

## Hazard Mitigation & Resiliency

**Goal: Encourage resiliency and sustainable development by protecting development from natural hazards.**

In Maryland Heights, the Comprehensive Plan is the responsibility of the Planning and Zoning Section and hazard mitigation planning is coordinated by the Building and Codes Section, in conjunction with East-West Gateway (EWG) Council of Government's 2015 Regional All-Hazard Mitigation Plan. In order to continue to make sound planning decisions related to future growth that is resilient and sustainable, hazard impacts are being incorporated into the comprehensive planning process.

The goals of the Comprehensive Plan are implemented through various local planning instruments such as the Zoning Code, Subdivision Code, and Capital Improvements Program. Integrating hazard mitigation principles into the Comprehensive Plan highlights the value the City places on community resilience. Further it allows the City to manage current and future development in a way that does not lead to an increase in the community's vulnerability to hazards.

The relationship between sound land use planning and the reduction of a community's exposure, risk, and vulnerability to hazards is clear. Experience has shown that those communities that carefully plan the location, type, and structural requirements of development to avoid hazard areas and vulnerable structures to the maximum extent possible suffer much less disaster-related damage and impact than do communities that do not consider hazard mitigation as a part of the Comprehensive Plan. From a disaster recovery standpoint, the benefits of sound hazard mitigation and resiliency planning include the following:

- Less disruption to the City's economic, social, and physical structure
- Less impact on the area's tax base
- Less impact on the provision of essential services
- Less financial impact in terms of local participation in disaster program cost-sharing

Through the hazard mitigation planning process, EWG is encouraging local communities to include hazard mitigation planning as well as disaster response planning in their local comprehensive plans. The intent of this chapter of the Comprehensive Plan is to support and encourage the goals and objectives of the Regional All-Hazard Mitigation Plan.

The updated All-Hazard Mitigation Plan can be found here:

<https://www.ewgateway.org/community-planning/hazard-mitigation/>

**Objective: Raise public awareness concerning hazards, including measures that can be taken to promote mitigation and increase disaster preparedness, response, and recovery capabilities.**

The Federal Emergency Management Agency (FEMA) has a variety of printed pamphlets and guides that encourage the integration of hazard mitigation with planning, with the idea that it will increase resiliency from natural disasters. FEMA suggests that local community leaders and elected officials play

a central role in setting the community's priorities, providing overall policy direction, and bringing stakeholders together. Maryland Heights' leaders can spearhead initiatives that promote the importance of integrating hazard mitigation to achieve overall community safety and resilience. Further, they have the ability to communicate with a broad base of constituents and partners. These abilities are important for the success of an integrated, interdepartmental, multi-jurisdictional hazard mitigation strategy. FEMA recommends<sup>1</sup> the following for achieving this strategy:

- **Frame the issue.** Integrating hazard mitigation and safe growth policies can seem like an obscure topic to decision makers and the general public. Planners can frame the issue in terms that resonate with the community, such as economic development, environmental protection, or providing essential public services.
- **Make safety and resilience a priority.** Ensure that public safety and community resilience are considered in all decisions. When deliberating or voting on an issue, providing policy direction, or setting budgets, ask how that decision affects safety and resilience, and ask which hazard mitigation practices may strengthen the decision.
- **Build partnerships.** Bring stakeholders to the planning table to encourage partnerships among City departments, agencies, and nearby communities. Include representatives from the community, residents, civic organizations, and technical experts as well.
- **Get the message out.** Local leaders can be a champion for the importance of hazard mitigation and community resilience by highlighting successful actions and return on investment. Be repetitive and consistent with the message through multiple channels of communication.

**Objective: Evaluate options to mitigate the impacts of gradual and catastrophic natural hazards.**

The City of Maryland Heights has a Class 9 rating in the National Flood Insurance Program's Community Rating System (CRS) for its efforts to reduce loss of lives and mitigate property damage from floods in its quest to create a disaster resistant community. A CRS Class 9 rating enables residents of Maryland Heights who have flood insurance and live in a Special Flood Hazard Area (SFHA) to receive a five percent discount on their flood insurance premiums. Those who do not live in a SFHA can receive a five percent reduction. For additional information on CRS activities in Maryland Heights, go to the Community Development Department link at [www.marylandheights.com](http://www.marylandheights.com).

In addition from the time of the City's incorporation in 1985, it has taken an active interest in the areas prone to flash flooding and erosion. With the help of the Stormwater Advisory Commission, many dangerous locations have been identified and addressed. This Commission consists of seven members. Not less than five (5) members shall be residents of the City. They meet quarterly or more often if circumstances dictate. They are tasked with identifying the problems of damaged storm sewers, erosion, and flooding throughout the city. This includes the maintenance of storm sewers and open channels. The city budgets funds for this purpose as capital expenditures.

---

<sup>1</sup> <http://www.fema.gov/media-library-data/20130726-1908-25045-7330/factsheet2.pdf>

Every year, the Commission develops a program of projects to address small and large issues. All new projects must provide mitigation measures to ensure that there will be no adverse effects, such as increased velocity or peak discharge upstream or downstream of the project. For instance, eroding creek beds are often stabilized with rip rap or a loose application of broken stones.

In response to the lessons learned from natural and human-made disasters, building codes are continuously being reviewed and modified to mitigate the effects of these events. The Community Development department participates in the code development process to assure the City remains current with best planning and construction practices. Adopting and enforcing the updated codes will enhance the community's resilience. Further, examples of integrated hazard mitigation solutions might include:

- Establish goals, policies, and objectives that are linked to risk reduction and resiliency in the Comprehensive Plan
- Incorporate hazard mitigation standards in permit reviews and encourage homeowners to enhance their homes with storm shelters
- Use community improvement district (CID), transportation development district (TDD), or other public funding mechanisms to help pay for hazard mitigation measures
- Use the Capital Improvement Program to fund hazard mitigation measures
- Use infrastructure improvements to guide growth away from known hazard areas
- Use zoning and other land use controls to prohibit or discourage hazardous development patterns
- Encourage green infrastructure and low impact development
- Preserving or restoring natural functions that minimize hazard impacts, such as wetland restoration
- Incorporate structural retrofits or relocation of mission critical buildings or infrastructure
- Incorporate the awareness of hazard risks and hazard mitigation into public outreach practices, including using the Maryland Heights Chamber of Commerce to help reach out to the business community
- Enforce the City's stream buffer protection requirements
- Identify at-risk populations

**Objective: Support efforts that will assist with the continuity of critical business operations.**

Natural hazards are deadly and expensive: the United States averages 500 deaths per year and nearly \$14 billion in damage from weather-related natural hazards. Between 1980 and 2020, the U. S. has sustained 18 wildfire, 28 drought, 48 tropical cyclone, 126 severe storm, 33 flooding, 17 winter storm, and 9 freeze billion-dollar disaster events affected the United States (CPI-adjusted)<sup>2</sup>. Yet, building or enhancing community resilience does not need to mean expensive structural protection measures. Decisions that are made relating to land use, environmental protection, economic development, capital improvements, government operations, and budgets all have a role to play in mitigating hazard risks.

---

<sup>2</sup> NOAA National Climatic Data Center

The most effective way to promote resilience at the community level is to integrate the consideration of risk and ways to reduce or eliminate risk, into all decisions. Preventive planning reduces the need for reactive planning.

Mitigation measures reduce risk for individual homeowners and businesses, as well as essential critical facilities such as hospitals, public safety and transportation facilities, civic institutions, and water and power utilities. While individual citizens and property owners have an important role to play in mitigation, local governments have a major responsibility.

The most effective mitigation measures are implemented at the local government level, where most decisions on the regulation, timing, and location of development are made. Through comprehensive planning, communities can manage development to build resilience to natural hazards and thus better “weather the storm” of natural disasters.

The City can also implement policy and adopt temporary regulatory measures to promote business continuity after or during disasters or similar events. For example, after the tornado of 2011, the Zoning Code was temporarily amended to allow non-conforming residential structures to be rebuild without penalty. Similarly, during the COVID-19 pandemic, temporary regulations were put into place that would assist restaurants and other small City businesses.

**Objective: Form working relationships to leverage and share resources.**

As mentioned previously, the City of Maryland Heights participates with EWG in the Regional All-Hazard Mitigation Plan. Federal Statute requires that the All Hazard Mitigation Plan be updated and readopted every five years. In Missouri, the State Emergency Management Agency (SEMA) has funded EWG to prepare an update to the regional plan, on behalf of the five Missouri Counties (City of St. Louis, and Franklin, Jefferson, St. Charles, and St. Louis counties) and for 135 participating municipalities and 50 school districts. Planning partners included STARRS, county emergency managers, Municipal League representatives, St. Louis Area Regional Coalition of Community Organizations Active in Disaster (SLARCC), and EducationPlus<sup>3</sup>.

The All-Hazard Mitigation Plan is intended to help protect public safety and prevent loss of life or injury in the event of a natural disaster. It is also designed to reduce risk to existing and future development and to prevent damage to each community’s unique economic, cultural, and environmental assets. The plan will also help to improve the operational effectiveness of local governments and school districts following any natural disaster, by providing recommendations for advance preparation. Advanced planning should prepare first responders as well as local government leaders and school personnel and thus serve to reduce costs, save lives, and improve efficiency of disaster response and recovery.

Current rules require that local governments and school districts applying for federal pre-natural disaster mitigation funding must have a FEMA approved plan. Any community and/or school district

---

<sup>3</sup> EducationPlus is a non-profit education consortium that serves teachers, administrators, support staff, and school board members in 60 public school districts in eight Missouri counties and three Illinois counties.

seeking pre-natural disaster mitigation funding must formally adopt the plan by resolution in order to be eligible for FEMA/SEMA funding.

**Objective: Minimize the loss of life and injuries that could be caused by natural hazards to the greatest extent practical.**

By developing and implementing a hazard mitigation plan before disaster strikes, the City of Maryland Heights will be better able to prevent or minimize loss of life and property. Regional early warning systems, public education, and improved construction techniques, can provide the opportunity for reductions in the number of injuries, reduction in property damage, and loss of life.

In the last five years, and in partnership with the EWG St. Louis Area Regional Response System (STARRS), the American Red Cross of Eastern Missouri, Paraquad, and LINC have been promoting the All Ready Campaign. This program encourages those with functional and access needs to be prepared to address their own needs in the aftermath of a disaster. Advance preparation of this type can be a significant factor in reducing loss of life. In addition to supporting the functional and access needs population, municipalities can publicize advance preparation for all citizens.

**Actions:**

- Continue to participate in regional emergency preparedness activities.
- Participate in the Community Rating System (CRS) program.
- Work with first responders in the development review process to ensure that hazard mitigation and public safety are considered.