Amendment 2 to Council Bill No. 28 -2023

BY: Christiana Rigby **Legislative Day 11**
Date: 10/02/2023

Amendment No. 2

(This Amendment makes the following changes to HoCo by Design Chapter 3 and Chapter 11:

Chapter 3: Ecological Health	- *Amends the section titled "Mitigation Measures" to include how targeting redevelopment in activity centers offers opportunities to preserve existing environmental resources;* - *Amends the EH-2 Policy Statement to integrate projects and regulations with climate change goals and the Implementing Actions to include redevelopment in mixed use activity centers in the evaluation of where the Land Development Regulations and Zoning Regulations;* - *Amends the EH-3 Policy Statement Implementing Actions to require an exploration of housing development patterns that enhance opportunities for preservation while reducing emissions;*
Chapter 11: Implementation	- *includes the Climate Action and Resiliency Plan in the County's library of plans;* - *Amends the EH-2 Policy Statement to integrate projects and regulations with climate change goals and the Implementing Actions to include redevelopment in mixed use activity centers in the evaluation of where the Land Development Regulations and Zoning Regulations; and* - *Amends the EH-3 Policy Statement Implementing Actions to require an exploration of housing development patterns that enhance opportunities for preservation while reducing emissions)*

In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following pages as indicated in this Amendment:

- Chapter 3: Ecological Health: 12, 15, and 17;
- Chapter 11: Implementation: 10, 16, and 17.

Correct all page numbers, numbering, and formatting within this Act to accommodate this amendment.

> *I would like to see environmental and climate change concerns be the most important consideration for growth and infrastructure.*
>
> *- HoCo By Design process participant*

Mitigating and Adapting to Climate Change

Climate change can be generally defined as a significant, long-term shift in weather patterns for a specific geographic region. The National Oceanic and Atmospheric Administration's (NOAA) Fourth National Climate Assessment notes that emissions of the long-lived greenhouse gases carbon dioxide, methane, nitrous oxide, and fluorinated gases are causing climate change as they build up and trap heat in the atmosphere. The assessment further notes that greenhouse gas (GHG) emissions come from human sources (fossil fuel combustion, industrial processes, deforestation) and natural sources, but emissions from human sources have increased dramatically since the start of the industrial age and the growing use of coal, oil, and natural gas.

NOAA's Maryland State Climate Summary (2017) projects impacts in Maryland from climate change will include increased average annual precipitation, especially during the winter and spring. More frequent and intense rainfall events are also projected, which could lead to more flooding events in urban areas and expanded flood inundation areas. Projected changes also include higher daytime and nighttime temperatures, which could intensify droughts. NOAA further projects that the oceans will continue to warm and sea levels will continue to rise, which may displace people living along the coast. These effects combined could shift available habitat and impact migratory patterns for plant and wildlife species. If these shifts occur at a rapid pace, species that cannot adapt quickly enough may not survive.

Not only could climate change have a devastating impact on the natural environment and plant and wildlife species, it could also economically distress many households, businesses, and families. Families could experience higher energy bills resulting from temperature extremes, unless they are able to upgrade the heating and cooling systems in their homes. They may also need to further weatherproof their homes and retrofit their properties to add stormwater management for more frequent nuisance flooding. While all households may experience impacts from climate change, lower-income and cost-burdened households could have significant challenges affording these extra costs. In Howard County, as of 2018, 5% (5,732) of all households are below the poverty line and 23% (27,310) of households are in the ALICE (Asset Limited, Income Constrained, Employed) income bracket. Financial assistance programs are available to assist income-qualified households, such as weatherization programs funded by federal and state grants.

Mitigation Measures

Mitigation measures to reduce GHG emissions in our region can include reducing the use of fossil fuels through energy conservation and efficiency in buildings and transportation, switching to renewable energy, and promoting carbon sequestration through natural resources and agriculture. Carbon sequestration is the process by which atmospheric carbon dioxide is taken up by trees, grasses, and other plants through photosynthesis and stored as carbon in biomass (trunks, branches, foliage, and roots) and soils.

Many Smart Growth policies promote development patterns and actions that are in harmony with climate mitigation goals. Polices that promote compact growth, walkable communities, green buildings, complete streets, and increased transit reduce fossil fuel use. Other policies promote protecting environmental resources, such as wetlands and forests, and preserving open space and agricultural land, which can provide carbon sequestration and help mitigate increased temperature extremes. HoCo By Design's Smart Growth strategy of targeting redevelopment in mixed used activity centers offers opportunities to preserve existing environmental resources by directing growth away from undeveloped lands and creating compact, walkable communities that support transit investment and innovative green building design. Zoning and other policies can promote renewable energy by making it easier to include solar and other on-site or local renewable energy generation, especially on developed parcels. Mitigation measures can help communities improve their quality of life and save money through reduced energy costs, an important outcome for everyone, but especially for low-income or cost-burdened households.

Photo Credit: Sue Muller

EH-2 Policy Statement

Seek to integrate climate change mitigation and adaptation goals into all county programs, projects, ~~and~~ policies, and regulations.

Implementing Actions

1. Ensure the Howard County Climate Action Plan update continues to maximize opportunities to mitigate and adapt to climate change with clear goals and strategies.
2. Evaluate and enhance opportunities where needed for climate change mitigation and adaptation measures in the Subdivision and Land Development Regulations and Zoning Regulations, such as redevelopment in mixed use activity centers, natural resource protection, and the provision of renewable energy.
3. Enhance county design requirements for county infrastructure and public and private buildings, to ensure these structures will be resilient under projected future weather patterns and minimize resource consumption.
4. Review and update county Green Building requirements for opportunities to enhance the sustainability of public and private buildings.
5. Identify and ensure economically-vulnerable communities, businesses, and households have the resources necessary for mitigation and adaptation measures.

Protecting Sensitive Environmental Resources

The County Subdivision and Land Development Regulations and Zoning Regulations contain significant provisions for the protection of sensitive environmental resources when properties are developed. This section discusses regulatory protections for water resources, steep slopes, and rare, threatened and endangered species, as well as three zoning districts specifically designed to protect sensitive resources. Additional protective measures for forests and stormwater management requirements are addressed in later, separate sections.

Water Resources and Steep Slopes

Water resources include rivers, wetlands, floodplains, ponds, lakes, and groundwater. These are vital natural resources that provide drinking water, stormwater management, pollution abatement, floodwater storage, and recreation, as well as important habitat for a wide variety of plant and animal species.

To protect water quality and habitat within streams, the County Subdivision and Land Development Regulations require the following undisturbed streamside buffer areas:

- 75 to 100 feet along perennial streams in residential zoning districts;
- 50 feet along perennial streams in non-residential zoning districts; and
- 50 feet along intermittent streams in all zoning districts.

The regulations also require a 25-foot undisturbed buffer around nontidal wetlands. Additionally, most wetlands in the County are found within the 100-year floodplain, which is protected from disturbance.

County regulations also protect steep slopes of 25% or greater when there is a contiguous area of 20,000 square feet or larger. Disturbing steep slopes can generate excessive erosion and sedimentation that can be difficult to contain even with enhanced sediment and erosion control practices, and once disturbed steep slopes can be difficult to stabilize. This can be especially problematic when these slopes are adjacent to water bodies. When slopes of 15% or greater occur in conjunction with highly erodible soils, these erosion problems are intensified.

To provide the greatest benefit, stream and wetland buffers should be wide enough to allow adequate filtering of overland stormwater runoff, include adjacent steep slopes and highly erodible soils, and be forested. The use of a floodplain buffer can improve resilience to flooding by accounting for future changes in the floodplain due to changing weather patterns (increased rainfall), increased development, or outdated mapping.

County regulations require sediment and erosion control practices comply with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control when development or forestry activities will result in clearing and grading. These practices prevent sediment and other pollutants from leaving a disturbed site and entering nearby water bodies during storm events. The requirements for sediment and erosion control should be reviewed to ensure they are adequate for changing precipitation patterns, especially short-duration, high-intensity storms.

Rare, Threatened, and Endangered Species

The 2019 Maryland Department of Natural Resources (DNR) list of current and historical rare, threatened, and endangered species identifies 98 species within Howard County. Of these 98 species, 15 are animals and 83 are plants. Threats to these species are primarily caused by habitat destruction, particularly of wetlands, riparian areas, steep slopes, and forests. Therefore, protective measures for these important habitats also benefit these species.

The DNR mapped the known habitat areas for rare, threatened, and endangered species throughout Maryland as Sensitive Species Project Review Areas (SSPRA). The SSPRA information is used by the County to initially screen development proposals under the Forest Conservation Act. If this screening indicates that such habitat may be present, the developer is referred to the DNR for guidance on protecting the species and the associated habitat.

Zoning Regulations

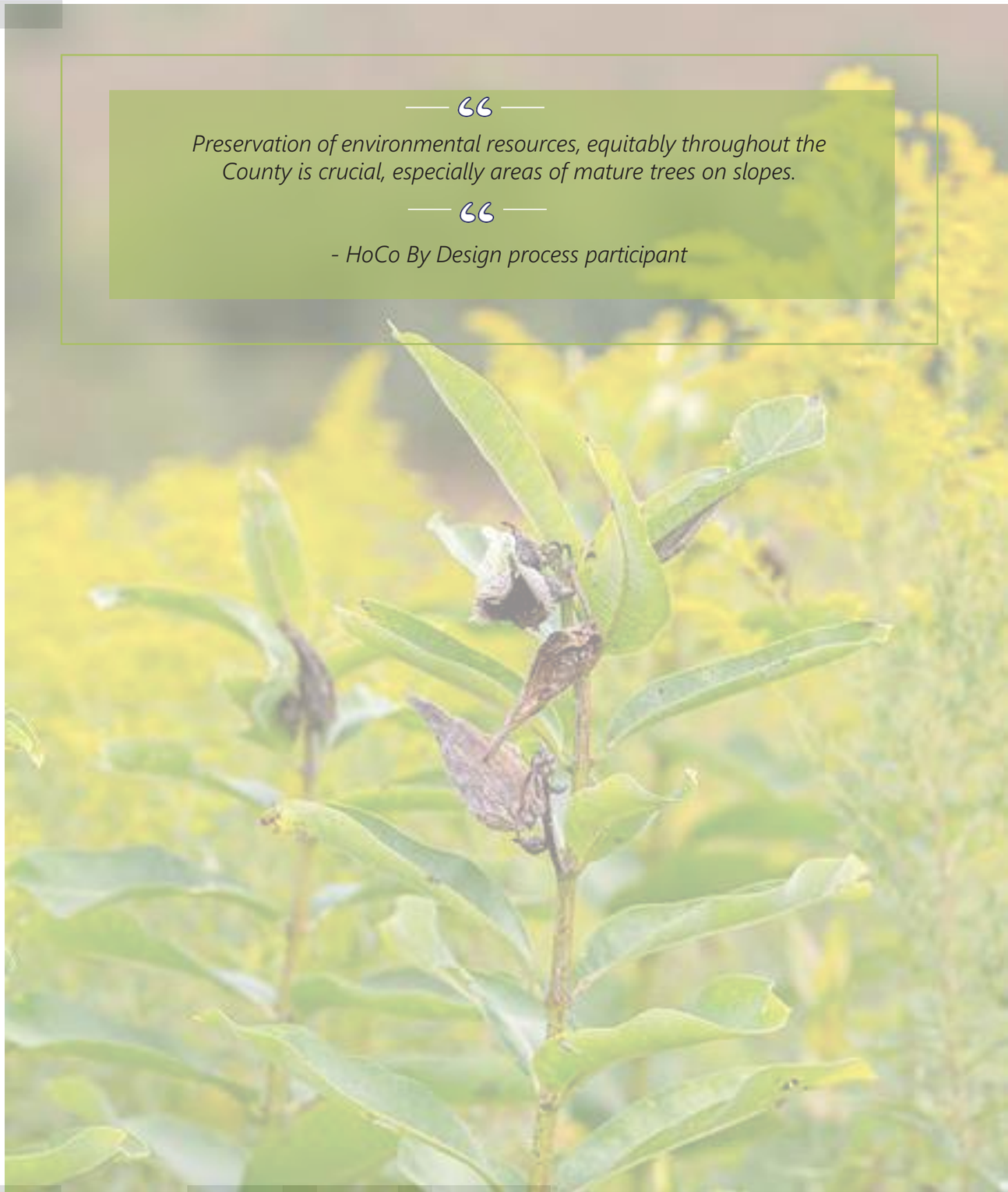
Excluding mixed use zones, there are three residential zoning districts with a stated purpose that includes protecting environmental resources. (Note that there is a fourth district that includes this purpose, but it is applicable only to historic properties.) These zoning districts require or allow the use of cluster development to achieve this purpose. The Residential-Environmental Development (R-ED) zoning district in the East is located primarily along the Patapsco River in areas with steep and narrow stream valleys. The R-ED zoning district has a 50% open space requirement (as specified in the Subdivision and Land Development Regulations) and allows smaller lots, clustered together to keep development impacts away from steep slopes and streams. In the Rural West, the Rural Conservation (RC) zoning district requires low-density, clustered residential development for parcels of 20 acres or greater to protect agricultural lands and natural resources. This type of cluster development is also allowed on smaller lots in the RC zoning district and on any lot in the Rural Residential (RR) zoning district. Cluster development may also be appropriate to enhance environmental protection in other residential zoning districts.

EH-3 Policy Statement

Ensure the Subdivision and Land Development Regulations and Zoning Regulations provide adequate protection for sensitive environmental resources within new development and redevelopment.

Implementing Actions

1. Evaluate and enhance protections, including sediment and erosion control, where needed for sensitive environmental resources, such as water resources, steep slopes, and rare, threatened, and endangered species, in the Subdivision and Land Development Regulations.
2. Explore whether cluster development may also be appropriate in other residential zoning districts during the zoning regulation update process.
3. Explore housing development patterns that enhance opportunities for preservation while reducing emissions that contribute to climate change.



Preservation of environmental resources, equitably throughout the County is crucial, especially areas of mature trees on slopes.

- HoCo By Design process participant

WalkHoward

WalkHoward, approved in 2020 and updated approximately every five years, focuses on creating a stronger, safer, and more convenient pedestrian network in Howard County, which allows residents and visitors of all abilities to access transit, schools, trails, parks, and recreational opportunities. This will be accomplished by filling in existing gaps in infrastructure, meeting or exceeding Americans with Disabilities Act requirements, and enhancing existing facilities in the current network.

BikeHoward

The County's BikeHoward Plan, updated approximately every five years, focuses on creating an inclusive bicycle-friendly community supported by networks and infrastructure to access schools, work, and recreation. The goal of the document is to create a framework for a bicycle network that has seamless transitions and provides for safety for all users using education programs, updates to infrastructure and land use policies, and coordination with the State of Maryland.

Strategic Road Safety Plan

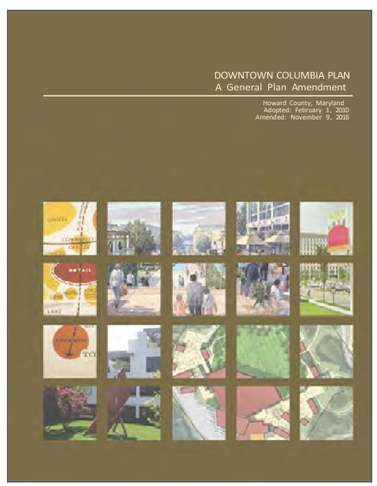
The Howard County Strategic Road Safety Plan serves as a roadmap to guide County policies and actions to reduce the number of traffic-related crashes, injuries, and fatalities using a comprehensive and strategic approach based on the four E's of traffic safety: Engineering, Enforcement, Education, and Emergency Medical Services. The plan also aligns with the State of Maryland's Strategic Highway Safety Plan in an effort to reach zero traffic fatalities.

Complete Streets Policy

The County's Complete Streets Policy provides goals, strategies, policies, standards, and actions to incorporate complete streets into the County's land use and transportation plans, and establish priority projects based upon annual performance measures.

Downtown Columbia Plan

The Downtown Columbia Plan provides a master plan to reinvest in the Town Center consistent with James Rouse's four original principles for Columbia. The document provides goals and guidance on neighborhood character, shared spaces, commercial development, housing diversity, urban design, parks and open spaces, green technologies and sustainable design, conservation and restoration, and balancing and phasing growth through housing, redevelopment opportunities, and transit integration. The Downtown Columbia Plan is incorporated by reference in HoCo By Design.

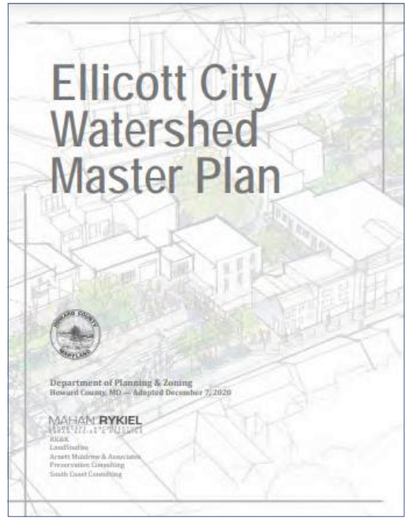


Housing Opportunities Master Plan

Howard County's Housing Opportunities Master Plan (HOMP) is focused on housing programs, regulations, and policies in Howard County that help assess existing conditions, identify opportunities for new and preserved housing, and provide options for residents in all socio-economic segments. Land use decisions and policies directly influence the provision and availability of housing types and locations in the County. The HOMP guides decisions and provides metrics and timelines to measure success of meeting the plan's goals.

Ellicott City Watershed Master Plan

As part of the General Plan, the Ellicott City Watershed Master Plan provides policies and implementing actions for protecting and enhancing flood-impacted Ellicott City and the surrounding Tiber Branch Watershed. To accomplish this protection and enhancement, the plan integrates strategies for community character and placemaking, flood mitigation, environmental sustainability, economic development, and transportation and parking. Strategies are then illustrated through options for specific geographic areas. The plan is guided by and builds upon the Ellicott City Safe and Sound Plan. Like the Downtown Columbia Plan, the Ellicott City Watershed Master Plan is incorporated by reference in HoCo By Design.



Design Manuals

The Route 1 Manual (2009), Route 40 Design Manual (2010), and Clarksville Pike Streetscape Plan and Design Guidelines (2016) include recommendations to guide design in these three corridors, and are used by the Howard County Design Advisory Panel (DAP) in reviewing applications for new developments and redevelopments.

Climate Action and Resiliency Plan

The Climate Action and Resiliency Plan includes strategies, actions, and recommendations to address the impacts of climate change, make the County a model for energy independence, and enhance resilience to future environmental challenges, with a particular focus on underserved communities.

Table 10-1: Implementation Matrix

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
GCF-1 - Provide limited and predictable Planned Service Area expansions.		
1. Planned Service Area expansions should include a development proposal that is consistent with the General Plan.	**DPZ**	Ongoing
2. Any Planned Service Area expansion shall establish a transition that is compatible with and enhances surrounding communities, and provides an environmental benefit.	**DPZ**	Ongoing
3. Any Planned Service Area expansion shall meet the criteria above.	**DPZ**	Ongoing
EH-1 - Continue to support the County's ecological health.		
1. Integrate the goals of protecting and restoring the County's ecological health when updating county programs and policies.	**OCS** DPZ DPW DRP HCHD	Mid-Term
2. Ensure adequate funding for programs and measures to protect and restore the County's ecological health.	**OCS** DRP DPW HSCD Elected Officials OOB	Ongoing
3. Create a dedicated funding source, as was done for the Agricultural Land Preservation Program, for environmental programs.	**DPZ** OCS Elected Officials OOB	Mid-Term
4. Establish a natural resource protection goal for the County and each major watershed to help protect biodiversity and mitigate climate change.	**OCS** DPZ DRP	Mid-Term

Table 10-1: Implementation Matrix

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
EH-2 - Seek to integrate climate change mitigation and adaptation goals into all county programs, projects, ~~and~~ policies, and regulations.		
1. Ensure the Howard County Climate Action Plan update continues to maximize opportunities to mitigate and adapt to climate change with clear goals and strategies.	**OCS**	Mid-Term
2. Evaluate and enhance opportunities where needed for climate change mitigation and adaptation measures in the Subdivision and Land Development Regulations and Zoning Regulations, such as redevelopment in mixed use activity centers, natural resource protection, and the provision of renewable energy.	**DPZ** OCS	Ongoing
3. Enhance county design requirements for county infrastructure and public and private buildings, to ensure these structures will be resilient under projected future weather patterns and minimize resource consumption.	**DPW** **DILP** OCS DPZ Private Partners	Ongoing
4. Review and update county Green Building requirements for opportunities to enhance the sustainability of public and private buildings.	**DILP** DPW DPZ OCS Private Partners	Mid-Term
5. Identify and ensure economically-vulnerable communities, businesses, and households have the resources necessary for mitigation and adaptation measures.	**DCRS** OEM OHRE OCS DPW HCHD HCEDA	Ongoing

Table 10-1: Implementation Matrix

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
EH-3 - Ensure the Subdivision and Land Development Regulations and Zoning Regulations provide adequate protection for sensitive environmental resources within new development and redevelopment.		
1. Evaluate and enhance protections, including sediment and erosion control, where needed for sensitive environmental resources, such as water resources, steep slopes, and rare, threatened, and endangered species, in the Subdivision and Land Development Regulations.	**DPZ** HSCD	Mid-Term
2. Explore whether cluster development may also be appropriate in other residential zoning districts during the zoning regulation update	**DPZ**	Mid-Term
3. Explore housing development patterns that enhance opportunities for preservation while reducing emissions that contribute to climate change.	**DPZ** OCS	Mid-Term
EH-4 - Incentivize additional resource protection and restoration measures within new development and redevelopment.		
1. Consider increased use of a density exchange overlay district, in both the West and the East, to protect sensitive resources in areas with unique conditions or resources.	**DPZ**	Mid-Term
2. Consider incentives to encourage environmental protection and restoration when properties are developed or redeveloped, such as tax credits, density bonuses, housing allocations, and public-private partnerships.	**DPZ** HCEDA Private Partners	Mid-Term
3. Evaluate and strengthen the Green Neighborhood Program to ensure adequate incentives will increase program use and incorporate new options, such as increased moderate income housing units.	**DPZ** **DILP** OCS	Mid-Term

Table 10-1: Implementation Matrix

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
EH-5 - Evaluate and improve stormwater management requirements to enhance climate change resilience.		
1. Conduct a flooding vulnerability assessment to determine which watersheds are susceptible to chronic flooding under current and expected future precipitation patterns.	**DPW**	Ongoing
2. Update stormwater management design standards to address current and expected future precipitation patterns. Consider adding quantity management requirements, including management for short-duration, high-intensity storms in vulnerable watersheds.	**DPZ** DPW OCS	Mid-Term
3. Evaluate opportunities to further reduce stormwater runoff and pollutant loadings when redevelopment occurs.	**DPZ** DPW OCS	Mid-Term
4. Continue to use a nature-based or green stormwater infrastructure approach (bioretention, swales) in combination with a built or gray infrastructure approach (pipes, ponds) to address flood mitigation and adaptation, to maximize ecological benefits.	**DPW** **DPZ** OCS Private Partners	Ongoing
5. Evaluate alternatives for improving, enforcing, and funding long-term inspection and maintenance of stormwater management facilities, particularly those facilities located on private residential lots.	**DPW** Private Partners	Mid-Term