

MILITARY INSTALLATION RESILIENCE IN THE NATIONAL CAPITAL REGION

Focus on Transportation Elements

Katherine Rainone
Transportation Planner

TPB Technical Committee
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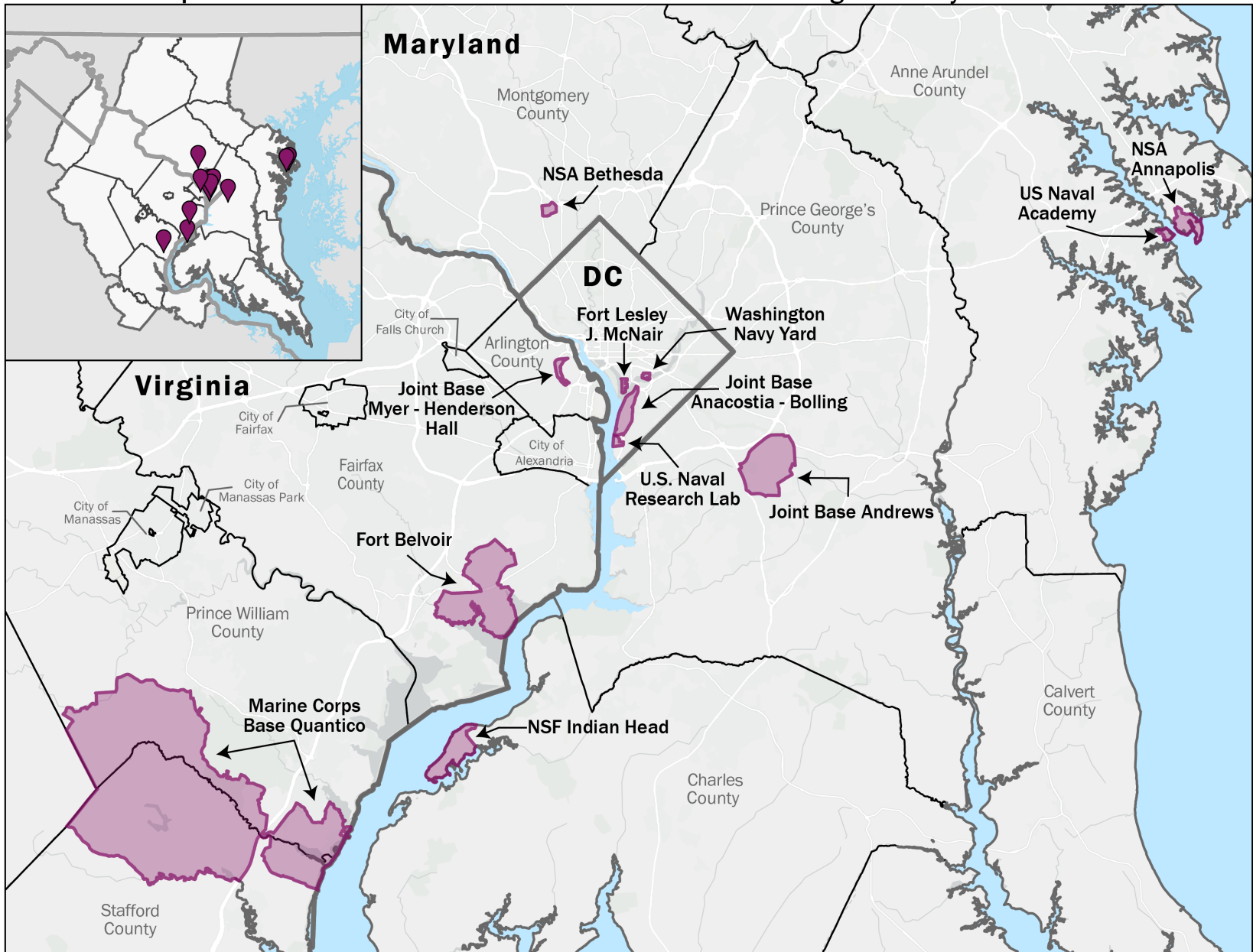


Overview

- Military Installation Resilience Reviews in the National Capital Region and surrounding areas
- Specific focus on transportation-related elements in each study
- Some terms:
 - MIRR = Military Installation Resilience Review (formerly Joint Land Use Study (JLUS), now referred to as simply Installation Resilience Review (IRR)
 - OLDCC = Office of Local Defense Community Cooperation
- Other regions – Hampton Roads, San Diego



Department of Defense Installations with Resilience Planning Underway or Planned



Charles County – NSF Indian Head

- JLUS (2016)
- Charles County Nuisance and Urban Flood Plan (2020)
- MIRR (2022)
 - Asset vulnerability and risk assessment was completed, including built environment as an asset category
 - **Action Strategy 1: Develop a comprehensive transportation resilience plan with a specific focus on Route 210**
- Resilience Authority (2021)



Rte 210, Charles County



Prince George's County – Joint Base Andrews

- Beginning stages of Installation Resilience Review (IRR) effort
- **Project Goal:** Support the long-term resilience and sustainability of key transportation infrastructure and community hubs for JBA and to ensure that climate adaptation considerations are better integrated into the decision-making process
- Specific focus will be placed on vulnerability of key transportation routes and JBA community to localized flooding events
 - Assessing and inventorying vulnerabilities of nearby communities and the transportation and storm drain infrastructure to flooding risks
- Some other tasks include: identify nature-based adaptation strategies to mitigate potential impacts; urban heat index analysis; data sharing guidelines and climate resilience recommendations



Montgomery County – NSA Bethesda

- Currently underway, beginning stages – no information yet



Anne Arundel County – U.S. Naval Academy, NSA Annapolis

- U.S. Naval Academy Installation Resilience Plan – recently completed but not publicly available (no off-base projects recommended)
 - In November, USNA broke ground on the first project recommended from that study – Farragut Field Sea Wall



Sea Wall Groundbreaking, www.usna.edu



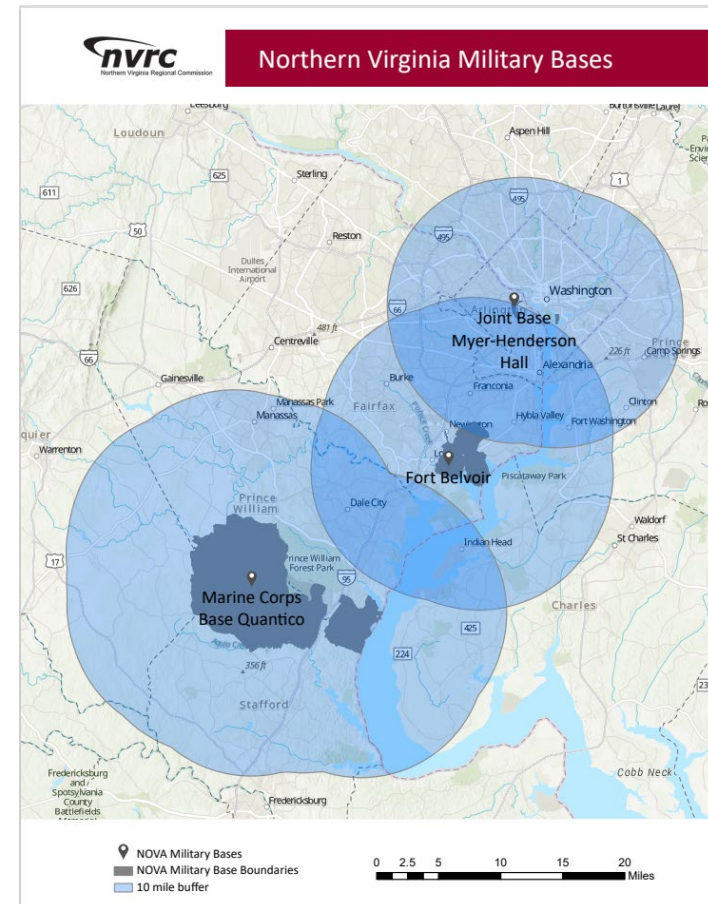
Anne Arundel County – U.S. Naval Academy, NSA Annapolis

- NSA Annapolis – working closely with the City of Annapolis/Anne Arundel County to complete a MIRR, in final stages
- **Goal:** for the community and NSA Annapolis to plan, design, and finance a resilient future, together
- Roughly 30% of study scope transportation related, convened a separate working group for transportation
 - Preliminary planning and 30% design of up to 30 traffic signal upgrades along key evacuation routes
 - Critical assets on access roads to NSA
 - Recommendations to relocate some entrances, elevate bridges



Northern Virginia – Joint Base Myer-Henderson Hall, Marine Corps Base Quantico, Fort Belvoir

- Northern Virginia Regional Council (NVRC) – MIRR scheduled for completion May 2023
- Recently received REPI Challenge grant (Readiness and Environmental Protection Integration) for flooding and erosion projects adjacent to Marine Corps Base Quantico in Prince William County
- MIRR recommends over \$310M in projects, including many transportation elements



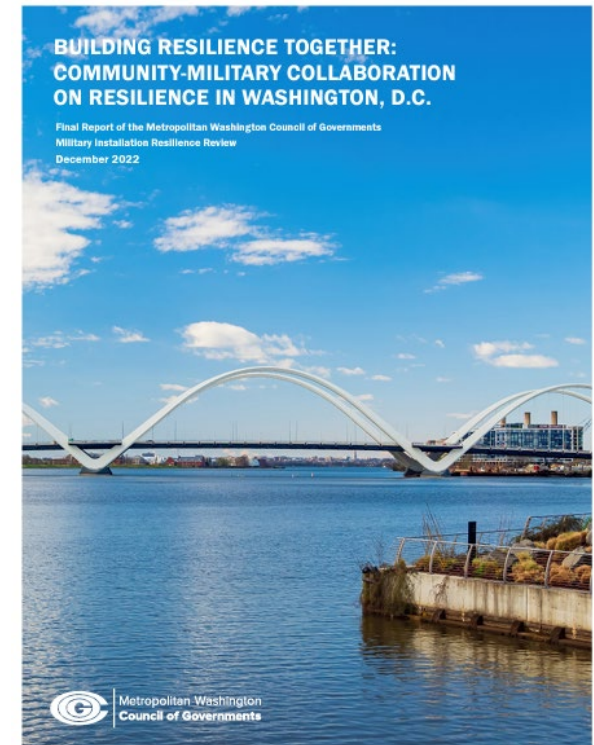
Northern Virginia – Joint Base Myer-Henderson Hall, Marine Corps Base Quantico, Fort Belvoir

- Recommendations for further study that include transportation elements:
 - Rail – VRE transports 300-600 people per day to Quantico and Fort Belvoir, study flooding potential
 - Evaluating future flooding situations of bridge infrastructure on Route 1 corridor
 - Tunnels for Metro – study flooding potential
 - Ferry as potential long-range solution for commuter access to Quantico and Joint Base Myer-Henderson Hall
 - Extreme heat impacting rail tracks at various emissions scenarios
 - Roadway design guidelines
 - Potential for land sharing between VDOT and Quantico for maintenance center
 - Autonomous vehicle study – Phase II of installation loop at Myer-Henderson Hall



Washington, D.C. – Ft. Lesley J. McNair, Washington Navy Yard, Joint Base Anacostia-Bolling, U.S. Naval Research Laboratory

- Recently completed – December 2022
- Study assessed four DoD installations within the District of Columbia
- Evaluated the community resources and services that are mission critical
- Vulnerability assessment focused on transportation/transit, energy, telecommunications, and water/wastewater sectors



Washington, D.C. – Ft. Lesley J. McNair, Washington Navy Yard, Joint Base Anacostia-Bolling, U.S. Naval Research Laboratory

- Study identified 14 priority measures to address vulnerabilities and enhance resilience, several of which would advance regional transportation system
 - **Construct community electric vehicle charging stations**
 - **Expand connectivity to/from high-capacity transit station areas**
 - **Implement congestion relief and traffic control measures**
 - *Increase shade cover and green infrastructure*
 - *Retrofit stormwater pumping stations*
 - **Continue exploring opportunities to expand ferry service as a commuting option (honorable mention measure)**



Transportation Sector 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



Transportation Sector Measures

Increase shade cover and green infrastructure

Key Actors

Leaders: DDOT Urban Forestry, DC DOEE
Partners: NPS, USDA Forestry Service, Casey Trees, University of DC, MWCOG

Immediate Next Steps:

- Develop an initial baseline inventory of the area's tree canopy and impervious surface cover
- Identify and prioritize projects to increase healthy tree canopy and increase permeable surface cover in the mid-term
- Track, monitor, and report project status to stakeholders and partners (long term)

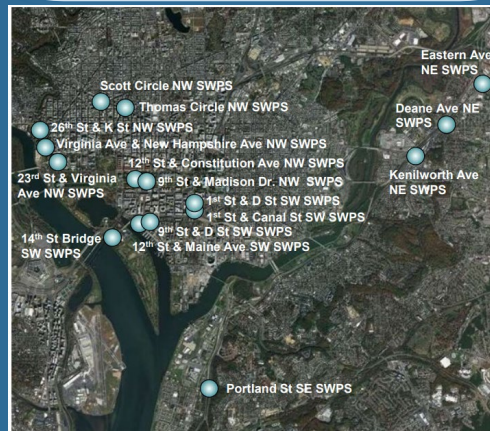
Retrofit stormwater pumping stations

Key Actors

Leaders: D.C. Water
Partners: Electric Utility (Pepco) for installing dual power feeds

Immediate Next Steps:

- Secure additional funding
- Retrofit all pumping stations



Expand ferry service as commuting option (honorable mention)

Could include adding Potomac River Ferry stops near installations (WNY, JBAB) to provide multiple fueling options to build fuel supply resilience, ease transportation stress placed on roads, and additional transportation capacity in case of emergency



Other regions

- Hampton Roads Regional Roadway Flooding Sensor Network (FY21 OLDCC Award)
 - Enables HRPDC to install a network of flooding sensors that will provide real-time information on roadway flooding to commuters in order to avoid traffic congestion caused by flooded roads via Waze. Benefits local military workforce by alerting to flooded roads near installations allowing alternative routes to and from installations.
- San Diego Region (FY21 OLDCC Award)
 - Enables SANDAG to develop necessary conceptual designs, cost estimates, policies needed for transportation infrastructure improvements involving three targeted access corridors threatened by storm surge, SLR, and traffic congestion



Katherine Rainone

Transportation Planner

(202) 962-3283

krainone@mwkog.org

mwkog.org/TPB

Metropolitan Washington Council of Governments

777 North Capitol Street NE, Suite 300

Washington, DC 20002



National Capital Region
Transportation Planning Board