



FORT LEONARD WOOD MILITARY INSTALLATION RESILIENCE REVIEW

Executive Committee Meeting

October 7, 2024



WELCOME AND INTRODUCTIONS

MIRR OVERVIEW

PURPOSE, OBJECTIVES, AND OUTCOMES

MIRR OVERVIEW

- Military Installation Resilience Review
- Merges previous OLDCC programs into one broader program - JLUS/Compatible Use Studies + Resilience Studies
- OLDCC grant funding to local sponsor (MRPC)
- Requires nomination by installation.



U.S. Department of Defense
Office of Local Defense
Community Cooperation

MIRR PROGRAM GOALS

- A cooperative, ***community-driven planning effort*** that leverages the capabilities and strengths of state and local governments to address resilience and encroachment risks;
- Protect and ***enhance the public health, safety, and general welfare*** of those living and working near an active military installation.
- Protect and ***enhance military readiness*** and defense capabilities while supporting continued community economic development;
- Enhance civilian and military ***communication and collaboration.***

DEFINING RESILIENCE

- The capacity to withstand or to recover quickly from difficulties.
- The ability of a system / organization to withstand changes in its environment and still function.
- The adaptive capacities of communities and societies to manage change and adversities over time.
- The ability of buildings and infrastructure to absorb impacts without suffering complete failure

FLW MIRR RESILIENCE DEFINITION

The capacity of Fort Leonard Wood and its host communities to withstand, adapt to, and recover from adverse impacts to infrastructure and systems that sustain the mission and integrity of the installation.



INSTALLATION RESILIENCE FACTORS

FACTORS THAT ARE LIKELY TO IMPAIR THE CONTINUED OPERATIONAL UTILITY OF LOCAL MILITARY INSTALLATIONS.



Extreme Natural Events

- Avalanche
- Drought
- Earthquake/ Seismic Concerns
- Landslide
- Lightning
- Tsunami
- Volcanic Activity
- Wildfire



Water Supply

- Capacity
- Availability
- Contamination
- Salt Water Intrusion



Flooding

- Tidal Surge
- Coastal Flooding
- Inland Flooding
- Riverine Flooding



Land Use/ Development

- Air Quality
- Cultural Resources
- Environmental Justice
- Housing Availability
- Gate Access
- Light Pollution
- Encroachment
- Transportation
- Foreign Investment/Proximity
- Spectrum Encroachment
- Maritime Encroachment



Severe Weather

- Extreme Temperatures
- Severe Thunderstorms
- Hurricane/ Tropical Storm
- Snow/Ice Storms
- Tornado



Military Operational Impacts

- AICUZ/RAICUZ/RCUZ
- Airborne Noise
- Industrial Noise
- Artillery Noise
- Security
- Convoy Transportation
- Safety (explosives)



Land Degradation

- Coastal Inundation
- Erosion
- Forest Health
- Invasive Species
- Permafrost
- Sea Level Rise
- Subsidence



Infrastructure

- Stormwater
- Wastewater
- Water
- Telecommunications
- Electrical
- Gas



Species & Habitat Concerns

- Critical Habitat
- Rare, Threatened, Endangered Species
- Special Species of Concern
- Invasive Species
- BASH



Energy

- Renewable Energy Siting
- Compatibility
- Microgrid
- Energy Redundancy
- Energy Security

MIRR PROCESS AND SCOPE

- **Installation / Community Engagement**
 - Executive & Technical Committee guidance
 - Local and regional partners (government and private sector)
 - Fort Leonard Wood agencies and directorates
- **Priority Sector Analysis**
 - Review plans, studies, and data
 - Key informant interviews
 - Document resilience factors
 - Develop consensus on priority sectors for analysis

MIRR PROCESS AND SCOPE

- **Threats & Vulnerabilities Analysis**
 - Identify / Map Threats and Hazards
 - Vulnerability Assessment
 - Identify site-specific solutions and implementation strategies
 - Assess feasibility of solutions and prepare implementation plan
- **Final Report**
 - Draft report and implementation plan prepared
 - Reviews by Committees, FLW, MRPC, OLDCC
 - Final report prepared
 - Final presentations

MIRR PROJECT TIMELINE

Kickoff

August 2024

Completion

August 2025



PROJECT OUTCOMES

- Recommendations to address identified threats and vulnerabilities through implementation of:
 - *Plans*
 - *Policies*
 - *Programs*
 - *Partnerships*
 - *Capital Projects*
- Enables the installation, community partners, and private sector to seek follow-on funding for major initiatives through OLDCC and other federal / state funding sources.

LISTENING SESSIONS SUMMARY

Community:

- Ozark Land Trust
- Rolla Emergency Management
- Pulaski County Emergency Management
- Texas County Emergency Management
- Missouri Military Advocate
- Missouri Department of Transportation
- Missouri Department of Conservation
- Mark Twain National Forest
- Electric Utilities
- City of Waynesville
- City of Crocker
- Sustainable Ozarks Partnership
- Pulaski Growth Alliance

Fort Leonard Wood:

- DPW Master Planning
- DPW Operations and Engineering
- DPTMS Range Operations
- DPW Environmental
- Logistics Readiness Center
- DPTMS Emergency Operations
- Network Enterprise Center
- Emergency Services

Scheduled

- Pulaski County Commission

PRIORITY SECTOR ANALYSIS

Initial Sector Identification

PRIORITY SECTOR ANALYSIS

- Initial step in the development of the MIRR
- Identify topics for further study in the Threats and Vulnerabilities Analysis
- Prioritization based on impact to Fort Leonard Wood mission, host community impacts, and viability of potential solutions at the local / regional level.



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RISK – DEFINITION AND ASSESSMENT

- Risk is the potential for an adverse outcome that may result from a hazardous condition or challenging circumstance.
- Determined by a qualitative assessment that considers several factors, including:
 - The likelihood of the event occurring
 - The severity of the potential harm
 - The value of the interest at stake
 - The extent of the damage that could be done
 - The permanence of the potential damage

RISK ASSESSMENT SCORING

- Simplified analysis to determine risk based on the likelihood of an event or circumstance occurring multiplied by the consequence of it occurring.

Risk Score = Likelihood x Consequence

Risk Level:

- > 12 = High
- 6 – 12 = Moderate
- 1 – 5 = Low

Likelihood:

- 5 - Certain
- 4 - Likely
- 3 - Possible
- 2 - Unlikely
- 1 - Rare

Consequence:

- 5 - Catastrophic
- 4 - Major
- 3 - Moderate
- 2 - Minor
- 1 - Insignificant

RISK SCORING MATRIX

Consequence	<i>Catastrophic</i>	5	5	10	15	20	25
	<i>Major</i>	4	4	8	12	16	20
	<i>Moderate</i>	3	3	6	9	12	15
	<i>Minor</i>	2	2	4	6	8	10
	<i>Insignificant</i>	1	1	2	3	4	5
			1	2	3	4	5
			<i>Rare</i>	<i>Unlikely</i>	<i>Possible</i>	<i>Likely</i>	<i>Almost Certain</i>
			Likelihood				

Risk Levels:	Shock/Stress	Low	Medium	High
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PRELIMINARY RISK ASSESSMENT

- Identified 28 potential hazards to infrastructure and support systems that sustain the mission and integrity of the installation.
- Hazards can have discrete or broad impact
- Hazards can impact the installation and/or community
- Preliminary risk screening and scoring determined:
 - **High Risk = 8 hazards**
 - **Moderate Risk = 18 hazards**
 - **Low Risk = 2 hazards**

HIGH RISK HAZARDS

- Severe Winter Weather
- Tornado
- Electric Supply Disruption (persistent)
- Earthquake
- Wildfire
- Riverine Flooding
- Severe Storms
- External Transportation Network Disruption

MODERATE RISK HAZARDS (Top Tier)

- Extreme Heat
- Extreme Cold
- Extreme Precipitation
- Water Supply Disruption (persistent)
- External Installation Access Disruption
- Installation Access Integrity / Security
- Communications Failure (persistent)

MODERATE RISK HAZARDS (Lower Tier)

- Land Subsidence
- Natural Gas Supply Disruption (persistent)
- Workforce Availability
- Housing Availability
- Supply Chain Disruption
- Quality of Life Degradation
- Degradation of Ranges / Training / Maneuver Areas
- Electric Supply Capacity Availability
- Water Supply Capacity Availability
- Natural Gas Supply Capacity Availability
- Endangered Species Habitat Encroachment

LOW RISK HAZARDS

- Urban Encroachment
- Diminished Community Support

PRIORITY SECTOR ANALYSIS

- Priorities for analysis in the Threats and Vulnerabilities assessment will be finalized at the November committee meeting.
- Committee input is requested to assist in determining the hazards that will be included in the assessment.
- The outcomes of the assessment will directly inform implementation recommendations and funding opportunities.

FUNDING OPPORTUNITIES: TOOL DEVELOPMENT & IMPLEMENTATION

MIRR RECOMMENDED ACTIONS IN CONTEXT

**MIRR
Planning**

**Tool development: detailed
plans, policies, programs, &
partnerships**

**Implementation:
built & natural
infrastructure projects**

Various funding resources available for different actions

FUNDING: PLANS, POLICIES, PROGRAMS, & PARTNERSHIPS

- Funding from Office of Local Defense Community Cooperation (OLDCC)
- Other sources: state/local, military, Readiness & Environmental Protection Integration (REPI), FEMA Building Resilience and Communities (BRIC), EPA Community Change
- Example solutions:
 - Design & permitting
 - Creation of a local development ordinance
 - MIRR implementation program (website, engagement, partnership development)
 - Green energy assessment for FLW & surrounding communities
 - Regional tabletop exercise & integrated plan for community engagement
 - Standing up a REPI partnership program for conservation & restoration efforts

FUNDING: BUILT INFRASTRUCTURE PROJECTS

- Often competitive; some sources may require “shovel-ready” projects that have performed design and permitting
- Example funding sources:
 - OLDCC Defense Community Infrastructure Program (DCIP) and other programs (Public Schools on Military Installations, etc.)
 - FEMA BRIC
 - State funding derived from Infrastructure Investment and Jobs Act (IIJA)
 - Coordination with Military Preparedness and Enhancement Commission
 - Military funding
 - Enhanced use leases (EUL)
 - Intergovernmental Support Agreements (IGSAs)

FUNDING: NATURAL INFRASTRUCTURE PROJECTS

- Many newer funding sources prioritizing conservation, restoration, & natural infrastructure; often less competitive than funding for built infrastructure
- Example funding sources:
 - REPI and Army Compatible Use Buffer (ACUB) programming
 - Sentinel Landscapes
 - FEMA BRIC
 - US Department of Agriculture and respective NRCS programs
 - State funding derived from Infrastructure Investment and Jobs Act (IIJA)
 - Cooperative agreements for natural resources, wildfire risk reduction, etc.
 - Environmental state agencies
 - Military service environmental resilience funding / Engineering with Nature

OFFICE OF LOCAL DEFENSE COMMUNITY COOPERATION (OLDCC)

MIRR Implementation Planning and Other Planning Efforts

- Targeted studies
- Policy development
- Plans that may include design & permitting
- Program and/or partnership development
- Non-competitive; up to \$1.5 million in funding (Min. 10% partner contribution)

Community Infrastructure Program (DCIP)

- Addresses deficiencies in community infrastructure to enhance military value, installation resilience, and military family quality of life
- Eligible projects include complete and usable transportation projects, community support facilities, and utility infrastructure projects
- Very competitive; up to \$20 million (Minimum 30% partner contribution if the population is greater than 100,000)

Others: Public Schools on Installations, Stakeholder Engagement, etc.



FEMA BUILDING RESILIENCE & COMMUNITIES (BRIC)

- Supports hazard risk reduction through capacity building, innovation, partnerships, & large infrastructure projects
- Eligible activities:
 - Capability and capacity-building initiatives
 - Hazard mitigation projects
 - Management costs
- Funding dependent on project type; minimum 25% partner contribution; 10% for small, impoverished communities
- Major expansion of FEMA BRIC anticipated soon



OSD: CONSERVATION / NATURAL RESOURCES PARTNERSHIPS

REPI / Army Compatible Use Buffer (ACUB) Program

- Partnerships for compatible land use, natural resources, and installation resilience
- Installation establishes partnerships and proposes a five-year plan
- Partner-led projects engage willing landowners
- Competitive funding within Army and across services; partner contribution varies
- Growing focus on resilience (stream restoration, wildfire risk reduction, natural infrastructure)

Sentinel Landscapes

- Coalition of federal agencies, state and local governments, and NGOs to support military training, conserve working and natural lands, and enhance resilience to climate change surrounding military installations
- Highly competitive; significant funding available across various sources



OTHER FUNDING OPPORTUNITIES

- **Creative Military – Community Funding Partnerships**
 - Intergovernmental Support Agreements (IGSAs)
 - Enhanced Use Leases (EULs)
- **Military Funding Sources**
 - Environmental Resilience Funding / Engineering with Nature
 - Various military funding sources, but extremely competitive and often focused inside the fence-line

OTHER FUNDING OPPORTUNITIES

- **State / Local Funding**

- State agency funding derived from Infrastructure Investment and Jobs Act (IIJA)
- Military Preparedness and Enhancement Commission
- Local Community and NGO resources

- **National Fish & Wildlife America the Beautiful Grant**

- **EPA Community Change Grant**

- **Various USDA Opportunities**

- Regional Conservation Partnership Program
- Agricultural Land Easements
- Landowner Support for Climate Mitigation and Resilience

FUNDING LESSONS LEARNED

- Engage with OLDCC and consider MIRR Implementation funding to advance policies, programs, plans, and partnerships
- Prioritize actions for built and natural infrastructure projects that have high potential for implementation funding
- Identify funding targets as early as possible, and design efforts accordingly
- Consider multiple funding opportunities, and layer primary and matching sources



FUTURE COMMITTEE MEETINGS

- Priority Sector Analysis Conclusion
 - Executive Committee: November 18th or 19th
- Following conclusion of the Priority Sector Analysis, the Executive Committee will likely meet next to receive an update on the initial findings of the Threats and Vulnerabilities Analysis in March.

COMMITTEE MEMBER COMMENTS



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