

XII. Integrating All-Hazard Planning into Policy and Regulatory Framework

The public and community input that the Hazard Mitigation Plan process solicited showed that St. Clair County is serious about planning for the safety, security, and vitality of its people. St. Clair County can be strengthened through a variety of mechanisms implemented by the stakeholders in the community. An approved hazard mitigation plan is a key first step in making our community more resistant to disaster, but it is only a component in incorporating mitigation into the overarching vision.

This chapter describes the various steps our community should take to successfully incorporate hazard mitigation into its comprehensive planning, programming and operational systems. Additionally, it will describe different categories of mitigation and outline responsibility for each.

The Comprehensive Plan

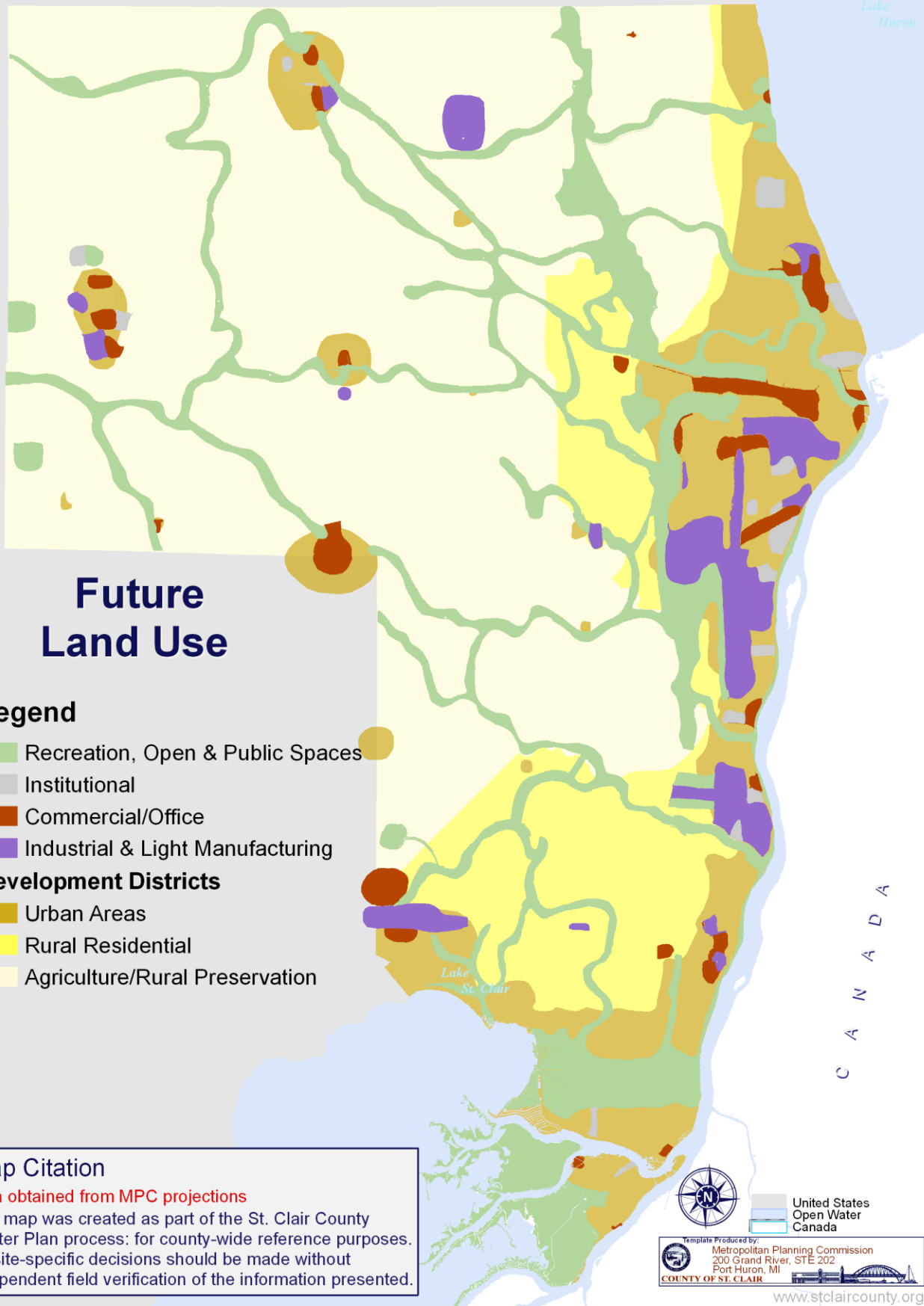
Public Acts 285 of 1931 (the Municipal Planning Act), 282 of 1945 (the County Planning Act), 168 of 1959 (the Township Planning Act), and 281 of 1945 (the Regional Planning Act) are the Michigan laws that enable the development of a comprehensive plan for a jurisdiction. Each of these acts provides the framework for the appointment of a Planning Commission to undertake a public process that creates a vision. The resulting Plan should have a practical implementation program (Capital Improvement Program) that the correlating legislative body can use to budget for and implement projects and programs that complete the public vision.

A comprehensive plan may include:

- Population projections
- Land use alternatives
- Transportation alternatives
- The built and natural environment
- Economic development strategies
- Public facilities and services
- Housing needs

One of the most important components of a comprehensive plan is its desire to create a “sense of place”. Ultimately, a financially stable community with a built and social sense of togetherness will be more resistant to disaster than a community that lacks organization and a “sense of place”. A community envisioned plan, with extensive opportunity for public participation gives a validation to public projects and creates an ownership of well-being. The logical development of land and public facilities can create a seamless community fabric, less apt to tear and easier to stitch during the recovery from disaster.





The typical steps for a comprehensive planning process are:

- Identifying problems and issues.
- Formulate goals and objectives.
- Assemble data and analyze for trends.
- Evaluate and optimize alternatives.
- Select preferred course of action.

It is vital for public officials to see that safety is integrated into the planning process. Resources must increasingly be devoted to initiatives that benefit several goals and objectives. Building partnerships and consensus in the planning process ensures a functional network in the preparedness > mitigation > response > recovery cycle. Multidisciplinary approaches are as integral to a master plan as all hazards are to a mitigation plan.

The comprehensive plan can best support hazard mitigation by:

- Including hazard mitigation and recovery in the goals and objectives.
- Identifying potential natural and built hazards in the existing conditions.
- Promoting systematic infrastructure expansions.
- Engaging the community for input and effectively incorporating that input into the comprehensive vision.
- Recommending development standards that encourage the interaction of people and the invigoration of neighborhoods through activity.
- Promoting a diverse and safe housing stock.
- Applying resources to programs that are applicable to many end uses, including mitigating hazards.
- Establishing the nexus between the health, safety and welfare of the public and implementation activities. This is necessary for political and legal defense of government action. Of particular concern are Fifth Amendment rights against “takings”.
- Balancing controlling hazards through physical improvements and discouraging use of the hazardous area.
- Require that public services and facilities are not sited to encourage growth into hazardous areas.
- Recommend that initiatives that deal with density (Purchase of Development Rights, Transfer of Development Rights, Wetland Banking, and Cluster Development) focus growth away from hazardous areas.
- Include adequate capacity for growth away from the most hazardous areas.
- Integrating a comprehensive, long term risk management strategy into the operations of county and local government.

Functional Plans

Comprehensive plans, and the wide scope they are tasked with, often have recommendations that suggest further evaluation or study for a particular issue. Functional plans explore issues in a detailed manner, often utilizing a technical analysis specific to the case at hand. Functional plans are also commissioned to meet requirements in Federal and Michigan law. Sometimes functional plans are conducted to solve a problem in a defined geographic area. Capital projects often undertake an exhaustive analysis required by Federal and Michigan laws that considers many different alternatives independent of each other, resulting in a feasible, preferred course of action. This "All-Hazard Mitigation Plan" is a functional plan designed to integrate risk analysis and loss prevention into existing policy and regulatory structures.

Other examples of functional plans existing in the county include:

- Watershed Management Plans
- The 2030 Long Range Transportation Plan
- Market and Targeted Industry Studies
- The Solid Waste Plan
- The Parks and Recreation Plan
- The Geographic Information Systems Integration Plan

Functional plans can best support hazard mitigation by:

- Including risk as a performance measure when defining and evaluating alternatives and policy recommendations.
- Prioritizing alternatives that support a safety benefit or risk reduction. Additionally, projects that have the ability to leverage a greater proportion of Michigan or Federal funding through a multidisciplinary approach.
- Directly augmenting all hazards planning through investigation of a specific risk unable to be fully addressed in technical depth in this plan or hazard mitigation through project planning.
- Transportation planning can help identify and manage evacuation routing in concert with the Local Emergency Planning Committee. This approach can ensure that emergency response vehicles are routed appropriately to the site, while the endangered public is efficiently routed away. Evaluation of public behavior during an evacuation can also strain the effectiveness of a response plan. Poor recovery can impact the performance of future responses because of damaged public perception. A network flow model may help illustrate the necessary lanes needed for evacuation demand.
- The regional transportation plan and ITS architecture are useful in implementing technological solutions for monitoring the shipment of goods across the US border with Canada. The electronic seal project is an example of using emerging technology to minimize tampering with hazardous materials shipments and payloads.
- An assessment of public transit vulnerability is essential to closing a major security gap. Transit facilities, transfer points, and vehicles are the main areas of transit vulnerability.

The Capital Improvement Program

The Capital Improvement Program (CIP) is the implementation component of the comprehensive planning process. A CIP takes the illustrative recommendations of a plan and defines a practical, short term program for priority projects. A capital project includes new or expanded physical facilities that are relatively large, expensive, and permanent. Examining and updating a CIP is the essential first step in the annual budgeting process because public infrastructure projects are usually of a significant scope and complexity. A CIP must be constrained by the available financial resources. (So, 1979)

Examples of local funding mechanisms for capital improvements include:

- Current revenue
- Reserve funds
- General obligation bonds
- Revenue bonds
- Lease-purchase
- Authorities and special districts
- Special assessments
- Tax increment financing

The Capital Improvements Program can best support hazard mitigation by:

- Providing a stable base for budgeting within a community.
- Internally and externally coordinating resources to deliver projects and programs that have the greatest positive effect on the largest scale possible.
- Prioritizing projects based on objective criteria that strengthen public confidence in management and oversight.
- Stabilizing tax rates through sensible debt management.
- Linking development to available public services and facilities, thereby lessening strain of infrastructure and promoting a healthy, sustainable community.
- Acquire land and property with public funds and convert to or protect low risk uses.

The Zoning Ordinance

A zoning ordinance is the primary tool for implementing the goals and objectives of a comprehensive plan into new development. Zoning ordinances incorporate standards that promote the health, safety, and welfare of the public and property owner. Zoning ordinances also establish which land uses are permitted in what districts, separating incompatible uses.

A Zoning Ordinance can best support hazard mitigation by:

- Proactively regulating developing areas through land use intensities and densities, site design standards, and structural features.
- Separating or buffering uses that are not well-matched.
- Enabling development standards that create activity and stimulate people's awareness of what is happening around them.
- Requiring proper internal circulation and emergency ingress and egress.
- Incorporating environmentally appropriate safety lighting into non-residential site development requirements.
- Regulating the storm water runoff that impervious surfaces generate.
- Offering incentive based approaches to diverting development away from hazardous areas, including lessening off-street parking requirements.
- Creating zoning overlay standards for sensitive areas (flood zones, steep slopes, and poorly drained soils).
- Complying with airport zoning and development regulations.

The Subdivision Ordinance

A principal step in development is the subdivision of property into smaller, developable pieces. Planning and zoning is much more effective when addressing hazardous areas at a large scale than mitigating risk with many property owners. However, communities can use the subdivision permitting process to promote smart growth and hazard mitigation. Effectively managing the subdivision process will alleviate the need to acquire property to mitigate hazards.

A Subdivision Ordinance can best support hazard mitigation by:

- Linking subdivision to density bonuses, Purchase of Development Rights, and Transfer of Development Rights.
- Identifying subdivided parcels that should be purchased before development. This can be more cost effective than recovering from extensive property damage, injuries, or loss of life and their accompanying litigation.
- Ensuring that building envelopes are outside of high risk areas.

The Building Code

Building codes ensure that construction is safe and sustainable at its completion. Building codes apply to the construction and modification of structures. Uniform building codes create a foundation for emergency responders to base operations on. Eliminating unsafe, blighted, or vacant buildings prevents hazards such as fires or criminal activity.

A Building Code can best support hazard mitigation by:

- Setting standards for safety in new and existing construction.
- Making public spaces more secure, accessible, and safe.
- Limiting decaying and blighted structures.
- Requiring uniform generator inputs on public facilities and emergency shelters.
- Restricting construction in floodplains.
- Elevating main breakers and utility meters in flood prone areas.
- Requiring tornado straps for manufactured homes.
- Promoting flame retardant building materials.
- Posting address numbers at each structure and using reflective signage at the street entrance.
- Requiring tempered glazing.
- Establishing retrofitting standards.

The Landscape and Maintenance Code

A property maintenance code ensures that a community maintains a consistent appearance and physical identity. Property maintenance codes usually require upkeep of landscaping and the clearance of snow and ice from vehicle and pedestrian areas.

A landscape and property maintenance code can best support hazard mitigation by:

- Requiring plantings and materials at ditches and drains to gradually release storm water instead of channelizing it.
- Providing for property maintenance to reduce opportunity for fire and criminal activity.
- Keeping roofs and eaves clear of debris
- Creating fire defensible areas around each structure without dense vegetation.
- Trimming trees around homes and overhead utilities to avoid damage during severe weather.
- Encouraging native species plantings and physical components of infrastructure projects to maintain habitats for creatures that naturally control pests and invasive species (e.g. bats)

Outreach Opportunities

Many hazard mitigation measures can be implemented by individuals through everyday action. Often, simple opportunities for public education are not capitalized upon. Following are suggestions for improved communication for hazard mitigation opportunities.

- Provide a welcome package for each building permit that is applied for in your community.
- Provide information on storm water management to prevent flooding for driveway permits and soil erosion sedimentation plans.
- Promote safety and awareness in every public communication.
- Host safety workshops and education outreach for students in your community.
- Stress safety for operations within your organization.
- Require review of safety materials and signed acknowledgement for open burning permits.
- Blitz areas with retrofitting and safety information during the disaster recovery period, when prevention has the most exposure.

Safe Streets

Street design is a major component of safely designing communities. Some important design considerations:

- **Scale streets to their appropriate use**
- **Reduce pavement widths where no on-street parking is needed**
- **Blocks no longer than 600 feet**
- **Alleys where feasible**
- **Termination points at landmarks**
- **Pedestrian friendly devices (bump outs**
- **and pedestrian refuges)**
- **8 inch barrier curbs**
- **Straight line, interconnected streets**