



TPB Technical Committee

Chris Landgraf
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Who we are and how we got here

Who we are

The Northern Virginia Regional Commission (NVRC) is a regional council of thirteen-member local governments in the Northern Virginia suburbs of Washington DC. NVRC is a political subdivision (a government agency) within the Commonwealth.

How we got here

NVRC applied for and received a Military Installation Resilience Review (MIRR) grant from the Office of Local Defense Community Cooperation (OLDCC). During the MIRR process projects benefitting the communities and the installations were identified. A summary of the MIRR Projects follows.

Timeline

Final MIRR report was accepted by the Commission May 25, 2023.



Military Installation Resilience Review (MIRR) Update

- Hazards Identified
 - High Priority Hazards (Extreme Heat, Energy Demand, Coastal Flooding, Inland Flooding)
 - Medium Priority Hazards (Wind, Winter Weather)
 - Low Priority Hazards (Drought, Wildfire)
- Threats and Vulnerabilities Analysis Completed
 - Hazard Exposure
 - Sensitivity
 - Adaptive Capacity
 - Consequence
- Business Case Analysis Completed
- 129 Regional and Installation/County Specific Strategies Identified and Classified
 - Low-Tier
 - Mid-Tier
 - High-Tier
- Funding Sources Identified
- Draft MIRR Report Out for Reviewed (1-17 Mar 2023)
- Final MIRR Report Due 17 May 2023

Solar Projects

1 Megawatt (MW) Floating Solar Array for Water Treatment Plant	\$3.5M
Battery back-up for the 1 MW Floating Solar Array	\$3M
Transmission lines for the 1 MW Solar Array	\$2M
Battery back-up for the Landfill Solar Array (built by others)	\$15M
Solar Panels for Fort Belvoir Elementary School	\$2.4M
Solar Panels for Woodlawn Elementary School	\$1.8M
2 MW Floating Solar at Quantico's Lunga Reservoir	\$7M
2 MW Battery back-up for Lunga Reservoir Solar	\$6M
Transmission Lines for Lunga Reservoir Solar	\$4M
1 MW Floating Solar at Smith Reservoir	\$3.5M
1 MW Battery back-up for Smith Reservoir	\$3M
Transmission Lines for Smith Reservoir Solar	\$4M
Floating Breakwater Protection for Smith Reservoir Solar	\$3M
10 Solar EV Charging Stations at each Installation	\$9M
Total	\$67.2M

Regional Energy Grid Projects

New Substation at Fort Belvoir	\$50M
2 MW Battery back-up for the Community (at the new substation)	\$6M
Micro-grid at the New Fort Belvoir Substation	\$50M
Micro-grid at the Existing Fort Belvoir Substation	\$50M
2 MW Battery back-up for the Community (at the existing substation)	\$5M
Transmission Line Improvements for FB Switching Gear	\$5M
Switch Gear for Fairfax County Covanta Plant	\$5M
Switch Gear for Arlington/Alexandria Covanta Plant	\$5M
Transmission Lines Improvements for A/A Switch Gear	\$5M
Micro-grid at Existing JBM-HH Substation	\$10M
Total	\$191M

Flooding/Shoreline Projects

Planning Effort for Little Creek and Quantico Shoreline	\$0.9M
Natural Infrastructure Improvements for Little Creek	\$35M
Shoreline Improvements at Quantico/Prince William County	\$4M
Total	\$39.9M

Utility Projects

Gas Line Connections at JBM-HH	\$0.7M
Town of Quantico Water and Wastewater Upgrades	\$10M
Total	\$10.7M

Transportation Strategies

R3—Update roadway design guidelines to reflect:

1. Different emissions scenarios and temperature rise on pavement distresses
2. Up-to-date projections for future SLR, future rainfall, and storm surge

Affected design guidelines would apply not only to horizontal and vertical design elements, but also to the materials that are used in construction (i.e., materials that are more resistant to corrosion).

R4—Pursue a study to model the risks and impacts that future flood conditions could have on travel demand characteristic along major regional corridors such as, but not limited to, I-95, 395, Fairfax County Parkway, Route 1, George Washington Memorial Pkwy, South Washington Blvd and use the output to inform approaches for mitigating flood impacts from SLR and future precipitation to ensure access is maintained.

R5—Compare future flood elevations with bridge components and minimum design criteria to determine areas for action.

Transportation Strategies

R6—Update the Transportation Demand Management Plan to consider future flood impacts from coastal and inland flooding on primary corridors and overall installation access. Coordinate with VDOT and counties.

R21—Evaluate Metro railway tunnel and station to assess potential flood impacts to operations and assets.

R22—Continue to advocate for the development of expanded transit services to all installations, including long-term concepts for Metro access and commuter ferry service.

R23—Conduct a base wide transportation study of personnel commuting patterns to determine how personnel are getting to work, and what incentives they would need to reduce the number of days they drive a POV alone to work (better on-base shuttle service, ferry service, bike or scooter share on base, etc.). Share information with regional public transit providers (VDOT TDM Coordinators, MWCOG, VRE, OmniRide, WMATA, etc.).

Transportation Strategies

R24—Consider different emissions scenarios and temperature rise impacts on rail track and update railway design guidelines accordingly.

R37—Incorporate cool and/or permeable pavements (including pervious concrete, porous asphalt, and permeable interlocking concrete pavers) into roadways and parking lots to minimize urban heat island effect and to support stormwater management.

R44—Installations to work with NVRC and OLDCC to pursue a second phase AV pilot program for on-base transportation; Scope could include last mile connector options at each installation (VRE/BRT connections).

Next Steps

- Identify funding sources for project planning
- Socialize the MIRR report
- Identify funding sources for project construction

MIRR POC and Questions

Chris Landgraf
NVRC Program Manager
Military Installation Resilience
(703) 642-4641

