into the project review and approval process when appropriate.
4. Continue partnering with other public entities, utility companies, and the private sector to maximize energy efficiencies.

HEALTHY COMMUNITIES

Community health is a key foundation of resilience because almost everything cities do to prepare for disaster and protect infrastructure is ultimately in the interest of preserving human health and welfare. A resilient community is socially connected and has accessible health systems, food sources, and modes of transportation that are able to withstand adversity. Also, a resilient community has reliable and effective ways to get messages to its residents and businesses in general and during emergencies.

1. Continue partnering with Dakota County and other organizations to support Pedestrian-Oriented Transportation Facilities and Services such as: Active Living Land Use Planning, Safe Routes to School, and Farmers' Markets.
2. Evaluate existing ordinances to assess alignment with City development goals.
3. Promote city cohesion through community-wide events and celebrations and welcome new residents into the community.
4. Collaborate with organizations and utilize diverse communication methods to reach as many residents as possible.
5. Work closely with Dakota County social services and other resident service agencies to increase livability for all residents.

ECONOMY AND SOCIETY

A diverse local economy is able to adapt to economic volatility and regional or global recessions. Additionally, a diverse tax base minimizes the exposure of the City budget to fluctuating property values in specific segments of the economy as seen most recently in the housing market over the past decade. Providing various types of housing will allow for residents to stay in the community as they age. This will also be opening up single family homes for younger residents to move into ensuring a stable supply of places to live and equalize the cost of housing.

1. Support a diverse tax base that is less vulnerable to fluctuations in property values and development cycles.
2. Work with large landholders to entice Business Park development that will increase the City's tax base and provide residents jobs.
3. Diversify tax base so there is not over-reliance on any one property owner.

Commercial Resilience

1. Encourage building materials that feature durability and meet City standards for maintenance.
2. Allow for commercial developments that reflect changing retail trends that are site sensitive and serve local neighborhoods and the broader community.

Housing and Jobs

1. Encourage life cycle housing to enable residents to age in place.
2. Plan for medium and high density housing types throughout the community to provide opportunities for market-driven housing.
3. Identify and eliminate regulatory and financial barriers which discourage the development of affordable housing.
4. Partner with Metropolitan organizations to provide affordable housing opportunities for community residents.
5. Support the creation of jobs that support the heads of households with living wages.
6. Encourage the creation of a diverse range of jobs within the city, including the renewable energy sector and "green" economy, creating a sustainable and resilient job market in line with City values.

IMPLEMENTATION

1. Zoning and Subdivision Ordinances

The zoning and subdivision ordinances can be used to encourage the development of resilient energy infrastructure as well as maintain the health of natural resources within the community. The zoning ordinance can also be used to require more durable and long lasting building materials.

2. Education and Outreach

The City can utilize its existing communication channels such as the City website, social media, and electronic signs to share important information with residents both during weather and other emergencies and also to educate residents about opportunities to increase energy efficiency and reduce water usage.

3. Collaboration Among Other Agencies

The City will continue to work with agencies and organizations such as Active Living Dakota County, Dakota County CDA, Great Plains Institute, etc. to move the City toward its goal of greater resilience.

4. Outside Funding Sources

The City is willing to support applications for funding sources such as the Livable Community Demonstration Account and Tax Base Revitalization Account, and Minnesota Pollution Control Agency to support projects that help achieve the City's resiliency goals.