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Resilience Checklist for Comprehensive Plans

Overview

This checklist guides the Maryland Department of Planning's (MDP) review of the Resilience Principle in comprehensive plans. Local governments should use it to inform their planning processes, assess whether their draft plans follow best practices, and comply with statutory requirements. MDP's 60-day review comments evaluate whether comprehensive plans include the items identified in this checklist.

As a part of the MDP Sustainable Growth Planning Principles, MDP identified Resilience as a key planning principle for statewide implementation. The intention of the Resilience planning principle is to **integrate resiliency measures that will minimize that impacts of rapid and unexpected natural- and human-caused threats on communities**. As jurisdictions develop and update their comprehensive plans and other significant planning documents, MDP asks them to review this checklist to inform incorporation of the principle. This resource is designed to promote a shared understanding of Resilience between MDP and local governments and communicate how MDP will evaluate resilience in local plan.

Guide to Using Checklist

- The prompts below highlight the questions and concepts that MDP considers when verifying that the Resilience Principle has been adequately addressed. Jurisdictions should begin by asking if the draft comprehensive plan specifies or addresses resilience within its introduction to the planning process. Additionally, a jurisdiction may ask whether resilience is found within content related to goals, themes, and challenges.
- The checklist displays the categories of resilience identified by MDP which are included in MDP's review of submitted draft comprehensive plans, along with details of various comprehensive plan elements which are most relevant to incorporating the Resilience Principle.
- While the Sustainable Growth Planning Principles modernize the 12 Planning Visions, the eight Planning Principles aim to make sustainable growth policies simpler, clearer, and easier for everyone involved in planning and development to use effectively. The principles are a tool for how local jurisdictions organize their comprehensive plans and advance best practices for the State's goals. The elements are required under the Land Use article and local jurisdictions shall address each element within their comprehensive plans, highlighting their consideration for existing and proposed land use and development.

Checklist Terms and Definitions

The following definitions are sourced from various State of Maryland Programs

- Adaptation: The practice of implementing measures which reduce vulnerability and improve resilience to adverse impacts, namely extreme weather.
- Climate Ready Action Boundary (CRAB): A map that shows the horizontal limits of flooding in Maryland.
- Community Disaster Resilience Zones (CDRZ): Federally identified areas which would benefit the most from building disaster resilience through federal, public, and private resources.
- Community Rating System (CRS): The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP).
- Environmental Justice: The just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people: are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, g, worship, and engage in cultural and subsistence practices.

- Floodplain: A low-lying area of land next to a river, stream, or waterway that may flood during heavy rains or storms.
- Hazard Mitigation: Any sustained action taken to reduce or eliminate the long-term risk to life and property from hazard events.
- Hazard Mitigation Plan: A long-term strategy to reduce the risk of loss of life and property damage from natural disasters.

Checklist for Incorporating the Resilience Principles into Comprehensive Plan Elements

	Planning Elements This column identifies the Statute elements most applicable to the "Forms of Resilience," as well as how resilience can be incorporated within the element.	**MDP Expectation** This column explains planning activities or plan content that advance the respective Forms of Resilience.	**Resources/Guidance** This column provides the additional documentation and programs whose inclusion will support submitted Plans. Plans may include anything listed in the Maryland Office of Resilience Toolkit	**Example (page number)** This column displays planning examples that implement the Resilience Principle.	**Expectation Met (Yes/No), Brief Explanation**
Principles – A local jurisdiction SHALL through the comprehensive plan, implement the 8 Planning Principles established in Land Use Article § 1-201.	**Goals and Objectives,** Land Use Article §3-110**:** The comprehensive plan should highlight how resilience is to be incorporated within the goals and objectives of the plan. The plan should identify how resilience consideration supports the achievement of goals within the plan.	Content which highlights approaches to resilience planning, what resilience looks like for the jurisdiction, or the local challenges that require resilience coordination.	MDP Sustainable Growth Planning Principles: This Guide has been developed to support the application of Principles in practice by multiple users across Maryland. The Guide provides deeper insight into the intent and understanding of each Principle, its benefits, relationship to Maryland's priorities, and measures that will be utilized to support accountability and progress.	N/A	N/A

Flood Resilience - Stormwater	**Sensitive Areas,** Land Use Article §3-104: Resilience advances the effectiveness and security of sensitive areas as it relates to flood plains and natural systems. Water Resources, Land Use Article §3-106: Resilience advances conveyance of stormwater to minimize inundation	Recommendations for planning activities or zoning standards which are considerate of all local flooding risks	FEMA Floodplain Maps: The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program (NFIP) Climate Ready Action Boundary (CRAB): The CRAB consists of a flood depth grid image service depicting the Climate Ready Action Boundary (CRAB) for the coastal areas throughout the State of Maryland MDP/MDE Water Resources Best Practices Checklist: This WRE Guidance Update provides best practices for considering and addressing water-related climate change impacts, and for addressing the challenges that growth and development pose to our	Ocean City specifies elevation as primary strategy for future development (Ocean City 2025 Draft Comprehensive Plan - Chapter 9, Page 8) Easton establishes a Land Use goal to balance new development with infrastructure capacity and data for storm water and other hazards so that land is used efficiently and sustainably. (Easton 2025 Draft Comprehensive Plan – Chapter 2 Land Use, Page 30)	

			collective efforts to protect and restore Maryland waterbodies.		
Flood Resilience – Water Services and Treatment	**Sensitive Areas, Land Use Article §3-104:** Resilience advances the effectiveness and security of sensitive areas as it relates to destructive flooding events or the containment of water pollution from natural areas. **Water Resources,** Land Use Article §3-106: Resilience advances conveyance of stormwater to minimize inundation and works to achieve water treatment goals as impacted by natural systems or critical	Recommendations for planning activities and capital investment which consider how water services and treatment may be impacted by flooding events.	FEMA Floodplain Maps: The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program (NFIP) Climate Ready Action Boundary (CRAB): The CRAB consists of a flood depth grid image service depicting the Climate Ready Action Boundary (CRAB) for the coastal areas throughout the State of Maryland	Betterton is seeking renewable energy for a new wastewater treatment facility + pursuing green infrastructure to upgrade old sewer system during complete replacement. (Betterton 2025 Draft Comprehensive Plan - Chapter 5, Page 25-26)	N/A

	infrastructure.		Capital Improvement Plan: This document outlines the overall process through which agencies prepare for and submit budget requests to DBM. It includes helpful hints, links, and checklists to ensure accurate and complete submissions.		
Coastal Resilience – Waterfront Threats and Sea Level Rise	**Sensitive Areas,** Land Use Article §3-104**:** Resilience considers floodplains and sea level rise, including impacts to the natural environment. **Water Resources**, Land Use Article §3-106: Resilience considers natural buffer protection and deploys infrastructure which mitigates the adverse impacts of sea level rise and other threats along the waterfront such as erosion.	Strategies for or directly addressing the impact of coastal flooding events, including sea level rise.	MDP Saltwater Intrusion Plan: This plan aims to document and consolidate the findings and recommendations of monitoring, analysis, and modeling initiatives of the Saltwater Intrusion research and adaptation. Nuisance Flood Plans: To enhance the resilience of every coastal jurisdiction in Maryland and to prepare for the future of increased flooding, the State of Maryland requires that every coastal municipality and county that	Ocean City directly incorporates its nuisance flood plan into the draft comprehensive plan. This section highlights the federal resources used to evaluate nuisance flooding and which responsibilities Ocean City has undertaken locally to expand understanding of increasing risk. (Ocean City 2025 Draft Comprehensive Plan – Chapter 7, Page 11)	N/A

			experiences nuisance flooding submit a nuisance flood plan (NFP) to be updated every five years.		
Coastal Resilience – Extreme Weather	**Sensitive Areas,** Land Use Article §3-104**:** Resilience considers extreme coastal weather such as hurricanes or storm surge which may adversely impact areas of project flood risk. **Community Facilities**, Land Use Article § 3-108**:** Resilience considers and plan for local facilities which face adverse risk from extreme coastal weather. **Water Resources**, Land Use Article §3-106: Resilience considers and	Strategies to address extreme coastal weather and its impacts to life, property, and infrastructure. Planning activities may also address where systems which support local resilience need improvement, such as stormwater and wastewater systems.	FEMA Community Rating System: The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP). Local Hazard Mitigation Plan: The local mitigation plan guides risk-informed decision-making at the local level. Local governments, including	Ocean City aligns development strategy with best practice updates to its built environment standards as advised by FEMA and USACE programs. (Ocean City 2025 Draft Comprehensive Plan – Chapter 11, Page 19-21) Chestertown states that development in the 100-year FEMA floodplain will be halted to prevent adverse impacts of building in known areas of flood hazard.	N/A

	plans for the effectiveness of water and wastewater related infrastructure and resources in the event of extreme coastal weather.		special districts, can use the mitigation plan to guide planning for resilience, land use and economic development.	(Chestertown 2025 Draft Comprehensive Plan – Sensitive Areas Element, Page 48)	
Heat Resilience	**Transportation**, Land Use Article§ 3-105**:** Resilience advances planning that is considerate of extreme heat impact on critical infrastructure and transportation assets such as rail systems or transit facilities. **Community Facilities**, Land Use Article § 3-108**:** Resilience advances planning for the adverse impact of extreme heat on facilities OR how facilities may mitigate extreme heat impact on the local	Planning activities or recommendations to curb extreme heat and its adverse impacts on communities and facility resources. Plans may include assessment of the areas or systems most vulnerable to the impacts of extreme heat.	Environmental Justice Screening and Mapping Tool: This tool provides users with data to inform their decisions on siting, permitting, enforcement, and infrastructure improvements. Demographic and socioeconomic data, coupled with state agency data such as proximity to active high air emission facilities or wastewater treatment facilities, will be used to help underserved and overburdened communities in Maryland.	Baltimore City's advancement of Urban Tree Canopy initiatives, increasing access to cooling during heat emergencies, and evaluating the impact of extreme heat on public health. (Baltimore City 2024 Comprehensive Plan – Chapter Trees and Forests, Page 204) Frederick County highlights that expanding tree canopy and urban greenery is an important	N/A

	community. **Development Regulations**, Land Use Article § 3-103**:** Resilience considers how growth and development may exacerbate the adverse impacts of extreme heat, and how mitigation may be integrated.			method to address growing extreme heat concerns across the rapidly developing county. Frederick County 2025 Draft Green Infrastructure Plan (Chapter 3 Green Infrastructure Explained and Explored, Page 55)	
Facility Resilience	**Community Facilities**, Land Use Article § 3-108**:** Resilience considers how local facilities may contribute to community preparedness or growth when unexpected natural or human-induced threats occur. **Municipal Growth**, Land Use Article§ 3-112**:** Resilience considers the public good/service needs of communities in the face of rapid growth or decline, or unexpected natural and human-induced threats.	Assessment or strategies for continued use/protection of vital facilities in the face of unexpected hazards or acute shocks.	Local Hazard Mitigation Plan: The local mitigation plan guides risk-informed decision-making at the local level. Local governments, including special districts, can use the mitigation plan to guide planning for resilience, land use and economic development. Capital Improvement Plan: This document outlines the overall process through which agencies prepare for and submit budget requests to DBM. It includes helpful hints,	N/A	N/A

			links, and checklists to ensure accurate and complete submissions.		
Economic Resilience	**Transportation**, Land Use Article§ 3-105**:** Resilience advances reliability of and access to transportation systems vital to a jurisdiction's core revenue streams. **Development Regulations**, Land Use Article § 3-103**:** Resilience advances the stability of core economic systems while supporting continued delivery of goods and services for local communities. **Municipal Growth**, Land Use Article§ 3-112:	Strategies to mitigate the impact of hazards on primary revenue streams, systems, and facilities.	Maryland's Compatible Use Project: The Maryland SJRIS is not a legally binding document. It is an advisory document aimed at improving compatibility between Maryland military installations and their surrounding communities. The primary goal of this document is to protect the viability of all current and future military operations at a military installation, while simultaneously guiding community growth, sustaining the environmental and economic vitality of the	Ocean City highlights alignment with the Worcester County and Ocean City Economic Development Corporation. Capital planning for infrastructure supports resilience through controlled growth and upgrading infrastructure to meet needed capacity. (Ocean City 2025 Draft Comprehensive Plan – Chapter 2, Page 29)	N/A

	Resilience advances the jurisdiction's ability to deliver services and essential needs to local communities, including maintaining the infrastructure needed.		region, and protecting public health, safety, and welfare.		
Social Resilience	**Housing**, Land Use Article §3-114**:** Resilience advances the jurisdiction's capacity to provide housing to communities in need and consider how housing stock may remain stable in the face of unexpected extreme weather or human-induced threats.	Strategies providing mitigation for all community members and the adverse or exponential risks they may face during hazards or acute shocks	Environmental Justice Screening and Mapping Tool: This tool provides users with data to inform their decisions on siting, permitting, enforcement, and infrastructure improvements. Demographic and socioeconomic data, coupled with state agency data such as proximity to active high air emission facilities or wastewater treatment facilities, will be used to help underserved and overburdened communities in Maryland.	Baltimore City integrates strategy, current efforts, and policy recommendations to complete an Environmental Justice chapter. This content displays how the city is advancing social resilience throughout communities. (Baltimore City 2024 Comprehensive Plan – Chapter Environmental and Climate Justice, Page 198)	N/A

Energy Resilience	**Community Facilities**, Land Use Article § 3-108**:** Resilience advances the reliability and redundancy of local power supply for critical infrastructure, which may include deploying renewable energy sources and microgrids.	Planning activities which identify where local energy delivery needs strengthening from external impacts. External impacts may look like regional generation or distribution failure due to natural hazards or human-induced threats. Internal impacts may look like disruption to local transmission or control. To plan for resilience, the comprehensive plan may identify energy solutions that are self- sustaining and adaptable such as small-scale local generation or redundant service from the regional provider.	Maryland's Compatible Use Project: The Maryland SJRIS is not a legally binding document. It is an advisory document aimed at improving compatibility between Maryland military installations and their surrounding communities. The primary goal of this document is to protect the viability of all current and future military operations at a military installation, while simultaneously guiding community growth, sustaining the environmental and economic vitality of the region, and protecting public health, safety, and welfare. MDP Solar Facility Siting Guidance: MDP's Solar Facility Siting Guidance webpage provides guidance to local governments on strategies to minimize impacts of utility-scale solar facilities	Aberdeen highlights the MDP Compatible Use Study and their strategy to align with the assets and development of nearby Aberdeen Proving Grounds. (Aberdeen 2022 Draft Comprehensive Plan – Chapter 5 Municipal Growth, Page 77)	N/A

			on agricultural lands and ecologically important areas, and to help facilitate the siting of solar facilities on developed lands and brownfields.		
Historical and Cultural Asset Resilience	**Development Regulations**, Land Use Article § 3-103**:** Resilience advances the protection and continuation of significant historic and cultural assets. **Community Facilities**, Land Use Article § 3-108**:** Resilience advances access to and ensures delivery of resources for historical and cultural assets.	Acknowledgement of historic and cultural resources at risk and in need of resilience considerations. If this is unknown, the plan should highlight how these resources may be identified. Address recommendations or strategies to mitigate harm and increase resilience and adaptation of historical and cultural resources.	Maryland Historical Trust Medusa Application: Through Medusa, you may access information about architectural and archaeological resources recorded in the Maryland Inventory of Historic Properties (MIHP) and the National Register of Historic Places (NRHP), as well as properties on which MHT holds preservation easements. Flood Mitigation Guide: Maryland's Historical Buildings: This Guide therefore creates a	Annapolis states that zoning standards are to be updated to address recommendations from all recent hazard mitigation plans, including Weather It Together: Cultural Resource Hazard Mitigation Plan (2018). (2024 City of Annapolis Comprehensive Plan – Chapter 4 Land Use, Page 152)	N/A

			framework through which local preservation planners and advocates can better understand floodplain management and engage in local and state emergency management processes. As this Guide demonstrates, floodplain and emergency management efforts are largely locally-focused, and as such, it is largely up to local planners and advocates to ensure that historic preservation has a seat at the table. FEMA Hazard Mitigation Planning for Historical Property and Cultural Resources: The Federal Emergency Management Agency (FEMA) has developed a series of mitigation planning "how-to" guides for the purpose of assisting Tribes, States, and local governments in developing effective hazard mitigation planning		

			processes. The material presented in these guides is intended to address the needs of both large and small communities with varying degrees of technical expertise and financial reserves		