MWCOG MIRR
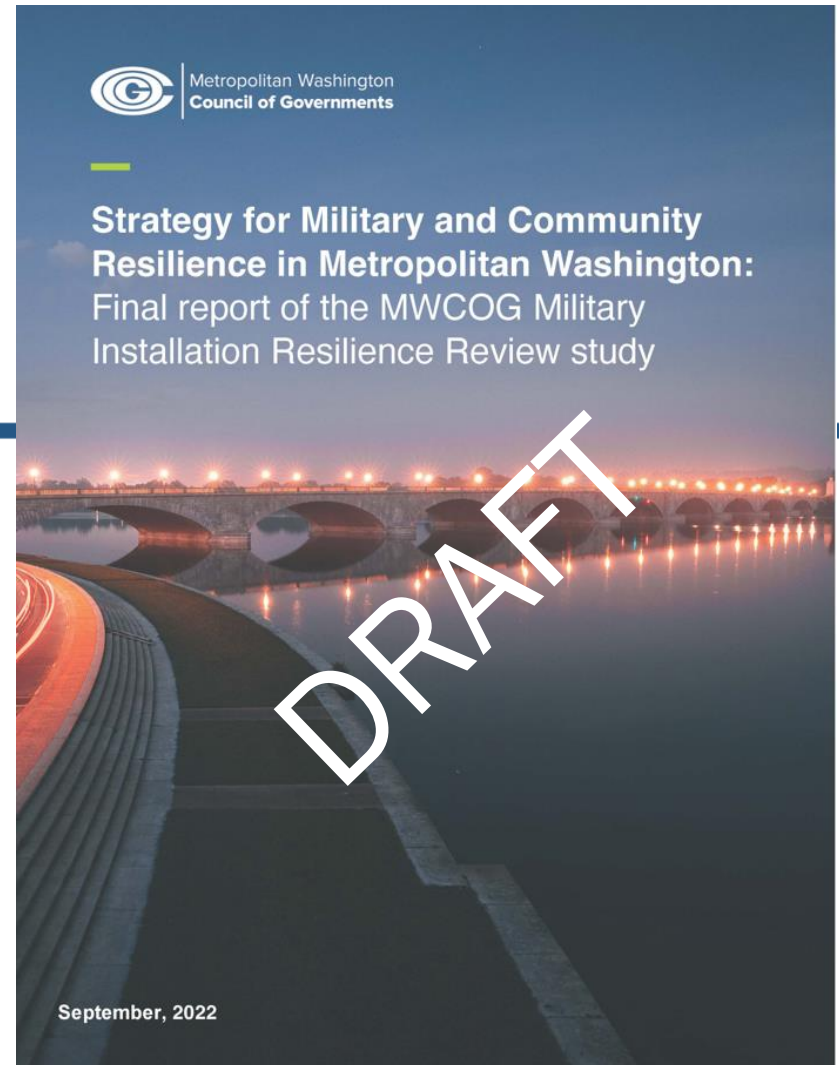
CEEPC
September 28, 2022

Note: All findings described herein are preliminary and are subject to change.

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MWCOG MIRR At a Glance

Purpose

Identify key threats to resilience of military installations and outside-the-fence measures to build resilience for both the installations and surrounding communities

Focus Region

- Geographic area: Washington, D.C.
- Specific installations: Joint Base Anacostia-Bolling, Washington Navy Yard, Fort McNair, Naval Research Laboratory

Project Phases

- Establish priority sectors, hazards, and stressors
- Conduct vulnerability assessment
- Develop recommended resilience strategy, including priority measures'

Core Tenets

- Advance communication and coordination among stakeholders
- Enable implementation of recommendations post-project
- Integrate equity as a priority

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Phase 1: Priority Hazards and Stressors

Selection criteria for hazards- filtered by:

- Critical infrastructure service sensitivity/exposure;
- Degree of impact on installation function (frequency, severity, extent)

Tier 1:

⬆ • Flooding (incl. riverine, interior, and coastal)

Tier 2

⬆ • Extreme heat
- Ice storm
- High wind

⬆ • Population growth
- Land use, development, & encroachment

Tier 3:

- Drought
- Snow storm
- Extreme cold
- Noise & Vibration
- Hazardous Materials
- Earthquake
- Ecosystem change
- Other (e.g., electromagnetic storm)

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⬆ = significant future increase very likely

Phase 1: Priority Sectors

🚆 Transportation and Transit

⚡ Energy

📞 Telecommunications

🚰 Water and Wastewater

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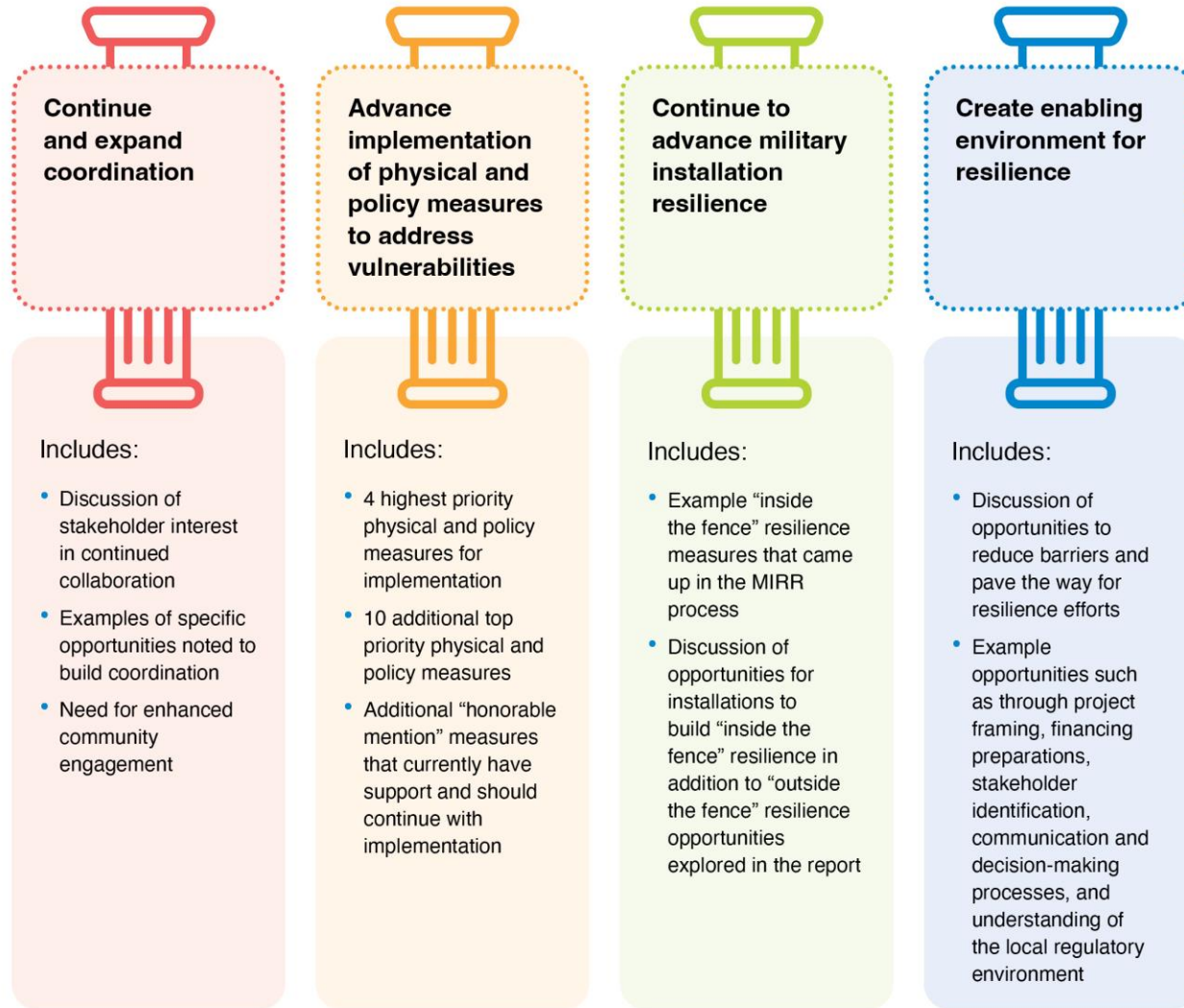**Council of Governments**

Phase 2: Priority Vulnerabilities

- Electricity distribution

- Critical telecommunications assets

- Specific areas and critical assets vulnerable to flooding

- Strain to regional water supply

- Stress on region's transportation

- Limited safe, reliable, and efficient mobility choices

- Regional petroleum fuel supply

- Encroachment

- Affordable workforce housing

- Workforce availability and retention

- Communication and coordination

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Strategy for Enhancing Military and Community Resilience in Metropolitan Washington

Pillars of Resilience

Continue and expand coordination

Advance implementation of physical and policy measures to address vulnerabilities

Continue to advance military installation resilience

Create enabling environment for resilience

Includes:

- Discussion of stakeholder interest in continued collaboration
- Examples of specific opportunities noted to build coordination
- Need for enhanced community engagement

Includes:

- 4 highest priority physical and policy measures for implementation
- 10 additional top priority physical and policy measures
- Additional "honorable mention" measures that currently have support and should continue with implementation

Includes:

- Example "inside the fence" resilience measures that came up in the MIRR process
- Discussion of opportunities for installations to build "inside the fence" resilience in addition to "outside the fence" resilience opportunities explored in the report

Includes:

- Discussion of opportunities to reduce barriers and pave the way for resilience efforts
- Example opportunities such as through project framing, financing preparations, stakeholder identification, communication and decision-making processes, and understanding of the local regulatory environment

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Resilience Strategy Elements

Overarching Principles

a. Think and act holistically

b. Consider multiple timeframes

c. Embrace flexible pathways

d. Emphasize equity

e. Make the case for resilience

3 STRATEGY FOR ENHANCING MILITARY AND COMMUNITY RESILIENCE

3.1 Introduction to the Strategy

Building resilience throughout a region and across installations, communities, governments, and private entities requires effective coordination across those actors and a sound strategy guiding their actions.

The development and implementation of such a strategy and coordination can be time- and resource-intensive, but the effort is worth it: successfully implementing an overarching resilience strategy should result in the avoidance of costly damages when natural hazards and threats arrive, saving human lives and improving health, and ensuring the ability to continue carrying out installation missions and ensuring a thriving community.

OVERARCHING PRINCIPLES

To implement a resilience strategy, actors should follow a set of overarching principles to ensure that the approach to enhancing resilience is thoughtful and sets everyone up for long-term success. The following is a summary of the principles we recommend.

Think and act holistically. The approach to resilience for the four installations should be undertaken holistically, since none operate in isolation from their surrounding communities or fellow installations. As noted in the coordination section below, it is critical that implementation of the measures identified in this report be undertaken in close coordination with the parties that are vital to the success of each measure and that may be affected by the measures' outcomes. A holistic approach not only avoids potential conflicts or mismatches in resilience efforts, but also helps to generate buy-in among actors and those affected, which can help drive the long-term success of resilience efforts. Further, intentional community involvement that incorporates equity will help address injustices and build stronger, more resilient communities—especially since disadvantaged communities are also those that face greater vulnerabilities to climate hazards and other threats.

Consider multiple timeframes. The resilience strategy should include both measures that create near-term successes as well as those that require more time and resources but have the potential to be transformative. Actors should explicitly plan around short, medium, and long-term time horizons to consider threats that currently exist and must be addressed immediately versus others whose importance may increase over time. Doing so can help build resilience in stages, both against key threats that need to be addressed soon, and eventually into the fabric of the region itself.

Embrace flexible pathways. Flexibility is paramount to a successful long-term effort. Multiple variables can change over time, including but not limited to military missions, the military infrastructure at the installations, the community structure, the community infrastructure, the environment, and the nature of the threats and vulnerabilities. A community- and installation-wide monitoring and evaluation approach can help actors understand what is working, what needs modification, and what should be abandoned due to failures or significant changes identified by the monitoring and evaluation system.

Emphasize equity. The enhancement of community resilience—which can ultimately enhance installation resilience—depends in part on the extent to which the resilience of the most vulnerable people in a community is increased. If equity is not actively pursued, distrust amongst community actors can undermine the intended progress. Instead, efforts to increase community resilience present valuable opportunities to reduce vulnerability of those who tend to need it the most and have been historically underserved, including people of color, LGBTQ+, elderly, poor, socially isolated, and other categories of people that tend to be most at-risk in community-wide emergency situations. It is important that these populations be given meaningful voice in the development and implementation of resilience solutions. This requires dedicated and sustained effort. However, it is vital to the success of community resilience initiatives. As a starting point, equity was considered throughout this MIRR's vulnerability assessment and resilience measure development and prioritization processes (see text box for specific examples).

Make the case for resilience. Having leadership that prioritizes resilience is often a key factor in the successful funding and implementation of resilience measures. When presenting a potential measure, actors should describe all of the factors that make a particular initiative valuable—how it was prioritized, what vulnerability(ies) it addresses, why it would be cost-effective. Each of the top 14 resilience measures presented in this report in Pillar #2 below provide key details to help describe and make the case for the measure, including key actors, costs and potential options for funding, and the benefits of the measure.

KEY PILLARS

The recommended strategy for enhancing military and community resilience in Metropolitan Washington is summarized in Figure 20 below.

> **Processes used to advance equity in this MIRR included:**
> - Considered socioeconomic vulnerabilities in the Vulnerability Assessment
> - Identified gaps for equitable solutions in developing extensive list of resilience measures
> - Vetted resilience measures with a "do-no-harm" screening criterion (i.e., removing any non-equitable measures)
> - Included potential equity impacts as a criterion in evaluating and prioritizing resilience measures
> - Provided recommendations and considerations to ensure equity is a key component of the implementation process for each high-priority resilience measure (e.g., conduct community engagement)

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For Each Measure:

Implementation profile:

- Measure description
- Vulnerabilities addressed
- Benefits
- Social and equity considerations
- Costs and funding opportunities
- Key actors
- Next steps
- Additional details

Priority Physical and Policy Measures

Retrofit stormwater pump stations

Support Blue Plains floodwall construction

Advance fuel resilience opportunities identified in RRAP study to benefit installations and communities

Ensure Lower Anacostia Waterfront development is resilient

Construct community electric vehicle charging stations

Assess and address key climate risks to telecommunications systems

Expand connectivity to/from High-Capacity Transit Station Areas

Provide financial support for Blue Plains microgrid

Implement congestion relief and traffic control measures

Implement congestion relief and traffic control measures

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Priority Physical and Policy Measures

Increase shade cover and green infrastructure

Invest in workforce development for in-demand skills

Invest in affordable housing

Develop suspicious activity & trespassing prevention plan

Honorable mention physical & policy measures

- Coordinate and advocate for funding for water supply alternatives.
- Continue to explore opportunities to add Potomac River Ferry stops near installations.
- Train workers to maintain green infrastructure and other capital projects.

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