# INCORPORATING NEW REQUIREMENTS FOR CLIMATE AND EQUITY INTO LOCAL GROWTH ALLOCATION APPLICATIONS

## Critical Area Commission
## Interim Guidance Document
## May 2025

### INTRODUCTION

Growth allocation is a process afforded to local jurisdictions used to reclassify acreage of Critical Area land from one designation to another, more intense designation. Growth allocation allows for the expansion of Limited Development Areas (LDAs) and Intensely Developed Areas (IDAs), provided the request meets the location standards and criteria in Critical Area law and regulations.

Chapter 424 of the 2024 session of the Maryland General Assembly incorporates environmental justice and climate change considerations into the Critical Area law for the very first time. These changes included the addition of a new growth allocation location standard and factor for consideration by the Commission to the Natural Resources Article. The new location standard will ensure that local jurisdictions give consideration as to whether a newly intensified area may be vulnerable to the risks associated with climate change and if so, ensure measures are taken to reduce that vulnerability. The new factor to be considered by the Commission is meant to provide a local jurisdiction with the opportunity to evaluate a proposal for the environmental impacts it may have on underserved or overburdened communities.

The Critical Area Commission is actively working to develop regulations and guidance for local jurisdictions to incorporate into their local Critical Area Programs. This document is meant to serve as interim guidance to local jurisdictions requesting growth allocation between the effective date of the changes to the Natural Resources Article (October 1, 2024) and the passage of new regulations and local program updates reflecting these changes. We recommend a local jurisdiction coordinate with Commission staff on potential growth allocations as soon as possible in order to ensure we can provide the most up to date tools and resources.

# Part I. How to address the new Climate Resiliency Location Standard

In approving the use of growth allocation, a local jurisdiction must ensure the proposal meets certain location standards. The purpose of the new standard for climate resilience is to ensure a local jurisdiction takes climate resiliency into consideration when approving a project.

*New Standard (§8-1801.1(c)(2)(vi))*

When locating new intensely developed or limited development areas, local jurisdictions shall locate new IDAs and LDAs **outside of areas vulnerable to climate change** unless the local jurisdiction proposes and the Commission approves:

1. Areas identified by the local jurisdiction as vulnerable to climate change as required under 8-1808(c)(1)(iii)16 of this subtitle[1]; and
2. Measures that:
   A. Assess climate resiliency and vulnerability; and
   B. Incorporate siting, design, construction, and other natural features to significantly enhance climate resiliency and reduce vulnerability.

In applying this new standard, local jurisdictions will be required to take the following two steps.

**Step 1**

First, a local jurisdiction must consider whether a proposal is located within an area that is vulnerable to the impacts of climate change, including sea level rise, storm surge, wetland migration areas, flooding and other extreme weather events.

**AND**

**Step 2**

If a growth allocation **IS** located in a vulnerable area, then the local jurisdiction must propose measures for the proposal that would significantly enhance the resilience of the site and project through certain measures.

This guidance document will offer some suggested procedures and tools for a local jurisdiction they can consider using in addressing this standard.

**Worksheet A: Growth Allocation Coastal Resiliency Evaluation**

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[1] 8-1808(C)(1)(III)16: At a minimum, a program shall contain all of the following elements including:...Provisions for:

A. Identifying areas vulnerable to climate change;
B. Mitigation and adaptation measures that address sea level rise, storm surge, precipitation-induced flooding, other extreme weather events, migrating wetlands, and coastal forests; and
C. Enhancing climate resiliency of the Critical Area by identifying, restoring, and creating and conserving existing and projected future natural and nature-based features

Attached to this guidance document is a resiliency evaluation worksheet. The worksheet is intended to help local jurisdictions determine whether a proposed growth allocation is vulnerable to the impacts of climate change. We recommend completing the worksheet as you proceed through the steps below as part of the growth allocation application process.

**Step 1. Vulnerability Assessments**

A new requirement in the Critical Area law is that local jurisdictions will be required to include provisions in their local Critical Area Programs to identify areas vulnerable to climate change. Those vulnerability provisions are intended to support local decision making, including this new growth allocation standard. The Commission will be developing more specific guidance and regulations around this requirement. In the meantime, local jurisdictions have a number of resources available to help them review specific growth allocation locations and understand how climate change may cause certain impacts such as sea level rise, storm surge or wetland migration.

We recommend that a local jurisdiction start a vulnerability assessment by first understanding what particular impacts may occur on a site. A great place to start is with the latest Maryland Commission on Climate Change sea level rise projects and the guidance published by the Maryland Department of Natural Resources and Maryland SeaGrant on using those projections.

**Recommended Primary Data Source**

The Maryland Commission on Climate Change (MCCC) Sea Level Rise Projections

**Recommended Planning Guidance**

Guidance for Using Maryland's 2023 Sea Level Rise Projections
Appendix A can help select a mean Sea Level Rise projection for the proposed growth allocation project.

**Recommended Technical Tools**

In addition to sea level rise, there are other means for determining whether land is vulnerable to the impacts of climate change. This includes storm surge, wetland migration corridors, and the presence of natural and nature-based features such as oyster reefs or forested buffers. There are numerous online GIS tools available to understand those resources, including:

**Maryland's Coastal Atlas,** which offers multiple layers to assess resiliency:

- Coastal Resilience Assessment Layer - The *Community Flood Risk Areas* represent residential areas at risk to coastal flooding where populations may be less equipped to prepare for, respond to, or recover from a coastal hazard event. Risk Areas are ranked from 1 to 5 to indicate relative risk, with 1 indicating very low risk and 5 indicating very high risk. Risk rankings incorporate population density, social parameters (i.e. age, income, language proficiency), and probability of exposure to a flood hazard event in any one given year. 2013 US Census Bureau American Community Survey, 2010 Maryland

Department of Planning land use land cover, and effective FEMA floodplain data as of December 2015 were used to identify and rank risk areas.

- Wetland Adaptation to Sea Level Rise layer - The *Drowned Lands* dataset visualizes the projected areas that will be flooded/drowned by 2050, 2070 and 2100. The *Uplands to Wetlands in 2100* dataset visualizes instances of wetland conversion under 4.03 feet of seal level rise (SLR), under a scenario of rising greenhouse gas emissions with a probability of at least 17%, using reported base sea levels in the year 2010.

**NOAA's Sea Level Rise viewer,** which shows sea level rise in 1-foot increments along Maryland's tidal shorelines.

**MD CS-CRAB**: The Maryland Coast Smart Council - Coastal Resilience Adaptation Boundary Tool shows the flood depth in Maryland's Coastal Zone associated with 3-feet above the 100-year floodplain.

**MDOT - SHA Climate Change Vulnerability Viewe**r, which highlights sea level change and the potential impacts on Maryland's roadways, including roadway assets & infrastructure.

**Step 2. Enhance Resilience**
If a project is vulnerable to the impacts of climate change, the growth allocation application should incorporate measures to reduce that vulnerability through an appropriate combination of siting rules, design or construction practices, or enhancement of natural features on a site. We recommend local jurisdictions use existing resources to help determine what types of practices may be most appropriate for a site. The second part of the worksheet is intended to help walk through that process.

**Siting, Design and Construction Guidance**:

Maryland's Coast Smart Council implements a Coast Smart Construction Program which include guidelines, and other directives applicable to the preliminary planning and construction of proposed capital projects to address sea level rise and coastal flood impacts. The Program includes measures such as locating critical infrastructure outside the boundary of the CS-CRAB. If structures are located within the CS-CRAB, then the guidance requires critical components to be located at least one-foot above the CS-CRAB elevation to ensure continued operation in the event of flooding. Depending on the specific growth allocation, local jurisdictions could require enhanced measures to ensure construction is not impacted by future flooding.

**Natural and Nature-Based Features for Resilience**
Climate resilient practices can also include projects that create or enhance natural or nature-based features on a site. Those types of practices can reduce flooding, storm surge and other climate related impacts. Project types can include living shorelines, oyster reef restoration, riparian buffer plantings, wetland enhancement, and stormwater management.

**Recommended Planning Resources**
NOAA Digital Coast

- Natural Infrastructure
- Fast Facts on Natural Infrastructure
- Adapting Stormwater Management for Coastal Floods

**Recommended Technical Tools**
**Maryland's Coastal Atlas,** which offers multiple layers to assess resiliency:

- The *Shoreline Hazard Index* identifies the potential for existing coastal habitat to provide for risk reduction.
- The *BUILD Beneficial Use layer* identifies opportunities to match planned dredge projects with potential restoration projects.
- The *Natural Filters layer* identifies opportunities for Buffer planting or wetland enhancement projects.

# Part II. How to address the new Environmental Justice Factor

In light of the 2024 legislative update, the Commission must ensure that the burden of development resulting from its decisions is equitably distributed. The Commission must also ensure the equitable distribution of the benefits of compensatory mitigation associated with those impacts.

*New Factor for Consideration (§8-1808.1(c)(4))*

> In reviewing map amendments or refinements involving the use of growth allocation, the Commission shall consider the following factors:
>
> (viii) Environmental impacts on underserved or overburdened communities

Specifically, when applying the new growth allocation factor, the Commission will consider whether and how the proposal impacts overburdened or underserved communities; as well as how the required mitigation for the proposal could be directed to overburdened and underserved communities to alleviate such inequities. This may result in new, innovative and/or out-of-kind mitigation strategies than what the Commission has previously requested or accepted.

For example, the mitigation package for a proposed growth allocation could include a public access point in an overburdened/underserved community that does not currently have accessible public access. It could also include upgrading an existing public access point to provide additional facilities or activities valuable to the community. It might also include the addition or improvement of greenspace in a community that is considered overburdened and/or

underserved. Even if the proposed project is not within an overburdened or underserved community, targeting tree planting mitigation to a community that qualifies as underserved in terms of tree canopy could be a way to provide more equitable mitigation.

This section is meant to assist a local jurisdiction in addressing the new growth allocation factor for considering environmental impacts on overburdened and underserved communities. As a local jurisdiction works through this section, they should consider and explore ways to advance equity as part of the proposed project. This will likely require a rethinking of how we have typically viewed growth allocation impacts and mitigation opportunities in the past.

**Equity Worksheet B**
Attached to this guidance document is an equity evaluation worksheet. The worksheet is intended to help local jurisdictions identify potential equity issues at a proposed growth allocation site. We recommend completing the worksheet prior to answering the questions below and using it to guide your responses.

**Equity Assessment**

Please develop a narrative that answers the following questions:

I. What are the County's desired outcomes for the proposed growth allocation project?

II. What data does the County have regarding this site? What does that data tell you about the site? Eg., how is the site currently used? Who currently uses the site? How will the site be used after the project is implemented? Who will use the site then? What are the limiting factors for the site (i.e., existing/surrounding infrastructure, public access, etc)?

III. How have community members been engaged with the proposed project? What methods of outreach has the County used? Are there people who will be affected by this project who may not be aware of it?

IV. Ultimately, who will benefit from the growth allocation project?

V. Who will be burdened by it?

VI. Considering the results of your Site Evaluation above, and the County's desired

outcomes for this project; what are the County's strategies for advancing equity and mitigating unintended consequences for this project? Can this project address any of the inequities identified in the Site Evaluation? Can this project ease the burden for those identified in (V) above?

VII. How will the County implement the strategies identified in (VI) above with this project?

VIII. How will the County communicate the results of their strategies to mitigate inequities to the surrounding community? How will the County hold themselves accountable to their desired outcomes?

# Worksheet A
# Growth Allocation Coastal Resilience Evaluation

This worksheet is intended to help a local jurisdiction select a sea level rise estimate for a proposed growth allocation request and guide analysis to demonstrate that the jurisdiction has:

1. Identified if the proposed growth allocation site is vulnerable to climate change and
2. If located in an area vulnerable to climate change, provides measures to:
    a. Assess climate resiliency and vulnerability, and
    b. Incorporates siting, design, construction, and other natural features to significantly enhance climate resiliency and reduce vulnerability.

This analysis relies on Maryland's sea level rise predictions issued by the Maryland Commission on Climate Change, as updated every five years. Resources that may assist in completing the analysis are listed at the end of this attachment.

Site Address:_____
_____

**STEP 1. Vulnerability Assessments**

Data Sources:

Sea Level Rise Projections for Maryland 2023

Guidance for Using Maryland 2023 Sea Level Rise Predictions

**Step 1a.** Define the design life of the growth allocation request, including the proposed development type (subdivision, commercial use, etc.), the location of infrastructure (roadways, utilities, stormwater management, etc.), and identify any required major maintenance activities and their timeframes through the life-cycle of the project:

Design-Life:

**Step 1b.** Determine the Project's Tolerance for Flood Risk.

Tolerance for flood risk is the willingness of decision-makers and stakeholders to accept possible consequences of flooding. Flood risk tolerance is different from a project's sensitivity to inundation, which refers to the project's capacity to sustain damage or loss of function during a flood event or repeated flood events. A project with high sensitivity to inundation would be easily damaged if flooding were to occur, whereas a project with low sensitivity to inundation would not.

| | **HIGH TOLERANCE FOR FLOOD RISK** | **MEDIUM TOLERANCE FOR FLOOD RISK** | **LOW TOLERANCE FOR FLOOD RISK** |
|---|---|---|---|
| **Description** | Decision-makers & stakeholders have a High tolerance for flood risk to the project | Decision-makers & stakeholders have a Medium tolerance for flood risk to the project | Decision-makers & stakeholders have a Low tolerance for flood risk to the project |
| **Possible Project Characteristics** | Low impact, importance or consequence to the community and/or replacement cost. | Medium impact, importance or consequence to the community and/or replacement cost. | High impact, importance or consequence to the community and/or replacement cost. |
| | Easy or likely to adapt | Moderately easy or somewhat likely to adapt | Difficult or unlikely to adapt |
| | Little to no implications for public function and/or safety | Moderate implications for public function and/or safety | Substantial implications for public function and/or safety |
| | Low sensitivity to frequency and exposure to inundation | Moderate sensitivity to frequency and exposure inundation | High sensitivity to frequency and exposure to inundation |

Source: Guidance for Using Maryland 2023 Sea Level Rise Predictions

- Overall Flood Risk Tolerance: ____HIGH ____MEDIUM ____LOW

Explanation:

**Step 1c.** Select a tide gauge.

Per the Guidance for Using Maryland 2023 Sea Level Rise Predictions, "decision-makers may choose to select the tide gauge that best represents or is the closest to or located within the project area. In most cases, Relative Sea Level Rise (RSLR) projections based on the closest tide gauge should be used for the project. However, in some instances, a further tide gauge may be more representative of the project area. For example, Hoopers Island in Dorchester County is closest to the Solomons Island tide gauge but would be better represented by the Cambridge tide gauge because it is on the same side of the Bay."

____ Baltimore MD
____ Tolchester Beach, MD
____ Annapolis, MD
____ Washington, DC
____ Cambridge, MD
____ Solomons Island, MD
____ Ocean City, MD

**Step 1d.** Select a RSLR estimate for the project in accordance with Appendix 1 of the Maryland Sea Level Rise Projections 2023.

The growth allocation site should plan for _____ft by the year_____.

**Step 1e. Relative Sea Level Rise**

Is the growth allocation project located within the selected RSLR over the course of its design life?

☐ YES ☐ NO

**Step 1f. Desktop Analysis**

☐ Maps showing all layers in conjunction with the proposed growth allocation project are attached.

❖ Will the growth allocation be impacted by storm events or nuisance flooding over the course of its design life?

☐ YES ☐ NO

Data Source: MDOT SHA Climate Change Vulnerability Viewer
- Select 2050 and 2100 (as necessary) Nuisance Tidal Inundation Maps

❖ Is the growth allocation within the FEMA 100 or 500-year floodplain?

☐ YES ☐ NO

Data Source: Maryland Flood Maps

❖ Is the growth allocation project located within a Special Flood Hazard Area?

☐ YES ☐ NO

Data Source: Maryland Flood Maps

❖ Is the growth allocation project located within the CoastSmart Climate Ready Action Boundary (CS-CRAB) layer?

☐ YES ☐ NO

Data Source: Maryland Flood Maps CRAB Tool

**STEP 2. Enhance Resilience**

**Step 2a. Design Considerations**

❖ Describe how the local jurisdiction has considered the likelihood of sea level rise over the course of the design life of the growth allocation request. This may include specific design or construction alterations made to the project if it is vulnerable to sea level rise, or location alterations made.

**Step 2b. Coastal Resiliency Practices**

- What climate resilient practices have been identified and incorporated into the proposed growth allocation project in order to avoid, or in the alternative, minimize environmental and structural damage associated with a coastal hazard, an extreme weather event, sea level rise, and other impacts?

- Does the growth allocation project incorporate freeboard above the 100-year base flood elevation, wet-proofing or dry proofing structures below base flood elevation, or the consideration of flooding potential for selection of building materials? If yes, please describe.

❖ Does the growth allocation project use or consider presence or creation of ecosystem resiliency features such as oyster beds, wetlands, dunes, barrier islands, or SAV? If yes, please describe.

❖ What other climate resilient practices have been incorporated into the project?

# Worksheet B

## Growth Allocation Site Evaluation for Equity

Site Address:_____

_____

I. Is your site located in an overburdened/underserved census tract?[1] (MDE EJ Screen)[2]

___YES ___NO

A. What are the breakout scores for the following:
   1. Overburdened Pollution Environmental: ___th percentile
   2. Overburdened Pollution Exposure: ___th percentile
   3. Overburdened Sensitive Population: ___th percentile
   4. Underserved Socioeconomic/Demographic Population: ___th percentile

B. If any score in A. above is over the 75th percentile, what are the specific contributing factors?

_____

_____

_____

_____

II. Is your site located in an underserved area in terms of tree canopy? (5 Million Trees Initiative)[3]

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[1] To be considered an overburdened or underserved census tract, the overall EJ Screen score must be in at least the 75th percentile for the State of Maryland.

[2] EJ Screen Story Map: https://storymaps.arcgis.com/stories/19b24650000a4ff1b13d8d40cf173dd7. EJ Screen How To: https://mdewin64.mde.state.md.us/EJ/HowTo.html.

[3] This map displays areas qualifying for funding through HB991's Urban Trees Program, administered by the Chesapeake Bay Trust, and for tree plantings organized through DNR and other partners, by meeting the bill's definition of "Underserved" (orange areas on map). Gray areas on the map delineate all MD Census Urban Areas. Click on the layers list icon to turn on/off the different layers that were used to determine the qualifying areas. The redlined areas displayed only show the current extent of digitally mapped neighborhoods that were rated as "hazardous" by the Home Owners Loan Corporation in Maryland. Other areas in Maryland have been redlined but the data may not be currently available in a digital, spatial format. The bill defines “Underserved Area” as an urban area, as delimited by the United States Census Bureau that also meets at least one of the following criteria:

1. A neighborhood that was, at any point in time, redlined or graded as “hazardous” by the Home Owners’ Loan Corporation;
2. A census tract with an average rate of unemployment for the most recent 24–month period for which data are available that exceeds the average rate of unemployment for the state;

____YES ____NO

III. Is your site located in a low public park equity area census block? (DNR Park Equity Mapper)[4]

____YES ____NO

IV. Is your site located in an overburdened and/or underserved Greenspace Area? (Greenspace Equity Mapper)

____Overburdened ____Underserved ____Overburdened and Underserved

V. Is your site located within 10 miles of an existing Water Activity access point? (MD Water Activity Mapper)[5]

____YES ____NO

If you answered YES above, which types of water activities are offered? (MD Water Activity Mapper)

____State Parks w/Swimming ____Water Access Points

____Water Trails ____Soft Access

____Public Fishing Access Points ____Boat Ramp

____Boat Ramp and Soft Access

VI. Using census group block data[6] (if available), what are the socioeconomic demographics of the impacted community?[7]

____% below medium income ____%minority

3. A census tract with a median household income for the most recent 24–month period for which data are available that is equal to or less than 75% of the median household income for the state during that period; or
4. A housing project as defined in § 12–101 of the housing and community development article.

[4] For assistance: https://p1.cgis.umd.edu/mdparkequity/help.html.

[5] Instructions for use: Click on the "Water Access" icon in the upper right corner. Ensure the box next to "Water Access" in the drop down menu is checked. Click on the arrow beside the checkbox. Select each type of activity to determine whether they are available near your site.

[6] If census group block data is not available and the jurisdiction has access to other sociodemographic data (i.e. census block data or jurisdiction-collected data), that can be used here instead.

[7] Instructions for use: Enter the address of the site. If Block Group data is available, it will appear in the drop down menu. Select the Block Group (BG). Scroll down to find sociodemographic data. Some data may not be available if the % is within the margin of error for the population. Just write "N/A" for that information.

____%English as a Second Language

VII. Is there an adjacent or nearby community (separate from where the project is proposed) that could benefit from mitigation efforts associated with this project? If so, please provide additional detail below:

_____

_____

_____

_____