Military Installation Resilience Review (MIRR) Briefing

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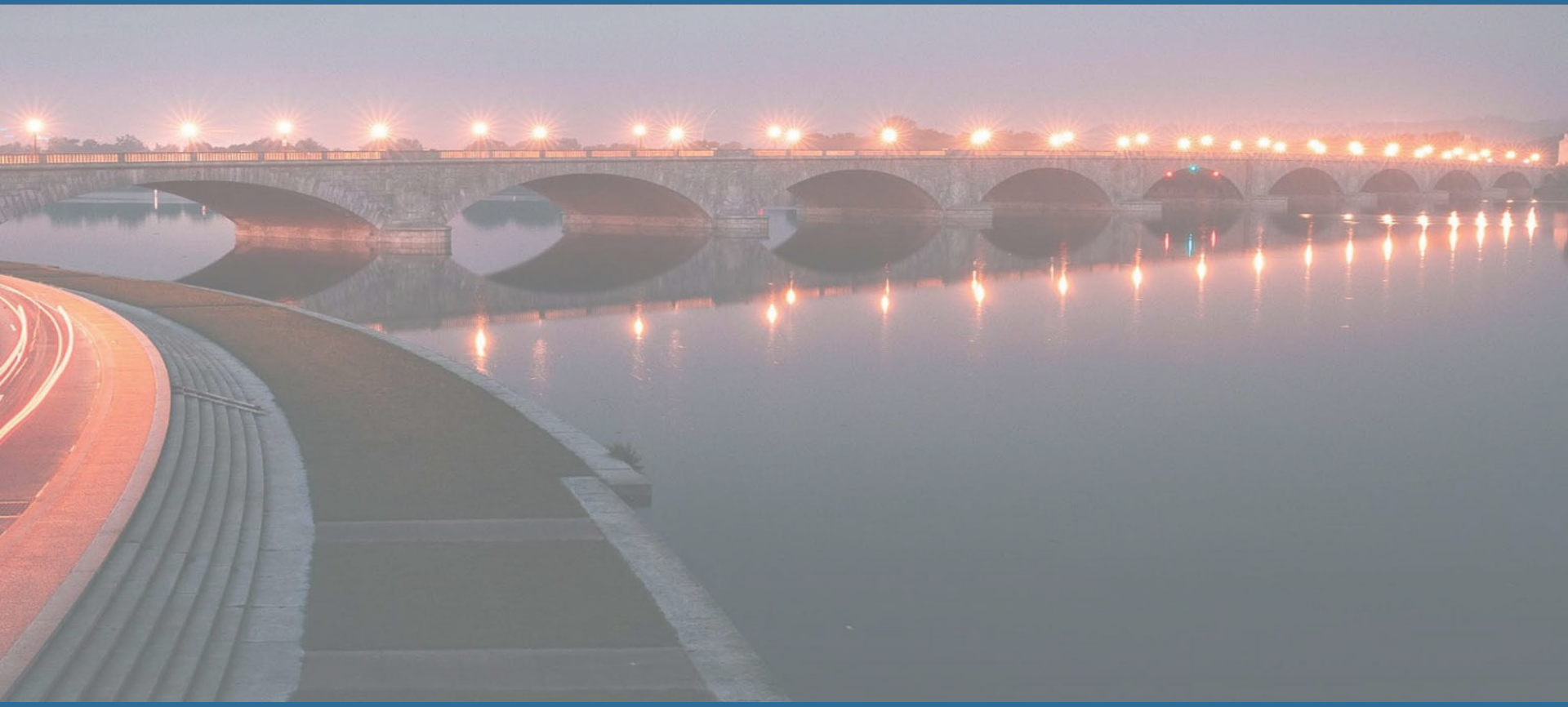

Metropolitan Washington
Council of Governments

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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 PHASE

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

CORE TENETS

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

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)

Phase 1: Priority Sectors

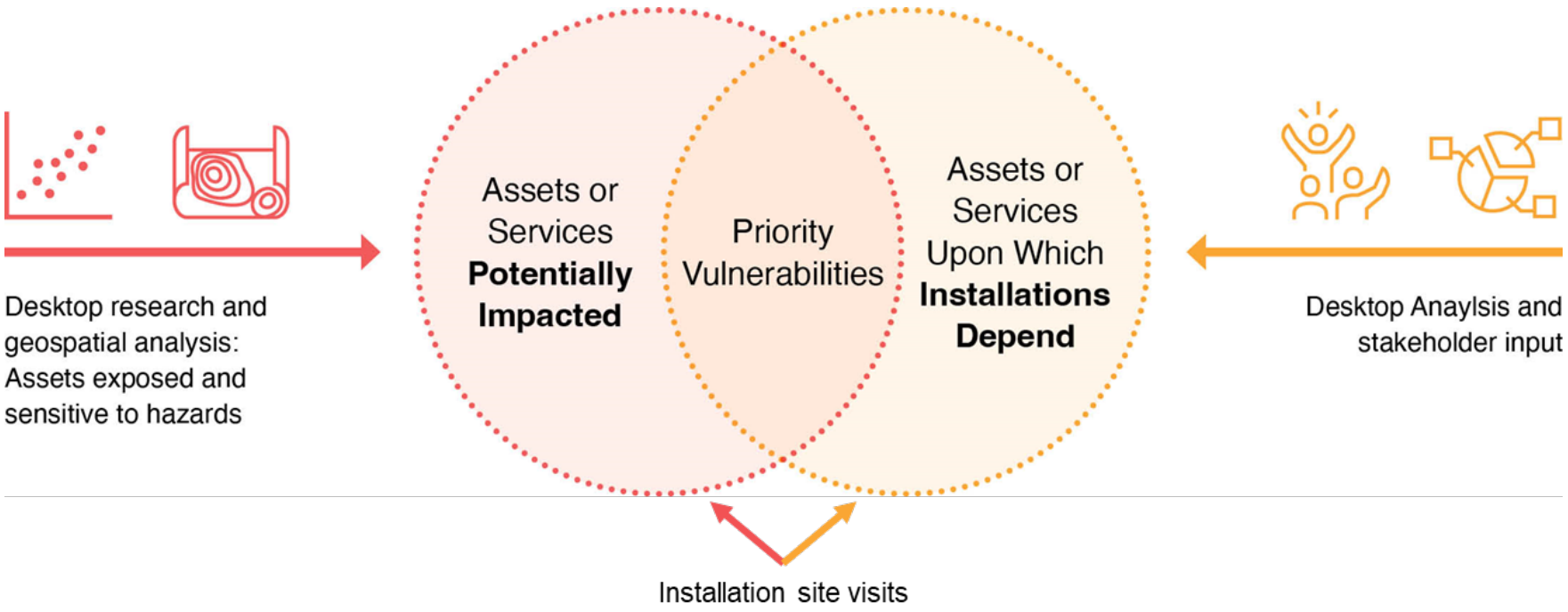
Transportation and Transit

Energy

Telecommunications

Water and Wastewater

Phase 2: Vulnerability Assessment Approach



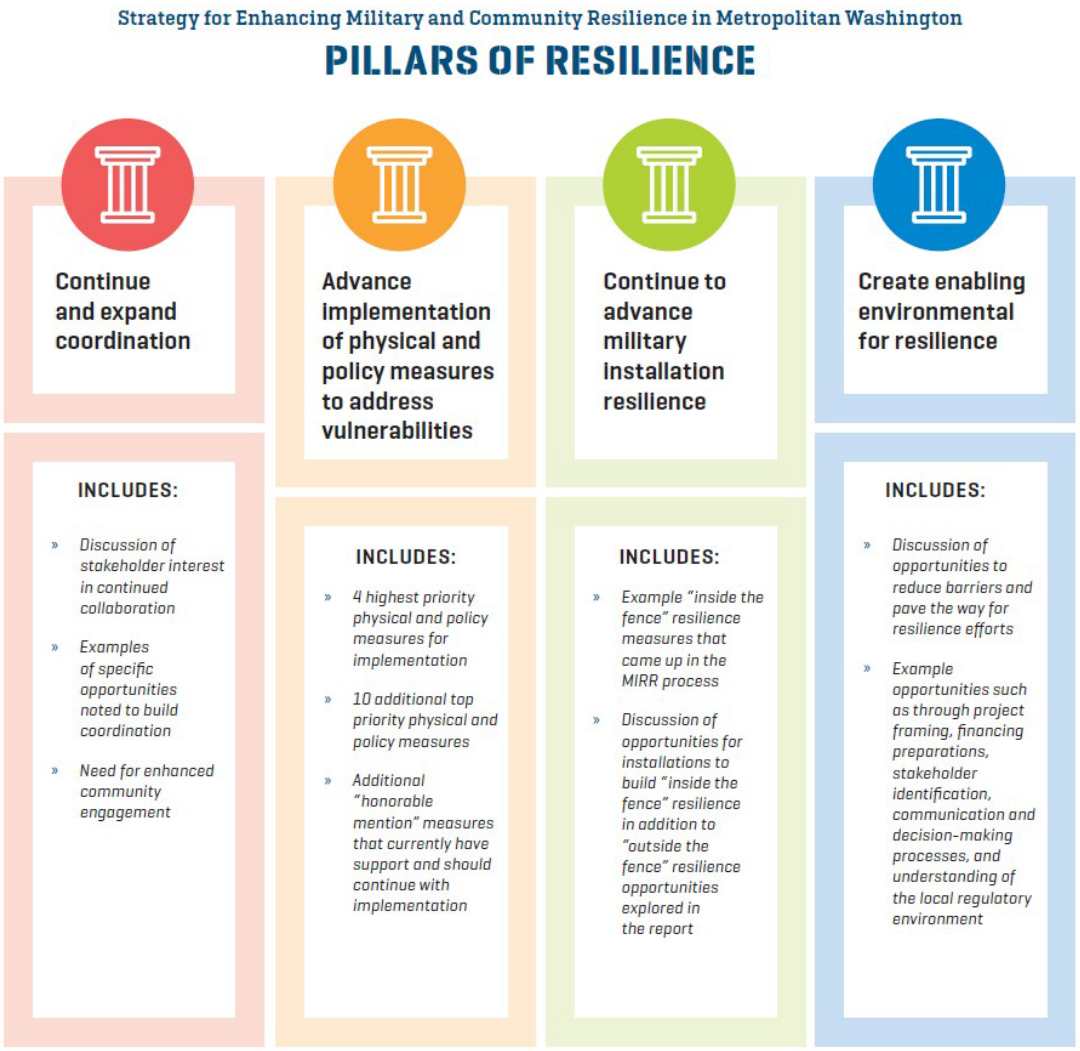
Phase 2: Priority Vulnerabilities

- Electricity distribution
- Critical telecommunications assets
- Specific areas and critical assets vulnerable to flooding
- Strain to regional water supply
- Stress on region's transportation system
- Limited safe, reliable, and efficient mobility choices
- Regional petroleum fuel supply
- Encroachment
- Affordable workforce housing
- Workforce availability and retention
- Communication and coordination

Key Findings

- Flooding and extreme heat are the climate hazards of most concern for Washington, D.C.
- The MIRR identified 14 priority measures to enhance regional resilience.
- Continued collaboration and communication on resilience measures is critical for implementation of MIRR recommendations.

Phase 3: Resilience Pillars



For Each Measure:

Implementation profile:

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

Assess and Address Key Climate Risks to Telecommunications Systems

Measure Description (icon)

Government actors, nongovernmental organizations, and telecommunications providers operating in the area will work together to 1) identify key specific risks that climate hazards may pose to critical telecommunications assets and 2) ensure service providers and relevant government stakeholders have the resources needed to manage risks and build resilience to climate change.

First, HSEMA and DOEE will share results from recent and ongoing asset vulnerability and climate risk studies (see Additional Details section below) with telecommunications providers in a format that telecommunications providers can use for risk management (e.g., geospatial hazard layers). Then, they may undertake additional analyses as needed, and synthesize findings to identify key risks. Roles of specific actors are described below in the Next Steps section.

If telecommunications providers are equipped with information about key climate hazards, they can make better-informed decisions about how to upgrade, design, or relocate existing facilities and where to site future infrastructure, which will ultimately result in more resilient communications systems.

Vulnerabilities Addressed (icon)

- Critical telecommunications assets (e.g., transmission towers; aboveground fiber optic and coaxial cables and associated facilities) vulnerabilities to hazards including ice storms and high winds

Other telecommunications assets may also be at future risk of flooding and/or power grid instability.

Benefits (icon)

- Installations: Installations use the civilian telecommunications system, with alternate, contingency, and emergency options to ensure service continuity. Addressing vulnerabilities to this system will increase the likelihood that installations can continue to communicate with their normal methods in emergencies.
- Community: Increased ability of support systems (e.g., first responders, service providers, community-based organizations, nonprofits) to continue communicating and coordinating to serve the community during events.
- Economy: Increased capacity of the local economy to continue operating during events.
- Environment: Potential for environmental benefits if nature-based resilience measures are applied (e.g., to manage flooding).

Social and Equity Considerations (icon)

Increasing communications resilience may particularly benefit populations that face higher risk or have less capacity to cope if communications systems go down.

Telecommunications service providers should also work with ANCs and BIDs to understand how outages and construction could impact different populations, and reflect community needs in resilience implementation plans and outage restoration plans.

Additionally, the quality of communications services and assets' resilience should be studied alongside wealth indicators to assess if the system is stronger in wealthier areas, and if it is, resilience investments should be prioritized to mitigate this inequity.

Costs and funding Opportunities (icon)

Potential costs associated with implementing this measure, and potential funding sources to support implementation, include:

Costs:

- Risk assessments to identify and inform the design or protection of critical equipment, buildings, and infrastructure may have a range of costs ($25,000—$250,000+) depending on the level of detail needed and the scope of the study.
- Undergrounding wires may cost ~$25,000 to $1,500,000 per mile, recognizing the need to ensure against flooding risks for buried lines
- Additional equipment may be used to increase reliability and capacity

Funding:

- Department of Defense Office of Local Defense Community Cooperation (OLDCC) grants to fund additional risk assessments as needed
- FEMA Building Resilient Infrastructure and Communities (BRIC) Program grants
- Homeland Security Grant Program (HSGP) grants
- National Telecommunications and Information Administration grants

Key Actors (icon)

- Leaders: HSEMA and telecommunications service providers
- Partners: Other government actors (MWCOG, National Labs, CISA, FEMA), electric service providers, Communications Sector Coordinating Council first responders, and other major users

Next Steps (icon)

Short-term (within 2 years)

- Public sector actors (e.g., governmental and NGOs) conduct R&D to develop climate risk data for telecommunications service providers
- HSEMA continues to investigate critical assets and vulnerabilities in local telecommunications system

Mid-term (2-6 years)

- Public sector actors make climate hazard data available to and easily accessible by telecommunications service providers
- Telecommunications providers integrate climate risk data into planning and decision-making processes

Long-term (7+ years)

- Telecommunications service providers coordinate as needed to build resilience and manage key climate risks
- Public sector continues to support service providers by providing updated high-quality climate data for risk management purposes
- Telecommunications service providers and public sector actors work together to target climate risks to telecommunications sector outside the scope of providers' capacity (e.g., improve flood resilience, harden the electric grid to increase its reliability)

Top Resilience Measures and Key Actors

Measure	Actor(s)
★ Retrofit stormwater pumping stations	Leaders: DC Water; Partners: Electric utility (Pepco)
★ Assess and address key risks to telecommunications systems	Leaders: HSEMA and telecommunications service providers; Partners: Local and federal government actors, electric service providers, Communications Sector Coordinating Council first responders, and other major users
★ Support Blue Plains floodwall construction	Leaders: DC Water; Partners: HSEMA, Ward 8 representatives
★ Ensure Lower Anacostia Waterfront redevelopment is resilient	Leaders: DCOP; Partners: Fort McNair, WNY, NCPC, National Park Service, DOEE, HSEMA, Anacostia Parks and Community Collaborative
Provide financial support for Blue Plains microgrid	Leaders: DC Water; Partner: Pepco
Construct community electric vehicle charging stations	Leaders: Charging station site hosts; Partners: Pepco, MWCOG, DDOT, installations, EV service providers (e.g., ChargePoint)
Advance fuel resilience opportunities identified in RRAP study to benefit installationsand communities	Leaders: CISA, DC HSEMA, DC DOEE; Partners: RRAP study stakeholders, terminal operators, energy marketers, energy assurance planners, emergency management agencies, and electric power utilities
Expand connectivity to/from High-Capacity Transit Station Areas	Leaders: DDOT Vision Zero Department; DDOT Planning and Sustainability Department; WMATA; Partners: DCOP Citywide Strategy & Analysis and Community Planning & Design, Anacostia BID, Anacostia Coordinating Council, ANCs, HSEMA
Create installation viewshed security plan	Leaders: NCPC Heights and Views; Partners: HSEMA, DCOP, DHS, NRL, MWCOG, FBI Washington Field Office, Capitol Riverfront BID, Anacostia, ANCs
Implement congestion relief and traffic control measures	Leaders: DDOT and NVRC; Partners: MPD, WMATA, MWCOG
Increase shade cover and green infrastructure	Leaders: DDOT Urban Forestry, DOEE; Partners: NPS, USDA Forestry Service, MWCOG
Invest in workforce development for in-demand skills	Leaders: Department of Employment Services (DOES); Partners: DOEE Sustainable Energy Utility and Green Infrastructure, DC Water (especially Blue Plains AWTP), DDOT Public Space Management and Maintenance, DCOP Citywide Strategy & Analysis
Develop suspicious activity and trespassing prevention plan	Leaders: Installations,; Partners: MWCOG, HSEMA National Capital Region Threat Intelligence Consortium (NTIC), NPS Police, ANCs, BIDs, DCOP Development Review & Historic Preservation, NCPC Security of Federal & Public Spaces
Invest in affordable housing	Leaders: DC Department of Housing and Community Development, Development Finance Division and DC Housing Authority, DCOP Development Review, DCOP Citywide Strategy and Analysis Division; Partners: MWCOG, ANCs for Wards 6 and 8

★ Top priority measure

Priority Physical and Policy Measures

Retrofit stormwater pump stations

Key Actors
DC Water

Partners: Electric utility (Pepco)

Immediate Next Steps:
Request additional funding (potentially from OLDCC, FEMA BRIC)

Assess and address key climate risks to telecommunications systems

Key Actors
HSEMA and telecommunications service providers

Partners: Local and federal government actors, electric service providers, Communications Sector Coordinating Council first responders, and other major users

Immediate Next Steps:
- Public sector actors conduct R&D to develop climate risk data for telecommunications service providers
- HSEMA continues to investigate critical assets and vulnerabilities in local telecommunications systems

Support Blue Plains floodwall construction

Key Actors
DC Water

Partners: HSEMA, Ward 8 representatives

Immediate Next Steps:
- Funding BRIC and OLDCC
- Community outreach
- Design & Engineering studies
- Consultation with agencies

Priority Physical and Policy Measures

Ensure Lower Anacostia Waterfront development is resilient

Key Actors
DCOP

Partners: Fort McNair, WNY, NCPC, National Park Service, DOEE, HSEMA, Anacostia Parks and Community Collaborative

Immediate Next Steps:
- Develop resilience action plan
- Conduct flood studies
- Community engagement
- Secure funding
- Track progress of Poplar Point EIS effort and provide input as stakeholders
- Develop resilience guidelines
- Scope resilience measures
- Begin implementation

Provide financial support for Blue Plains microgrid

Key Actors
DC Water

Partner: Pepco

Immediate Next Steps:
- Request additional funding from DoD
- DC Water completes microgrid scoping phase supported primarily by FEMA funding
- DC Water begins microgrid implementation phase, supported by additional external funding

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

Key Actors
CISA, DC HSEMA, DC DOEE

Partners: RRAP study stakeholders, terminal operators, energy marketers, energy assurance planners, emergency management agencies, and electric power utilities

Immediate Next Steps:
- Engage installations and utilities in conducting RRAP study
- RRAP stakeholders identify opportunities to build energy resilience for installations and critical staff

Priority Physical and Policy Measures

Construct community electric vehicle charging stations

Key Actors

Leaders: Charging station site hosts

Partners: Pepco, MWCOG, DDOT, installations, EV service providers (e.g., ChargePoint)

Immediate Next Steps:

- Identify and convene key stakeholders to develop plans for EV siting and construction; apply for funding to pay community stakeholders for their time
- Secure funds to build EV stations, begin construction if possible
- Keep tabs on additional funding opportunities that may support additional charging stations

Expand connectivity to/from High-Capacity Transit Station Areas

Key Actors

Leaders: DDOT Vision Zero Department; DDOT Planning and Sustainability Department; WMATA.

Partners: DCOP Citywide Strategy & Analysis and Community Planning & Design, Anacostia BID, Anacostia Coordinating Council, ANCs, HSEMA

Immediate Next Steps:

- Key actors to engage with partners about the existing transportation conditions between HCTs and the installations.
- Conduct analyses to identify gaps in infrastructure and any planned or implemented projects.

Implement congestion relief and traffic control measures

Key Actors

Leaders: DDOT and NVRC

Partners: MPD, WMATA, MWCOG

Immediate Next Steps:

- Analyze and prioritize areas of frequent congestion from their operations and workforce staff
- Engage with stakeholders to recommend the expansion of congestion mitigation measures proposed for those areas

Priority Physical and Policy Measures

Increase shade cover and green infrastructure

Key Actors

Leaders: DDOT Urban Forestry, DOEE

Partners: NPS, USDA Forestry Service, MWCOG

Immediate Next Steps:

- Develop an initial baseline inventory of the area's tree canopy and impervious surface cover

Invest in workforce development for in-demand skills

Key Actors

Leaders: Department of Employment Services (DOES)

Partners: DOEE Sustainable Energy Utility and Green Infrastructure, DC Water (especially Blue Plains AWTP), DDOT Public Space Management and Maintenance, DCOP Citywide Strategy & Analysis

Immediate Next Steps:

- Identify workforce development organizations and programs
- Identify and prioritize the workforce needs of each installation

Invest in affordable housing

Key Actors

Leaders: DC Department of Housing and Community Development, Development Finance Division and DC Housing Authority, DCOP Development Review, DCOP Citywide Strategy and Analysis Division

Partners: MWCOG, ANCs for Wards 6 and 8

Immediate Next Steps:

- Prepare grant applications for funding
- Conduct roundtable discussions between actors
- Identify and convene stakeholders for project engagement
- Plan community engagement efforts to publicize the project

Priority Physical and Policy Measures

Develop suspicious activity & trespassing prevention plan

Key Actors

Leaders: Installations, DCOP Development Review & Historic Preservation, NCPC Security of Federal & Public Spaces

Partners: MWCOG Department of Homeland Security and Public Safety, HSEMA National Capital Region Threat Intelligence Consortium (NTIC), NPS Police, ANCs, BIDs

Immediate Next Steps:

- Identify past or current efforts to address suspicious activity leading to trespassing.
- Organize and commence roundtable discussions.

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.

Next Steps

- Continue coordination: Continue coordinating with stakeholders to implementation of resilience strategy, discuss issues, and evaluate progress

- Implement top priority physical and policy measures: COG, installations, and key actors secure funding and implement next steps identified for each measure, focusing on measures that could be eligible for OLDCC funding
    - COG is coordinating with OLDCC to identify measures to submit for funding from DoD

- Advance military installation resilience: Build on findings from the vulnerability assessment and inside the fence measures

** This MIRR study should be seen as a foundational effort that launches collaborative work on community and installation resilience activities: A beginning, rather than a conclusion.*

MIRR Contact Information

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