

OPENING BY DCO/HS

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U.S. ARMY



US Army Corps
of Engineers®

U.S. ARMY CORPS OF ENGINEERS EMERGENCY MANAGEMENT

Support to FEMA
Emergency Support Function #3
(ESF#3)
Eric Conrad
ESF#3 Cadre Lead and Disaster
Program Manager

12 SEP 24



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of Engineers®

U.S. ARMY CORPS OF ENGINEERS

MISSION

Deliver vital engineering solutions, in collaboration with our partners, to secure our Nation, energize our economy, and reduce disaster risk.

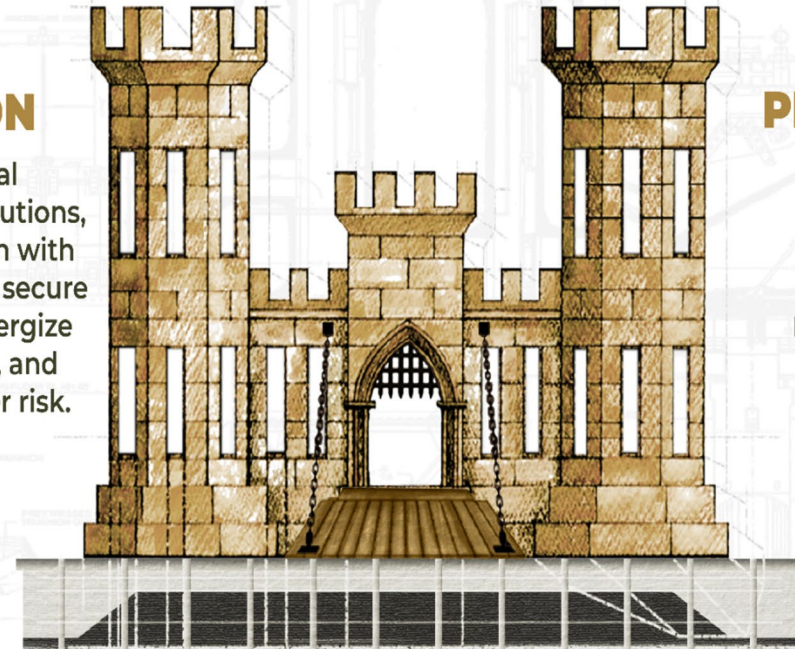
PRIORITIES

PEOPLE

READINESS

PARTNERSHIPS

INNOVATE



ENGINEERING SOLUTIONS FOR THE NATION'S TOUGHEST CHALLENGES



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ESF#3 Response Operations

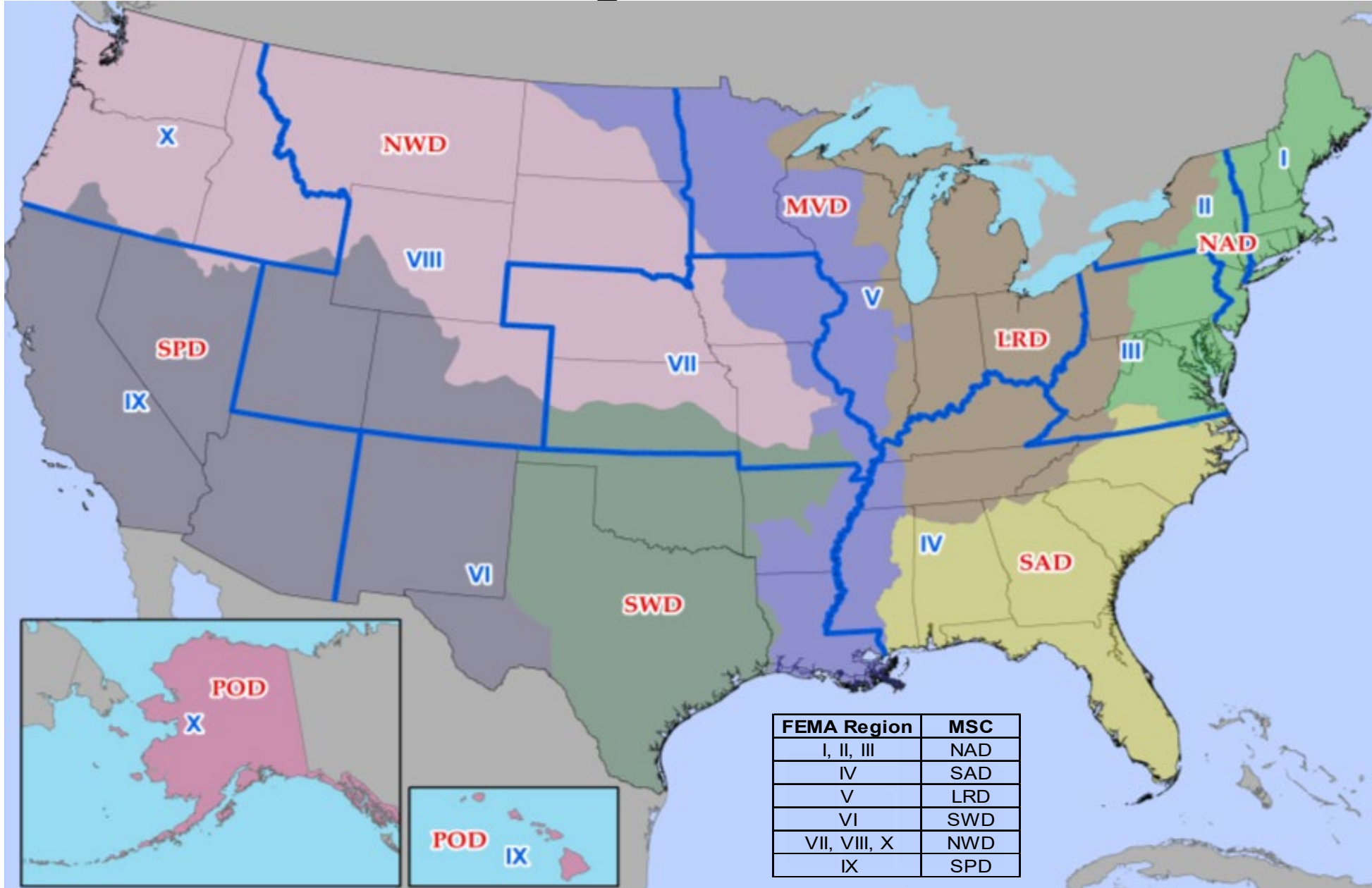


- Activation: Mobilize based on FEMA request/Direction under Stafford Act and National Response Framework
 - Notice Events – tropical storms, ice storms, etc – some advanced warning incident support is likely
 - No Notice – earthquakes, tornados, wildfires, etc – little to no advanced warning incident support is likely
- Delivery:
 - Technical Support – usually provided by subject matter experts within USACE
 - Direct Federal Assistance – most often delivered through contracting means
- Common Missions:
 - Specialized Cadre – Team Leader, Assistant Team Leader, Local Government Liaison, SME, etc
 - Temporary Emergency Power
 - Temporary Roofing
 - Temporary Housing
 - Critical Public Facilities
 - Infrastructure Assessment
 - Debris Management
- Capabilities:
 - 16 Permanent USACE employees focused on specifically on ESF#3
 - 2000 – 4000 volunteer employees from across USACE
 - Contractors



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FEMA / USACE Regions Across the Nation





Recent Response Trends

- Past two years, many activations in support of Pacific and Atlantic Island territories due to tropical developments
- 10-year trends: increased mobilization/activation requirements – deploying more often
 - Especially true for tropical developments
 - US Virgin Islands and Puerto Rico for instance – since last year, seven mobilizations
 - 2023: four
 - 2024 to date: three
- For the incidents USACE delivers, we are staying longer, receiving more to do, and getting missions later in the incident support timeline: Hawaii Wildfire Example of Temp Housing and complexity of debris removal
- Full gambit of incident support ‘types’ from floods, tropical storms, wildfires, tornados, drought, etc. Noticing it takes less of an incident threshold to activate Federal support.
- Wildfire support continues to be an area of support and unfortunately growth since 2017.
 - The western States (CA, WA, CO, NM) are examples since 2017
 - NOAA is predicting more WFs in the Gulf Coast states. Saw this in LA last year – though resulted in no USACE/ESF#3 support requirements.
 - NOAA predicts more “extremes” within the gulf coast states with regard to weather – greater/longer flooding to drought periods. I’ve personally observed this with longer periods of drought and more significant rainfall in Atlanta, GA area. Much different than the “mixture” that occurred in the past.

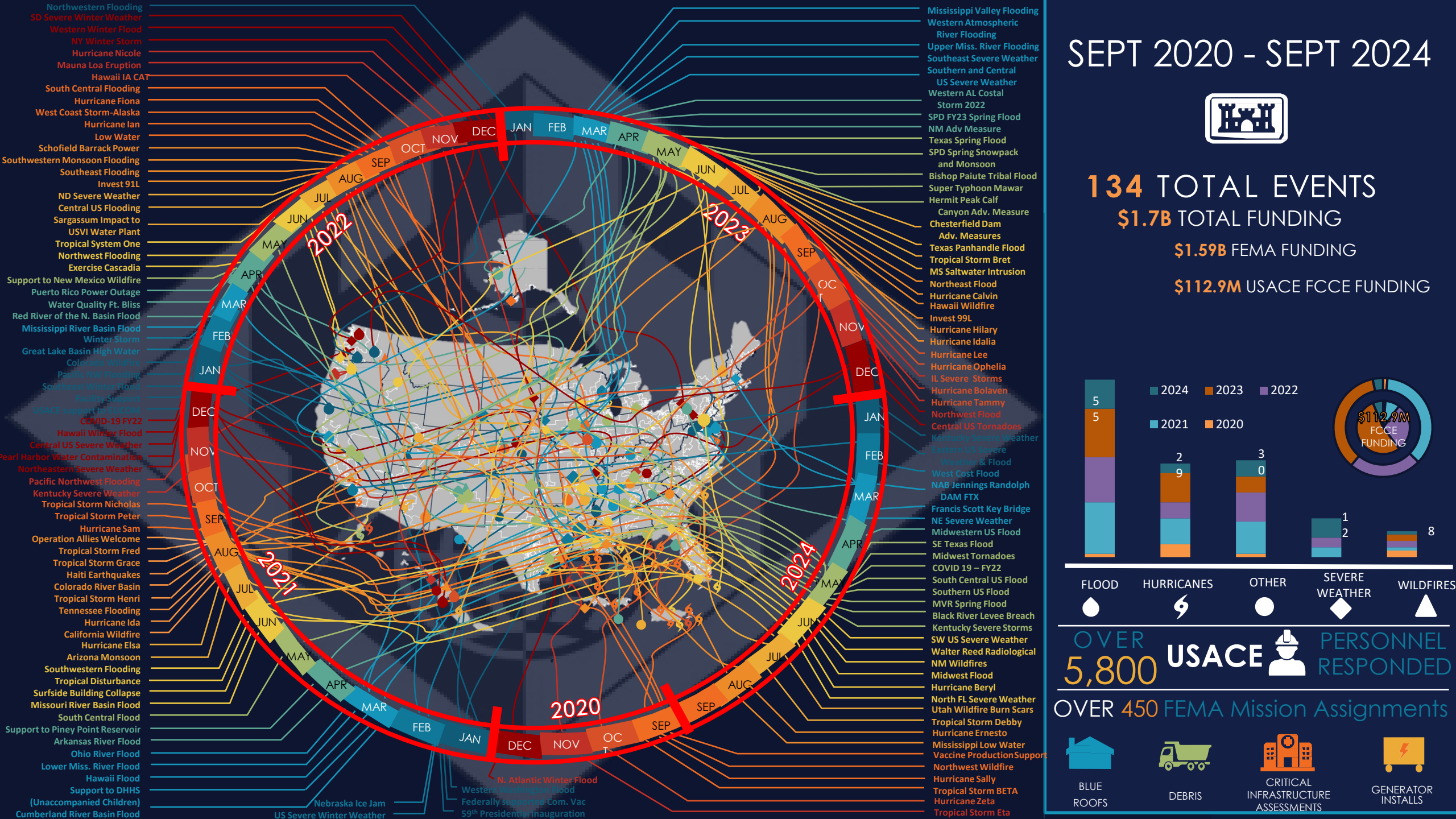


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Recent Response Trends (continued)



- Where we activate the most: FEMA Regions 2, 4, 6, and 9. But, all Regions have a lot of interaction with USACE and though we may not activate as much, we still provide technical coordination with FEMA counterparts. Further, trends are showing other FEMA regions activations are increasing.
- USACE “busy” season remains Atlantic Hurricane Season period: 1 JUN – 1 NOV, but also seeing more ‘off season’ incident support requirements as the support requirements are longer in duration and new incident support occurring more often over the past several years.
- Incident Prone States are becoming more capable: NC, SC, FL, and LA for instance have many of their own emergency contracting solutions ready to be utilized during an event. The number of states with these capabilities continue to grow. Contracts such as temp emergency power and debris management.
- More activations and incidents occurring in less prone states.



SEPT 2020 - SEPT 2024

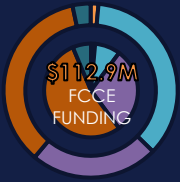
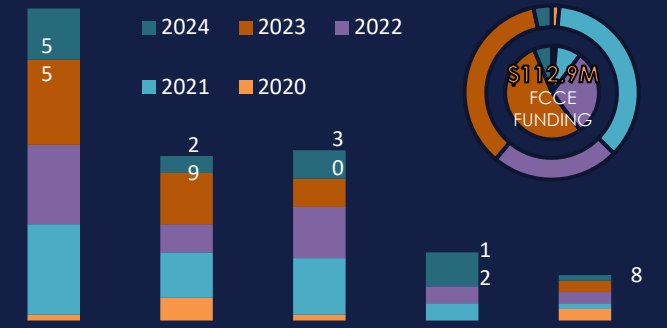


134 TOTAL EVENTS

\$1.7B TOTAL FUNDING

\$1.59B FEMA FUNDING

\$112.9M USACE FCCE FUNDING



FLOOD HURRICANES OTHER SEVERE WEATHER WILDFIRES

OVER **5,800** USACE PERSONNEL RESPONDED

OVER **450** FEMA Mission Assignments





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2023 DISASTER RESPONSE

AS OF February 2024



- Mississippi Valley Flooding
6 MAR 23-30 JUN 23
- Western Atmospheric River Flooding
8 MAR 23- PRESENT
- Upper Mississippi River Flooding
23 MAR 23- 23 MAY 23
- Southeast Severe Weather
23MAR23- PRESENT
- Southern and Central Severe Weather
31 MAR 23- 10 APR 23

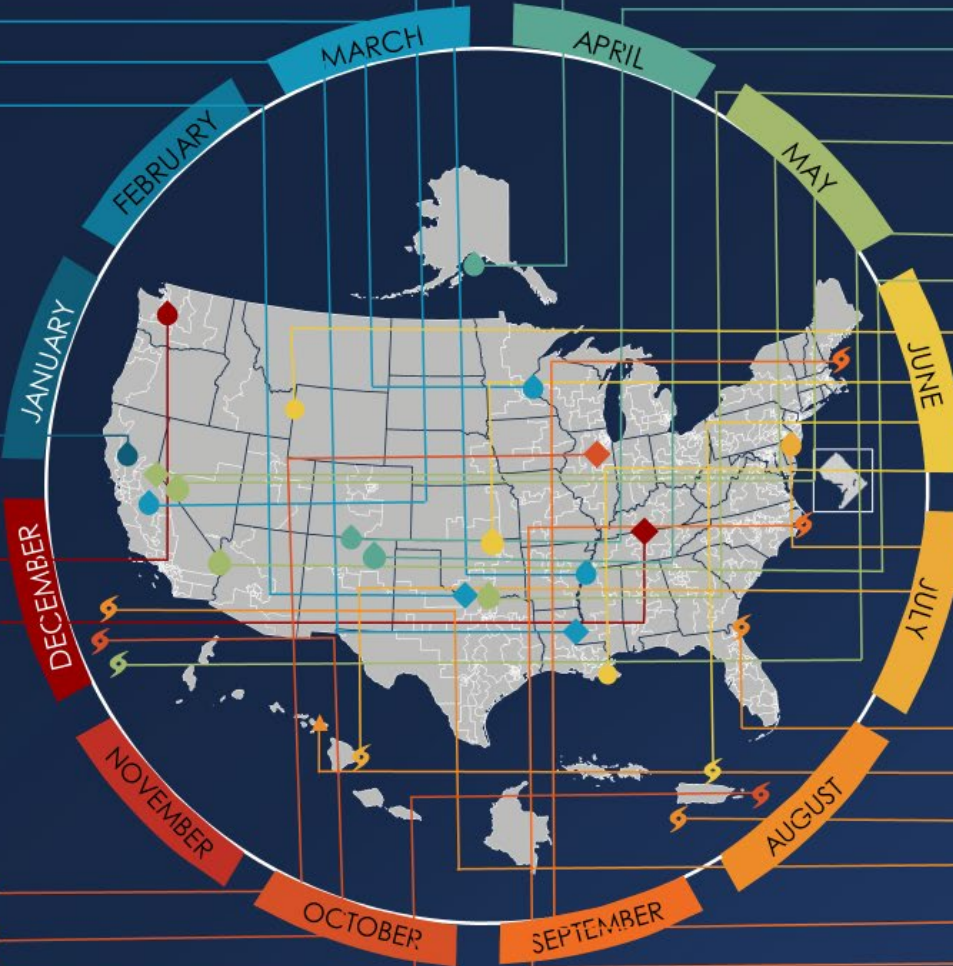
Western Winter Flooding
4 JAN 23 - PRESENT

Northwest Flooding
01 DEC 23 - 13 DEC 23

Central US Tornadoes 2023
15 DEC 23 - PRESENT

- IL Severe Storm-Summer 2023
5 OCT 23 - PRESENT
- Typhoon Bolaven
10 OCT 23- 20 OCT 23
- Hurricane Tammy
17 OCT 23 - 30 OCT 23

- Western Alaska Coastal Storm-Recovery
4 APR 23- PRESENT
- SPD FY23 Spring Flood
9 APR 23- 30 JUN 23
- New Mexico Advance Measure
9 APR 23- 10 APR 23
- Texas Spring Flooding
1 MAY 23 - 22 MAY 23
- SPD Spring Snowpack and Monsoon
23 MAY 23 - PRESENT
- Bishop Palute Tribal Flooding
26 MAY 23 - 1AUG 23
- Super Typhoon Mawar
28 MAY 23 - PRESENT
- Hermit Peak Calf Canyon Advance Measure
31 MAY 23 - 1 AUG 23
- Chesterfield Dam Advance Measure
1 JUN 23 - 5 JUN 23
- Texas Panhandle Flooding
5 JUN 23 - 23 JUN 23
- Tropical Storm Bret
23 JUN 23 - 26 JUN 23
- MS River Saltwater Intrusion
29 JUN 23 - 2 FEB 24
- Northeast Flooding - July 23
10 JUL 23 - 11 AUG 23
- Hurricane Calvin
16 JUL 23 - 24 JUL 23
- Hurricane Idalia-Aug 2023
25 AUG 23 - 01 NOV 23
- Hawai'i Wildfire
10 AUG 23 - PRESENT
- Invest 99L- Aug 2023
18 AUG 23 - 28 AUG 23
- Hurricane Hilary
18 AUG 23 - 25 AUG 23
- Hurricane Lee
13 SEP 23 - 20 SEP 23
- Tropical Storm Ophella
22 SEP 23 - 25 SEP 23



31
EVENTS
TOTAL



PERSONNEL
1499

- CONTINUED EVENTS**
- Western Winter Flooding
 - SE Severe Weather
 - Western AR Flooding
 - Western AK Coastal Storm-Recovery
 - SPD Spring Snowpack & Monsoon
 - Super Typhoon Mawar
 - Hawai'i Wildfires
 - IL Severe Storms-Summer 2023

SAME NORTHERN VIRGINIA POST SEMINAR

Jennifer Fox, Jennifer.R.Fox@usace.army.mil



**US Army Corps
of Engineers®**
Baltimore District



EMERGENCY CONTRACTING OVERVIEW

Emergency Contracting Considerations

- Multiple Award Task Order Contract (MATOC) / Single Award Task Order Contract (SATOC)
- Sole Source Authorities
- Undefined Contract Action
- Other Federal Agencies

Contract Capability Examples

Contract Vehicles	Contract Details
ACI Blue Roof	19 SATOCs- ME – TX (8); PR (2); HI (1); VI (2)
ACI Debris	8 SATOCs- MVD, SAD, SWD, LRD, NAD, NWD, SPD, POD
ACI Temp Power	4 Requirements- FEMA Regions: I-X, OCONUS Regions II & IX
Rapid Disaster Infrastructure	18 MATOCs- CONUS, AK, HI, & Outlying Areas (6); NE, IA, SD, ND, MO, KS (5)
Rapid	5 SATOCS CONUS- AK, HI, & Outlying Areas (2); CONUS, AK, HI, POD & SAD (2)
Other Federal Agencies (examples)	GSA: Emergency Acquisition Basic Ordering Agreement (BOA), One Acquisition Solution for Integrated Services (OASIS), and Multiple Award Schedule (MAS) Professional Services. Worldwide. Navy SUPSALV: 3 SATOCs for zones A-C worldwide.

Recent Emergency Contracting Efforts

- Maui Wildfire
 - ✓ ACI Debris
 - ✓ 8(a) authorities with NHO(s)
- ACI Debris Re-procurement
 - ✓ Rock Island, open sources sought

Resources

- SB website ([Small Business -- Headquarters U.S. Army Corps of Engineers](#))
- Contracting in Disasters website ([Contracting in Disasters \(army.mil\)](#))



Questions / Open Discussion





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ESF#3 MISSION PROPOONENT: DEBRIS



Program Components

Proponent Division RCO Chief: Don Walker
Mission PM: Kayla Stull (Lead), Eric Haliburton (Deputy)
ESF #3 Permanent Cadre Advisor: Mike deMasi

Planning & Response Teams (PRTs)

Kansas City (**Deployed**)
Mobile
Vicksburg
Sacramento
Baltimore (**Contaminated Debris Management Cadre**)
Ft. Worth (**Deployed**)
Louisville (Redeployed March 2024)

Cadre of Experts

Subject Matter Experts (SME): 21
Subject Matter Specialists (SMS): 12

Tools

ACI Ordering Guide
2022 Debris Management SOP

2024 Preparedness & Modernization

PRT Training

NWK	SAM	MVK	NAB
16-17 April	14-15 May	11-12 June	15-19 July

Project Management Plan

THIRA
SME/SMS Cadre Overhaul
Training Plan

uCOP Tool Development

Private Property Debris Removal
Right-of-Way Debris Removal
Technical Monitoring
PRT-Specific Tools

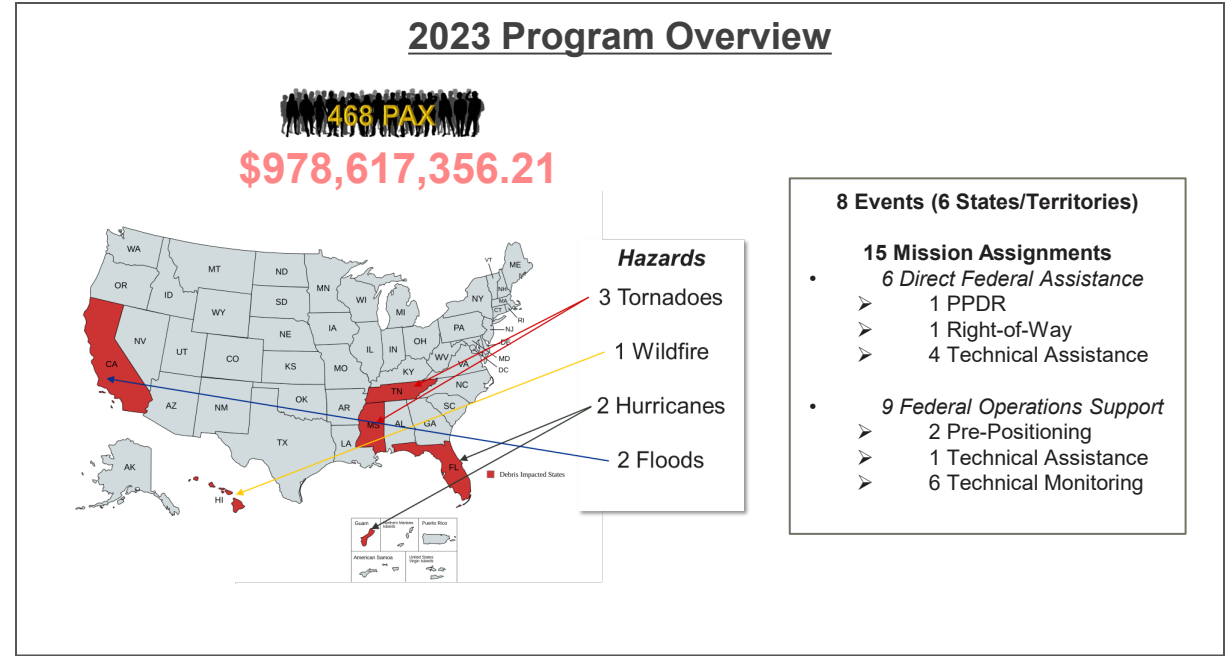
Contract Management PDT

Templated Contracting Documentation

Sharepoint Website

SME Application
Regulations & Policy
Templates
Programmatic Information

2023 Program Overview



ACI Posture

Contracts

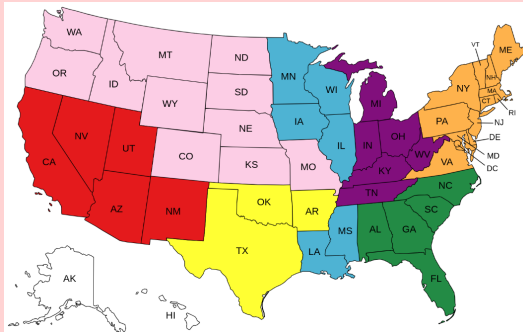
Total Capacity: \$3.5B

Total Awards: 8 Unrestricted Only

Due to long acquisition times caused by multiple protests, corrective action, and protest defense, a gap in ACI coverage spanned from 2019 to 2022 and only the Unrestricted contracts were awarded in 2021.

Concerns/Risks/Recommendations:

- No USACE Debris ACI for US Virgin Islands and Puerto Rico
 - SAD Developing Contingency Plan
- POD reaching ACI capacity limit
 - Executing KO, PRT, and CT Team developing COAs
- ACI expires 2026 (2028 for SPD)
 - Working with MVR/MVD to develop timeline and critical path forward



Unrestricted

- Region 1. NWD - \$250M
- Region 2. MVD - \$500M
- Region 3. LRD - \$250M
- Region 4. NAD - \$500M
- Region 5. SPD - \$500M
- Region 6. SWD - \$500M
- Region 7. SAD - \$500M
- Region 8. POD - \$500M

TEMPORARY ROOFING SAME NOVA BRIEF

Brenton Barkley
September 2024
Temporary Roofing Program SME



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PURPOSE

The purpose of the Temporary Roofing program is to provide temporary protection from the elements to allow people to shelter-in-place in residences or shelters and to prevent additional damages. The plastic sheeting will allow the homeowner to stay in their residence. The Temporary Roofing mission is an ESF #6 mission (mass care)

– The assistance to **FEMA** (at the State's request) can come in two forms:

Federal Operational Support:

- Advice on program scoping, planning, and execution
- Assess conditions and capabilities of local governments
- Provide training

Direct Federal Assistance:

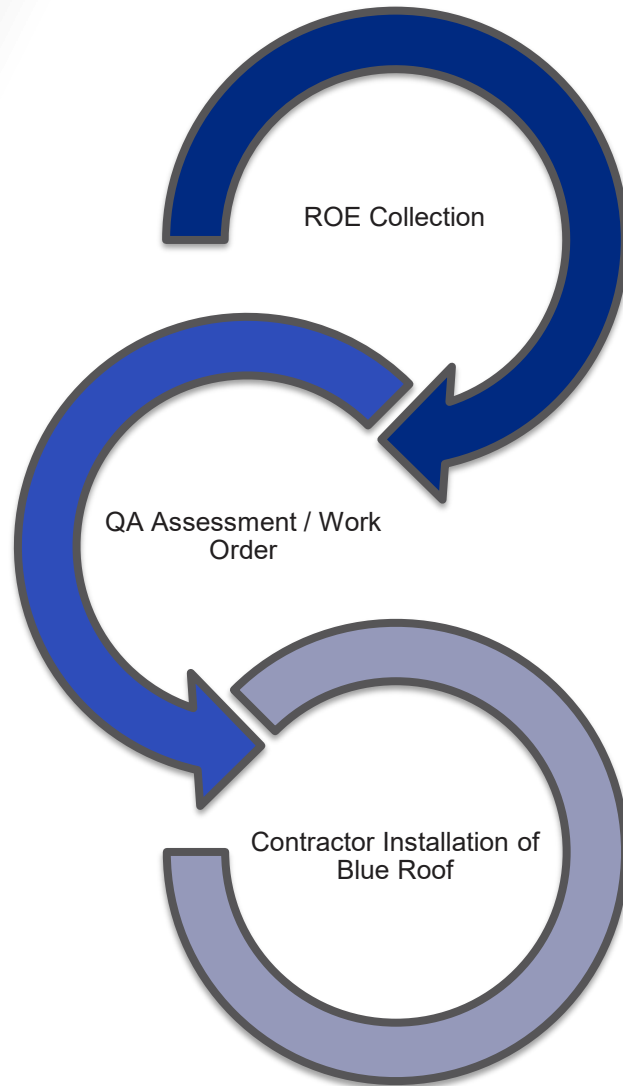
- Execution of the Temporary Roofing Mission
- Logistical support to other response groups (VOADs, National Guard, etc.)



<https://www.youtube.com/watch?v=TJLbOh-eYag>



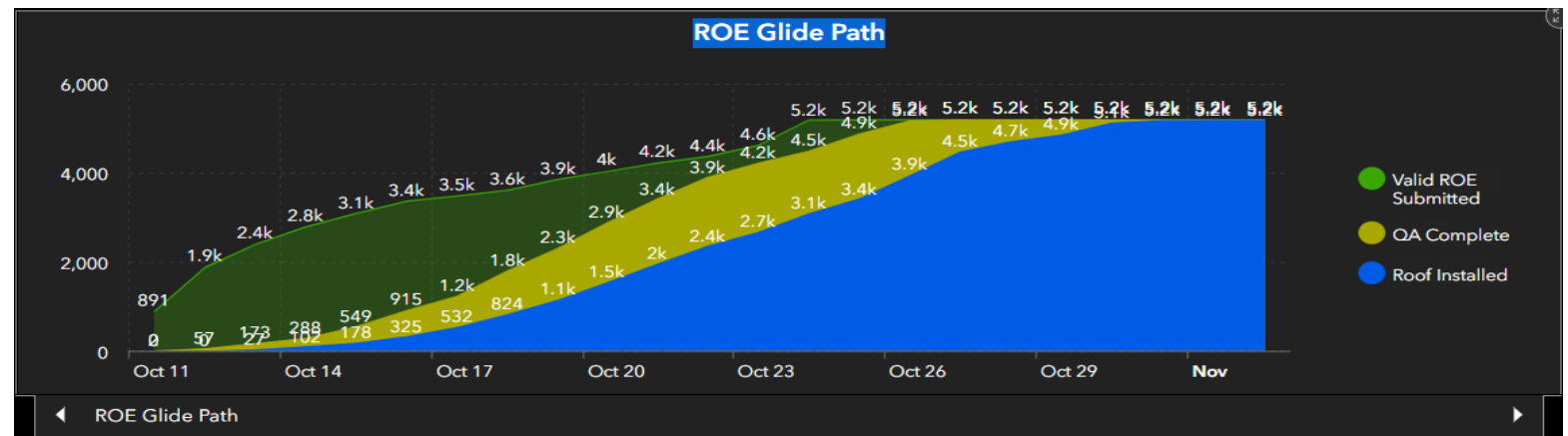
TEMPORARY ROOFING PROCESS OVERVIEW



1) Right of Entry (ROE) Collection – Public requests assistance either online, thru the call center or at an in-person collection center.

2) Assessment – USACE estimates damage and creates work order. Completed either in-person or remotely using aerial imagery.

3) Installation – Contractor installs materials for the temporary repair as shown on work order.





TEMPORARY ROOFING OVERVIEW

Historical Missions

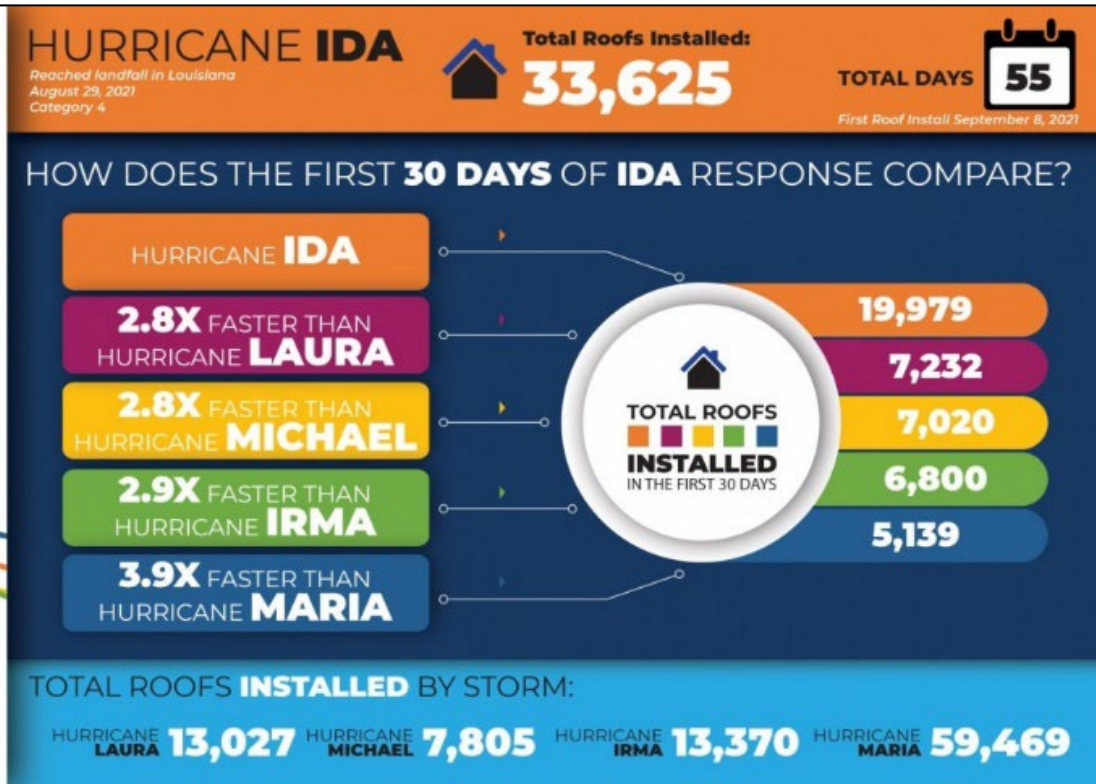
- 2004 (Hurricanes Charlie, Frances, Jeanne, and Ivan): 134,000 blue roofs installed
- 2005 (Hurricanes Katrina, Rita, and Wilma): 193,000 blue roofs installed
- 2008 (Hurricanes Gustav and Ike): 36,235 blue roofs installed
- 2017 (Hurricanes Irma and Maria): 76,500 blue roofs installed
- 2018 (Hurricane Michael): 7,800 blue roofs installed
- 2020 (Hurricanes Laura and Delta): 7,200 blue roofs installed
- 2021 (Hurricane Ida): 33,625 blue roofs installed
- 2022 (Hurricane Ian): 20,380 blue roofs installed

**OPERATION
BLUE ROOF**
US Army Corps of Engineers

**INCREASING
DISASTER RESPONSE
SPEED**
TO BEST SERVE THE NATION

Using lessons learned from previous responses USACE & FEMA constantly work to increase speed of delivery for the American people through process and communication improvement.

BUILDING STRONG
U.S. Army Corps of Engineers





TEMPORARY ROOFING CONTRACTS

Atlantic Coast			Maui/Hawaii		
W9128F21D0043	SB	S&M and Associates / Acworth, GA	W9128F20D0038	SB	Crown Architectural Metal Co / Kenner, LA
W9128F21D0044	SDVOSB	ThomCo Enterprises / Fort Walton Beach, FL	W9128F21D0062	UNR	Ceres Environmental Services / Sarasota, FL
W9128F21D0045	HUBZone	Power & Instrumentation Svcs / Vega Baja, PR	Kauai/Oahu		
W9128F21D0046	WOSB	Yerkes South / Crestview, FL	W9128F21D0061	UNR	SLSCO / Galveston, TX
W9128F21D0036	UNR	Ceres Environmental Services / Sarasota, FL	Eastern Puerto Rico		
Gulf Coast			W9128F20D0032	SB	Venegas JV / Ponce, PR
W9128F20D0034	WOSB	Swan Contracting / Peterborough, NH	W9128F21D0052	UNR	Ceres Environmental Services / Sarasota, FL
W9128F20D0035	SDVOSB	Blue Tarpon Construction / Gulf Breeze, FL	Western Puerto Rico		
W9128F20D0036	HUBZone	Venegas Construction / Ponce, PR	W9128F20D0033	SB	Power & Instrumentation Svcs / Vega Baja, PR
W9128F20D0037	SB	Hughes Construction Service / Ozark, AL	W9128F21D0053	UNR	Dynamic Construction Group / Baton Rouge, LA
W9128F20D0043	UNR	Barlovento LLC / Dothan, AL	US Virgin Islands		
			W9128F20D0044	SB	Power & Instrumentation Svcs / Vega Baja, PR
			W9128F21D0042	SB	Swan Contracting / Peterborough, NH

- 19 contracts covering Maine to Texas, Hawaiian Islands, Puerto Rico, and US Virgin Islands
- 7-year duration; 10 expire in 2027 and 9 expire in 2028
- \$45,000,000 capacity and single order limit



Questions?

TEMPORARY EMERGENCY POWER

Dom Basile & Nancy Church
US Army Corps of Engineers
Temporary Emergency Power PM



US Army Corps
of Engineers®

AGENDA

- Mission
- Capabilities
- Year in review
- ACI Contract(3)

TEMPORARY EMERGENCY POWER MISSION

Purpose: Provide Temporary Emergency Power Mission support to FEMA and the impacted State, Territory, Tribe, and Local Government; recommend power resource allocations; forecast future requirements; and provide temporary emergency power reports. Conduct fiscal closeout of all FEMA MAs.

Key Tasks:

- Coordinate and integrate Federal resources between affected USACE Divisions, Districts, and/or Regions; ICW FEMA, Develop sourcing solutions and champion re-allocation recommendations.
- Conduct future operational planning to enhance and focus mission execution and determine emerging requirements affecting resource allocation and asset management.
- Provide timely and accurate reporting (through the supported districts/divisions) of progress of power missions and key requirements.
- Assist and make recommendations to the STTL regarding prioritization of facility temporary emergency power requirements. Assist in integrating State capabilities to augment temporary emergency power mission.
- When FEMA directs/requests, mobilize temporary emergency power assets to preposition or position a specific temp power capability to a directed STT.



USACE TEMPORARY EMERGENCY POWER CAPABILITIES

- **Assess emergency power requirements needed at a facility.**
- **Install, operate, fuel and maintain emergency power generation equipment.**
- Assess conditions and capabilities of existing emergency generation equipment
- Troubleshoot, repair, and operate emergency generation/distribution equipment.
- Perform safety inspections of electrical distribution systems and equipment.
- Assess damaged electrical distribution systems and equipment.
- Perform all hazards temporary emergency power planning.

WHERE WE ARE — U.S. ARMY CORPS OF ENGINEERS



Temporary Emergency Power Planning and Response Teams

- SAS – Savannah, GA
- LRP – Pittsburgh, PA
- MVM – Memphis, TN
- SPA - Albuquerque, NM
- SWT – Tulsa, Ok
- NWW – Walla Walla, WA
- POH – Honolulu, HI





ESF#3 MISSION PROPONENT: LRD TEMPORARY EMERGENCY POWER



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Program Components

Proponent Division RCO Chief: Harry Huff
TEP PMs: Dominic Basile and Nancy Church
ESF #3 Permanent Cadre Advisor: Janelle Mavis

7 Planning & Response Teams (PRTs)

1. Pittsburgh, PA (LRP)
2. Albuquerque, NM (SPA)
3. Honolulu, HI (POH)
4. Savannah, GA (SAS)
5. Tulsa, OK (SWT)
6. Walla Walla, WA (NWW)
7. Memphis, TN (MVM)

Cadre of Experts

Subject Matter Experts (SME): 12
• 7 deployable, 5 reach back

Tools

Procedural Guide
2024 Temporary Emergency Power SOP (Draft)
120 Ruggedized Tablets

2024 Preparedness & Modernization

PRT Training

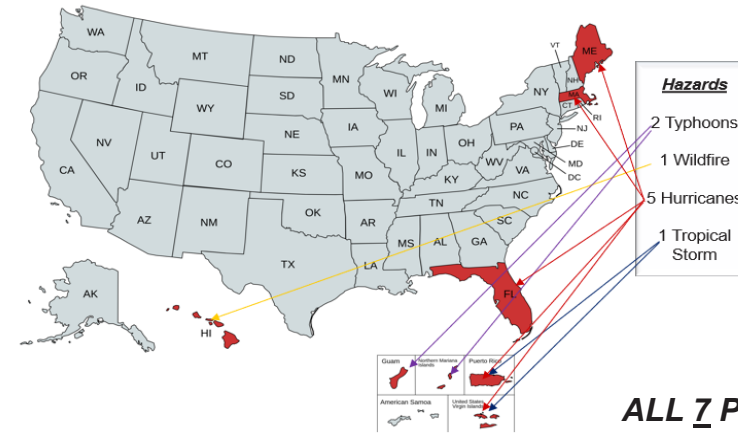
- 29 April-03 May Targeted Training
- Key Team Members, Mobile, AL
- 28 May-07 June Regional Power Mission Exercise
- LRP, NWW and MVM
- Federal, State and Enterprise Partners
- Localized Internal Temp Power Training
- Standardized curriculum providing execution flexibility. (LRP and POH complete)

Program Initiatives

- **ACI Requirements Review**
- **LRD Scenario Based Workshop**
- **Procured 120 Ruggedized Tablets for PRTs/249th/249th (400K Late 2023)**
- **Escalation Ladder**
- **Standardized Reporting and EEI's**
- **uCOP Tool Continued Development**
- **Strike Team Concept (Targeting USVI)**
- **Established ROE**
- **Training website development**

2023 Program Review

307 USACE PAX Total MA Executed: **\$73,213,881**



9 Events (8 States/Territories)

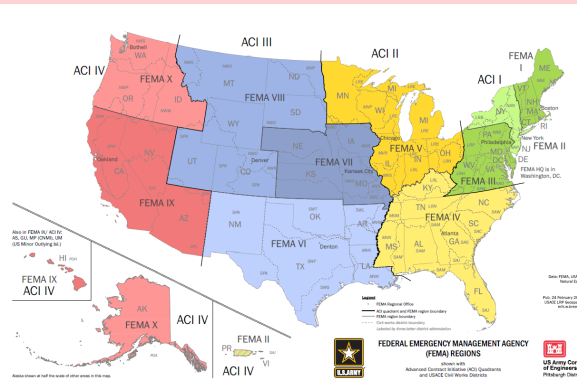
15 Mission Assignments
***3 - with Installs**

- 2 Direct Federal Assistance
- 13 Federal Operations Support

ALL 7 PRT's Deployed in 2023

FY24: Received \$1.5M to support training efforts and initiatives

Temporary Emergency Power ACI Contracts



- Awarded 4 ACI TEP contracts for FEMA Regions I – X and ALL OCONUS areas (PR, USVI, AS, HI, GU, AK, CNMI)
 - REG I-III
 - REG IV-V
 - REG VI-VIII
 - REG IX-X and OCONUS
- 1 Year w/ 4 options years
 - 2024 Year 1
 - Re-solicitation 2028
- Requirements Contracts


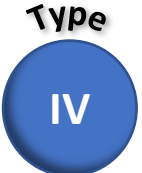


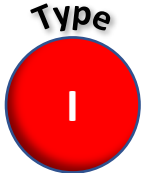




















- Quadrant I:** W911WN24D3000, WSP USA Solutions Inc., Washington, DC
- Quadrant II:** W911WN24D3001, WSP USA Solutions Inc., Washington, DC
- Quadrant III:** W911WN24D3002, WSP USA Solutions Inc., Washington, DC
- Quadrant IV:** W911WN24D3003, WSP USA Solutions Inc., Washington, DC

Each contract was awarded at a \$75M capacity; however, has the flexibility for unlimited capacity if costs exceed the \$75M threshold.

2024 Program and Contract Changes

- Reduction in Team Type install capability to align with historical mission execution
- Contractor Master Electrician integrated with each 249th assessment team to provide additional expertise and enable on-site discrepancy resolution
- Incorporate use of ACI AIS system for assessment input vice ENGLink to provide immediate visibility to GSB personnel of specific facility requirements.
- Reduce USACE interference by minimizing the number of work orders directing the Contractors to perform which enhances workflow and greater ownership from early on in execution all the way through Return to Storage.
- Ability to perform Transformer Testing which increases the Contractors ability to support medium-voltage installations and micro-grids if requested by FEMA.
- Expanded resourcing range for personnel and equipment that provides flexibility during critical build-up of capabilities to meet mission demands.

CONFIGURATION PACKAGES

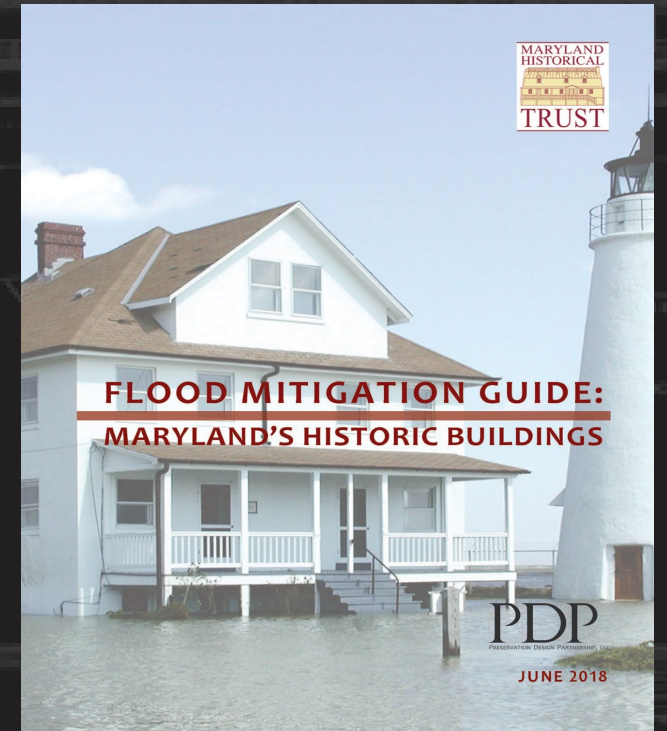
				
 <p>Minor Event National Security</p>	 <p>CAT I or Strong Tropical Storm</p>	 <p>CAT II or Less</p>	 <p>CAT III or Less Moderate Earthquake</p>	 <p>CAT IV/V Major Earthquake Catastrophic Event</p>
 <p>14 Personnel 12 Hour Operations</p>	 <p>22 USACE - 36 ACI 12 Hour Operations</p>	 <p>28 USACE - 74 ACI 24/7 Operations</p>	 <p>34 USACE - 111 ACI 24/7 Operations</p>	 <p>42 USACE - 175 ACI 24/7 Operations</p>
 <p>Technical Assistance Only</p>	 <p>Up to 10 Assessments Per Day</p>	 <p>Up to 15 Assessments Per Day</p>	 <p>Up to 20 Assessments Per Day</p>	 <p>Up to 30 Assessments Per Day</p>
 <p>Few Assessments No Installs</p>	 <p>Up to 2 Installs Per Day</p>	 <p>Up to 5 Installs / Day</p>	 <p>Up to 10 Installs / Day</p>	 <p>Up to 20 Installs / Day</p>

These are the different types of configuration packages that can be requested to deploy depending on the severity of the disaster. While an initial deployment will specifically request one of these packages, personnel and equipment changes are able to be made to size up or down based on actual need instead of automatically jumping to the next larger or smaller package available. These incremental plus ups or draw downs are the preferred way to right size and ensure we can meet the needs of the impacted area while simultaneously mitigating overextending our footprint and resource consumption.

SILVER JACKETS

Katherine Rowden
National Silver Jackets Program Manager
US Army Corps of Engineers

12 SEP 2024
SAME



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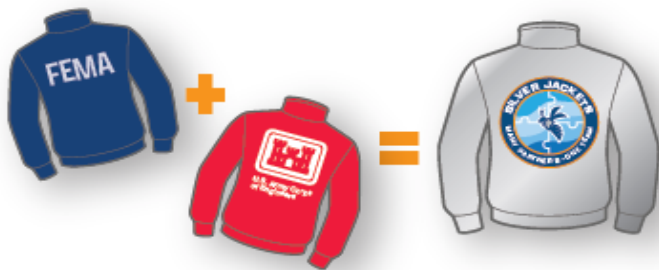
SILVER JACKETS

MANY PARTNERS • ONE TEAM

THE NAME

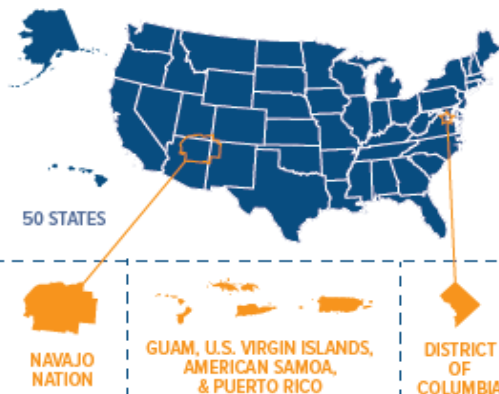
WHY THE NAME “SILVER JACKETS”?

During disaster response, agencies are often identified by the color jacket or shirt they wear. For example, FEMA typically wears blue and USACE wears red. The name “Silver Jackets” was coined to represent many agencies working together to achieve better outcomes by leveraging opportunities and expertise.



SILVER JACKETS NOW

TODAY the Silver Jackets Program supports 50 states, four territories, the District of Columbia, and the Navajo Nation. The first pilot teams were formed in Ohio in 2005 and Indiana in 2006, and the Silver Jackets reach has grown from there.



HOW IT WORKS

NO SINGLE AGENCY HAS ALL THE ANSWERS, BUT EACH HAS A PIECE OF THE PUZZLE.

Leveraging the expertise, programs, and perspectives of multiple partners results in more comprehensive, collaborative, and sustainable solutions to flooding, drought, and other natural hazards.



THE TEAMS

SILVER JACKETS facilitates interagency cooperation and collaboration among partners, which is key to creating the innovative and effective solutions needed to make communities more resilient to flooding, drought, and other natural hazards. Often this is done by supporting stand-alone Silver Jackets Teams, but also accomplishes this where Silver Jackets are supporting other groups, such as State Hazard Mitigation Teams. Silver Jackets Teams are led by a state, tribe, or territory who is responsible for setting the team's priorities. Each member agency brings their own programs, resources, and expertise to bear on those priorities.

A SAMPLE OF FEDERAL PARTNERS



USACE ROLE

COORDINATION SUPPORT to every interagency Silver Jackets Team is provided by USACE staff, alongside the state, tribe, or territory team lead. This support to Silver Jackets is funded out of the USACE National Flood Risk Management Program (NFRMP).

IF YOU WANT TO LEARN MORE ABOUT SILVER JACKETS AND HOW TO GET INVOLVED, CONTACT:

Katherine Rowden
National Silver Jackets Program Manager
Katherine.L.Rowden@usace.army.mil
509-218-3483
iwr.silverjackets@usace.army.mil



SCAN OR CLICK FOR MORE SILVER JACKETS INFORMATION

USACE CIVIL WORKS TECHNICAL ASSISTANCE OPPORTUNITIES

Kaely Megaro, FPMS Deputy Program Manager & PAS support detailee

IWR-HQUSACE

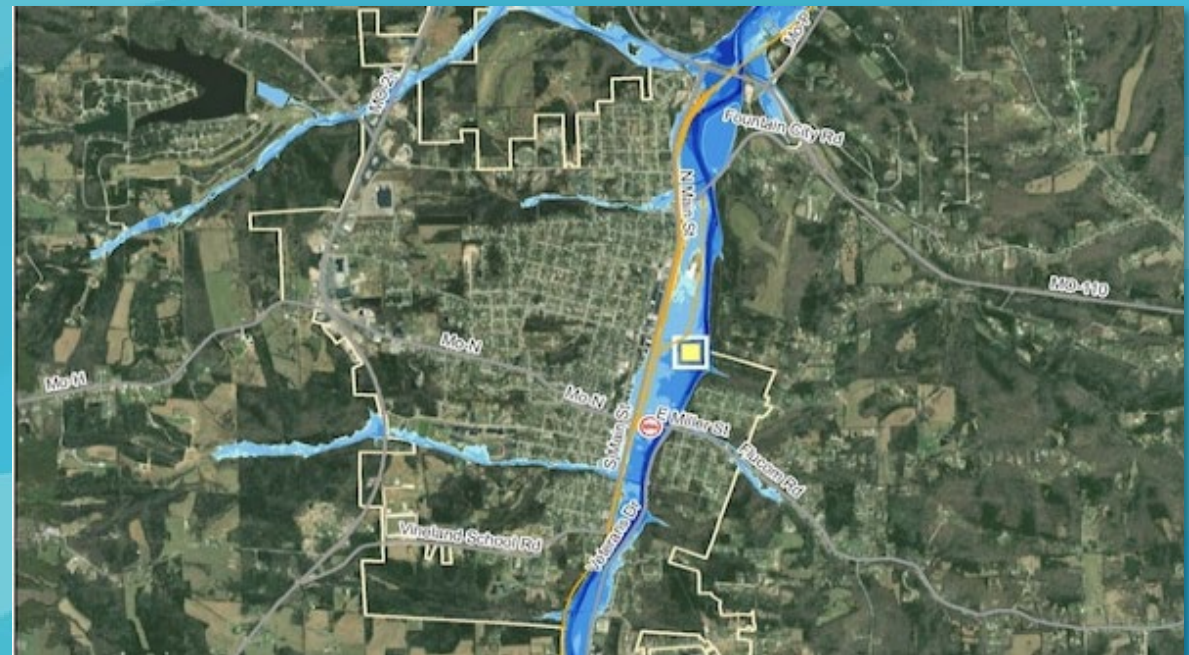
<https://www.usace.army.mil/Missions/Civil-Works/Technical-Assistance/FPMS/>



U.S. ARMY



US Army Corps
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USACE TECHNICAL ASSISTANCE

Each USACE Technical Assistance program has its own specialization and requirements, but they are all geared towards assisting states, U.S. territories, Native American Tribes (Tribal Nations), and communities to identify planning-level solutions to address water resource problems. Technical assistance can range from modeling and analysis to planning and initial designs”. However, detailed design or construction of water resource projects cannot be completed under these programs.

<https://www.usace.army.mil/Missions/Civil-Works/Technical-Assistance/>



PLANNING ASSISTANCE TO STATES

Authority – Section 22, WRDA 1974, as amended

Purpose – Make USACE expertise available for efforts pertaining to planning for water and related resources.

Planning Assistance to States (PAS). Section 22 of WRDA 1974, as amended, (42 U.S.C. 1962d-16) authorizes two types of studies: comprehensive plans and technical assistance. USACE is authorized to cooperate with **any state, a group of two or more states, or non-Federal interest working with a state in the preparation of comprehensive plans for the development, utilization, and conservation of the water and related resources of drainage basins, watersheds, or ecosystems, including plans to comprehensively address water resources challenges** located within or across the boundaries of such state(s) and to submit to Congress reports and recommendations with respect to appropriate Federal participation in carrying out such plans.

At the request of a governmental agency or non-Federal interest, the Secretary may provide technical assistance to such governmental agency or non-Federal interest in managing water resources.

Section 156, WRDA 2020. In carrying out section 22 of WRDA 1974 (42 U.S.C. 1962d-16), the Secretary shall provide **equal priority for all mission areas of the Corps of Engineers, including water supply and water conservation.**

Example PAS Projects

Floodplain delineation

Flood hazard evaluation

Comprehensive floodplain management

Storm water management

Flood risk reduction

Stream and Wetland Assessments

Coastal assessments

Watershed planning

Water Supply

Water Quality

Environmental Restoration

Fish and Wildlife

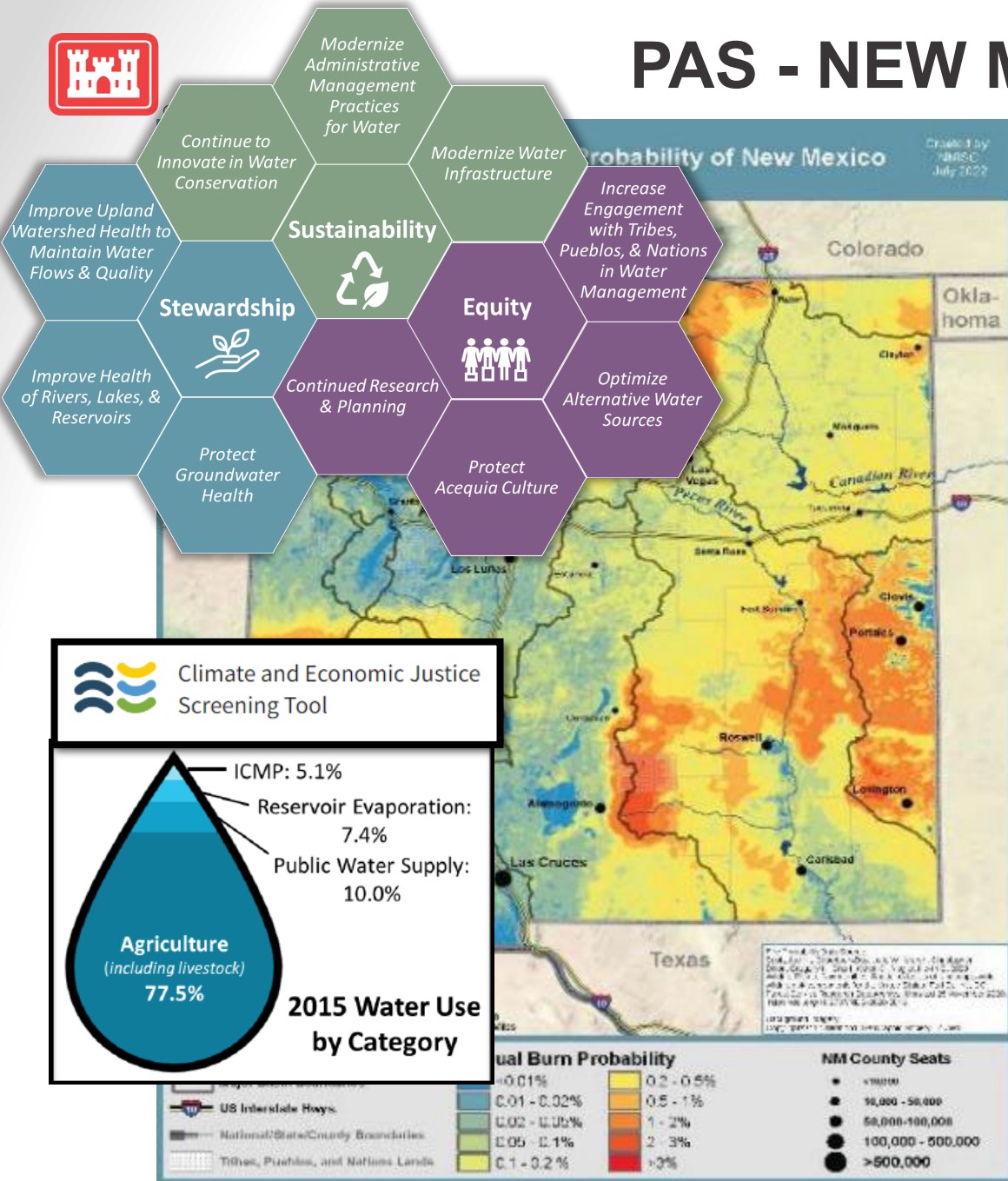


WHO CAN PARTICIPATE?

- A state;
- Group of states;
- Local government;
- Non-federal public bodies;
- Regional coalition of governmental entities;
- Federally-recognized Indian Tribes; *
- Specified territories; *
 - Puerto Rico, Virgin Islands, Guam, American Samoa, Northern Mariana Islands
- Not for profits
 - The not for profit entity must provide a letter from the affected local government consenting to the provision of such Section 22 assistance to the nonprofit entity

** Section 8119 WRDA 2022 Fee Waiver for Economically Disadvantaged Communities as defined under Section 160 of WRDA2020*

PAS - NEW MEXICO 50-YEAR WATER PLAN



Agreement Type: Comprehensive

Partners: NM Office of the State Engineer, Interstate Stream Commission (ISC)

Project Description: The NM 50-Year Water Plan (50YWP) builds off of the climate change science presented in the “NM Leap Ahead Report”. The 50YWP identifies water threats from climate change, identifies New Mexico communities’ water resilience to a changing climate, and provides a compilation of actionable recommendations for the state and local communities to pursue under Federal and State programs or local efforts. The 50YWP is meant to be a catalyst for future water planning in NM.

Objectives:

- ▶ Climate Change State of the Science for NM
- ▶ Potential impacts to water resources in the state by region
- ▶ Outreach for community assessment of resilience
- ▶ Potential projects, data gaps for future efforts

Total project costs: \$300K

Benefits to Partner: USACE will take the actionable recommendations from the 50YWP and cross reference with the CEJST to help the state better plan outreach across the state by region and need. The ISC also plans to base all future water planning reports (5 year cycles) on the findings and recommendations of the NM 50YWP.

Intended Outcome: The NM50YWP, Outreach Plan based on Equity Principals to inform future water plan actions

Albuquerque District



FLOODPLAIN MANAGEMENT SERVICES

Authorized USACE to:

- **Compile and disseminate information on floods and flood damages**, including identification of areas subject to inundation by floods of various magnitudes and frequencies, identification of areas subject to floods due to accumulated snags and other debris, and general criteria for guidance of Federal and non-Federal interests and agencies in the use of flood plain areas; and to
- **Provide advice to other Federal agencies and local interests for their use in planning to ameliorate the flood hazard**, to avoid repetitive flooding impacts, to anticipate, prepare, and adapt to changing climatic conditions and extreme weather events, and to withstand, respond to, and recover rapidly from disruption due to the flood hazards.

Types of Assistance:

General Technical Services

- Obtain, develop, and interpret flood and floodplain data
- Outreach to public entities upon request

Guides, Pamphlets, Supporting Studies

- Disseminate flood and floodplain data to foster public understanding of hazards and options

General Planning Guidance

- Undertake “special studies” on all aspects of floodplain management planning
- Includes physical, socioeconomic, and environmental conditions of floodplain

National Flood Insurance Program Support (on reimbursable basis)



Flood risk management (FRM) is one of the U.S. Army Corps of Engineers' (USACE) primary mission areas, and encompasses the development and communication of approaches, technologies, and solutions which reduce the risk of riverine flooding and coastal storm impacts. The Floodplain Management Services (FPMS) program serves as a tool to help achieve the USACE FRM mission by addressing the needs of people who live and work in floodplains, and the actions they can take to reduce property damage and prevent the loss of life caused by flooding.

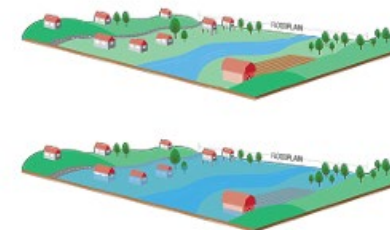
OVERVIEW

Through the FPMS program, USACE provides information on flood hazards to local interests, state agencies, tribal nations, and other federal agencies to guide development of the floodplains and flood-prone areas of the United States.

The program's objective is to foster public understanding of the options for dealing with flood hazards and promote prudent use and management of the nation's floodplains and flood-prone areas. The FPMS program provides a full range of technical services and planning guidance that is needed to support effective floodplain and flood risk management.

WHAT IS A FLOODPLAIN?

Per Executive Order 11988, a floodplain is “the lowland and relatively flat area adjoining inland and coastal waters, including flood-prone areas of offshore islands.” It also includes, at a minimum, that area subject to a 1-percent chance of flooding in any given year (Executive Order 11988).



WHAT IS FLOODPLAIN MANAGEMENT?

Floodplain management is a community-based effort to prevent or reduce the risk of flooding, resulting in a more resilient community. (FEMA.gov)

FPMS SERVICES AVAILABLE

Under the FPMS program, USACE is authorized to compile and disseminate information on floods and flood damages, including identifying areas subject to inundation by floods of various magnitudes and frequencies, providing general criteria for guidance for use of floodplain areas to federal and non-federal interests and agencies, and advising other federal agencies and local interests on using the criteria when planning flood hazard mitigation.

EXAMPLE FPMS ACTIVITIES & PRODUCTS

<ul style="list-style-type: none"> ■ Developing studies or guidance ■ Floodplain & flood inundation mapping ■ Flood hazard evaluation ■ Hurricane evacuation preparation/planning ■ Flood warning/preparedness ■ Flood risk reduction education & outreach ■ Urbanization impacts assessment/planning ■ Stormwater management assessment/planning 	<ul style="list-style-type: none"> ■ Preliminary assessment of nonstructural measures and/or natural and nature-based solutions ■ Inventory of flood-prone structure ■ Workshops ■ Tabletop exercises ■ Emergency Action Planning ■ Floodplain Management Plan Assistance ■ Assessment tools & processes
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WHO CAN RECEIVE ASSISTANCE?

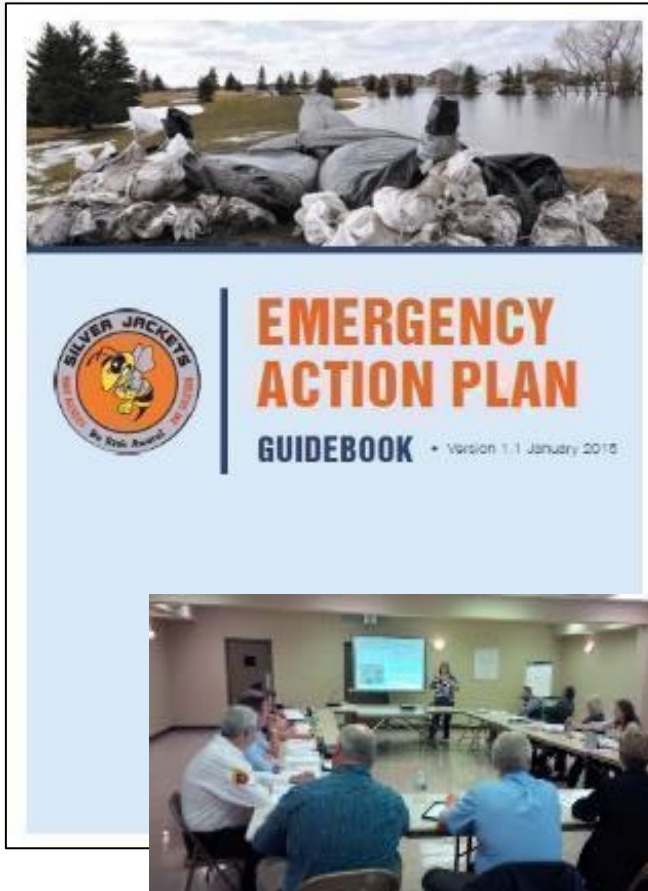
- At full federal cost
 - State governments;
 - Regional governments;
 - Local governments;
 - Non-federal public agencies;
 - Federally-recognized Indian Tribes;
 - Specified territories;
 - Puerto Rico, Virgin Islands, Guam, American Samoa, Northern Mariana Islands
- On a 100% cost-reimbursable basis*
 - Other federal agencies
 - Nongovernmental entities, including non-profits (501c)
 - “Private persons”



* Additional details on cost-reimbursable requirements on a following slide



FPMS INTERAGENCY: EMERGENCY ACTION PLAN GUIDEBOOK AND WORKSHOPS



- Step-by-step instructions
- Forms or samples
 - *After Action Review Input*
 - *Contacts –Personnel List*
 - *Critical Facilities*
 - *Hazardous Materials*
 - *Record of Plan Distribution*
 - *Press Release Example*
 - *Organization Chart*
- Links to resources
- Local community workshops to assist with EAP development

Partners

- MN and ND
Emergency Mgrs
- FEMA
- NOAA NWS
- USGS
- USACE

Guidebook:

https://www.mvp.usace.army.mil/Portals/57/docs/Operations%20Center/EAP_Combined_4_20Nov19w_cover.pdf



FLOOD RISK MANAGEMENT PARTNERING APPROACHES



FLOOD RISK MANAGEMENT PARTNERING APPROACHES

There are many ways to partner with the U.S. Army Corps of Engineers (USACE) for managing flood risks. This table briefly describes the different authorities and cost share opportunities to help you find the option that best fits your needs.¹

PURPOSE	TYPES OF STUDIES AND PROJECTS	AUTHORITY	FEASIBILITY PHASE COST SHARE FEDERAL/ NON-FEDERAL	IMPLEMENTATION PHASE COST SHARE FEDERAL/ NON-FEDERAL	FEDERAL PER PROJECT LIMIT
CONTINUING AUTHORITIES PROGRAM					
Small Flood Risk Management Projects	Projects can include levees, floodwalls, impoundments, pumping stations, and channel modifications as well as non-structural measures such as flood proofing, relocation and flood warning systems.	Section 205, 1948 Flood Control Act, as amended	100% / 0% for initial \$100,000; 50% / 50% remaining cost	65% / 35% ^{2,3}	\$10 Million
Snagging and Clearing for Flood Damage Reduction	Projects related to channel clearing and excavation, with limited embankment construction by the use of materials from the clearing operation to reduce nuisance flood damages caused by debris and minor shoaling of rivers.	Section 208, 1954 Flood Control Act, as amended	100% / 0% for initial \$100,000; 50% / 50% remaining cost	65% / 35% ²	\$500,000
Emergency Stream Bank and Shoreline Protection	Construction of bank protection for public infrastructure, such as highways, bridge approaches, municipal water supply systems, sewage disposal plants, churches, hospitals, schools, non-profit public services and known cultural sites endangered by flood-caused bank and shoreline erosion.	Section 14, 1946 Flood Control Act, as amended	100% / 0% for initial \$100,000; 50% / 50% remaining cost	65% / 35% ²	\$10 Million
Hurricane and Storm Damage Reduction (Beach Erosion)	Projects related with the protection of public infrastructure (e.g. utilities and roadways) on small beaches against erosion and damages caused by natural storm driven waves and currents.	Section 103, 1962 River and Harbor Act, as amended	100% / 0% for initial \$100,000; 50% / 50% remaining cost	65% / 35%	\$10 Million
Beneficial Use of Dredge Material	Creation of aquatic and wetland habitats in conjunction with construction or maintenance dredging of Federal Navigation Projects.	Section 204, Water Resources Development act of 1992, as amended	100% / 0%	65% / 35% ^{2,3}	\$10 Million
Aquatic Ecosystem Restoration	Projects can include restoring floodplain, channel modification, or modification of structures to restore conditions conducive to native aquatic species.	Section 206, Water Resources Development act of 1996, as amended	100% / 0% for initial \$100,000; 50% / 50% remaining cost	65% / 35%	\$10 Million
WATER RESOURCES DEVELOPMENT ACT (WRDA) 2020 AUTHORITIES TO ASSIST DISADVANTAGED COMMUNITIES			COST-SHARE AND FUNDING		
Federal Interest Determination (FID) Study	An analysis to be undertaken, at the request of the non-Federal interest, to benefit an economically disadvantaged community and determine the likelihood of federal interest prior to conducting a feasibility study.	Section 117, Water Resources Development Act of 2020 amends Section 905, Water Resources Development Act of 1986	100% federal (not to exceed \$200,000)		
Section 118b Pilot Program	Projects would include studies, in both rural and economically disadvantaged communities, that investigate the feasibility of FRM inland as well as hurricane and storm damage risk reduction projects.	Section 118, Water Resources Development Act of 2020	100% federal		

¹ USACE ability to participate in these different partnering programs is dependent on the availability of funds appropriated in any given year.

² For structural flood damage reduction purpose, non-Federal share is 35% up to 50% (based on cost of land, easements, rights of way, reallocations, disposal sites). 5% of the non-federal share must be in cash.

³ For non-structural flood damage reduction purposes, non-Federal Share limited to 35%, with no 5% cash requirement



PURPOSE	TYPES OF PROJECTS	AUTHORITY	COST-SHARE AND FUNDING
PLANNING ASSISTANCE TO STATES			
Assistance to States, local governments, Native American Tribes Territories, non-profit entities, and other non-Federal entities in preparation of comprehensive plans for water and related land resources or technical services for hydrologic, economic and environmental data and analysis.	Studies can include: water supply/demands, water quality, environmental restoration, wetland evaluation, dam and levee safety/failure, flood risk management, floodplain management, and other water related issues or technical analysis. These studies are initiated at the request of communities, accomplished on a smaller scale than larger feasibility studies; utilize existing data; and align with other established community plans.	Section 22, Water Resources Development Act of 1974, as amended	50% / 50% There is a cost-share waiver for Tribes and Territories per Section 1156, Water Resources Development Act of 1986, as amended. Non-Federal cost share for comprehensive plans can include 100% work-in-kind. No work-in-kind for technical services.
FLOODPLAIN MANAGEMENT SERVICES			
Provide full range of technical services and planning guidance needed to support effective floodplain management.	Studies can include: floodplain delineation/flood hazard evaluation studies, dam or levee break analysis, flood warning/preparedness, regulatory floodway, comprehensive floodplain management, urbanization impact, hydrologic/hydraulic and sediment transport modeling. These studies are initiated at the request of communities, accomplished on a smaller scale than larger feasibility studies; utilize existing data; and align with other established community plans.	Section 206, 1960 Flood Control Act (PL 86-645), as amended	Services are provided at no cost to state, regional and local governments and eligible Native American Tribes. Services for federal agencies and private persons are on a cost-recovery or fee basis.
REHABILITATION PROGRAM (PL-84-99)			
Provides for emergency activities in support of State and Local governments prior to, during, and after a flood event. USACE can provide both emergency technical and direct assistance in response to flood and coastal storms, such as hurricanes and nor'easters. In addition, the Corps can assist if there is a flood threat from damage caused by earthquakes to flood risk management projects.	Services include preparedness, response, and recovery assistance, such as training, technical assistance with development of response and hazard mitigation plans, and inspection of non-federal flood risk management projects as well as immediate response and recovery assistance from flooding, including issuance of sandbags and/or pumps, construction of emergency measures, and initial repair and restoration of flood risk management projects.	Public Law 84-99 (33 USC 701n)	Emergency readiness and response is 100% federally funded, with some exceptions. Post-flood repair activities are 100% federally funded for engineering and design. If eligible, rehabilitation of federal flood and coastal storm risk management projects is 100% federally funded. If eligible, rehabilitation of nonfederal flood risk management projects is cost shared at 80% federal and 20% non-federal. Assistance must be requested by the State and it must be supplemental to State and Local actions including resources and capabilities, as well as National Guard assets.
ALTERATION OF USACE CIVIL WORKS PROJECTS (SECTION 408)			
Provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project.	Projects could relate to alterations that could include improvements to the projects; relocation of part of the project; or installing utilities or other non-project features.	Section 408. 33 U.S. Code	Cost of the alteration is the responsibility of the requester, and the review by the Corps is federally funded. USACE can accept funds received from non-federal public or private entities to expedite activities related to processing the Section 408 request.
TRIBAL PARTNERSHIP PROGRAM			
Collaboration with Tribes to study the feasibility of water resource projects that will substantially benefit their constituents.	Studies can include flood damage reduction, environmental restoration and protection, and preservation of cultural and natural resources.	Section 203, Water Resources Development Act of 2000, as amended	50% / 50% for feasibility costs exceeding the Section 1156 Waiver amount of \$530,000. ⁴
FEASIBILITY INVESTIGATIONS			
Before the U.S. Army Corps of Engineers can participate in designing and constructing a project, planning studies must be conducted to determine if the project is feasible.	Flood risk management feasibility studies to determine federal interest and support Congressional authorization for proceeding to project construction. Studies may also be multi-purpose, covering additional areas such as ecosystem restoration, emergency response, or recreation.	Each study needs to be specifically authorized and funded by Congress.	Study cost shared 50% / 50% - Design and construction cost-share depend on mission area. Work-in-kind can be part of the cost-share.
WATERSHED STUDIES			
Watershed scale planning focusing on multiple objectives and tradeoffs, accounting for uncertainty, stakeholder collaboration and adaptive management. Results in a framework of recommended strategies and actions that can be implemented at a watershed-scale or smaller scales by the Corps or other partners.	Studies that result in Watershed Plans which examine the changing water resource needs relating to: ecosystem protection & restoration, flood damage reduction, navigation & ports, watershed protection, water supply, and drought preparedness.	Section 729, Water Resources Development Act of 1986, as amended	75% federal / 25% non-federal Work-in-kind can be part of the cost-share.

⁴ There is an annual inflation adjustment and the dollar amount will change at the beginning of each federal fiscal year.

QUESTIONS??



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INFRASTRUCTURE SYSTEMS – RECOVERY SUPPORT FUNCTION (IS-RSF) MISSION OVERVIEW

Dave Apple, P.E.

USACE Recovery LNO to FEMA

U.S. Army Corps of Engineers - Headquarters

September 12, 2024



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INFRASTRUCTURE SYSTEMS RSF

MISSION OVERVIEW AND ENGAGEMENTS




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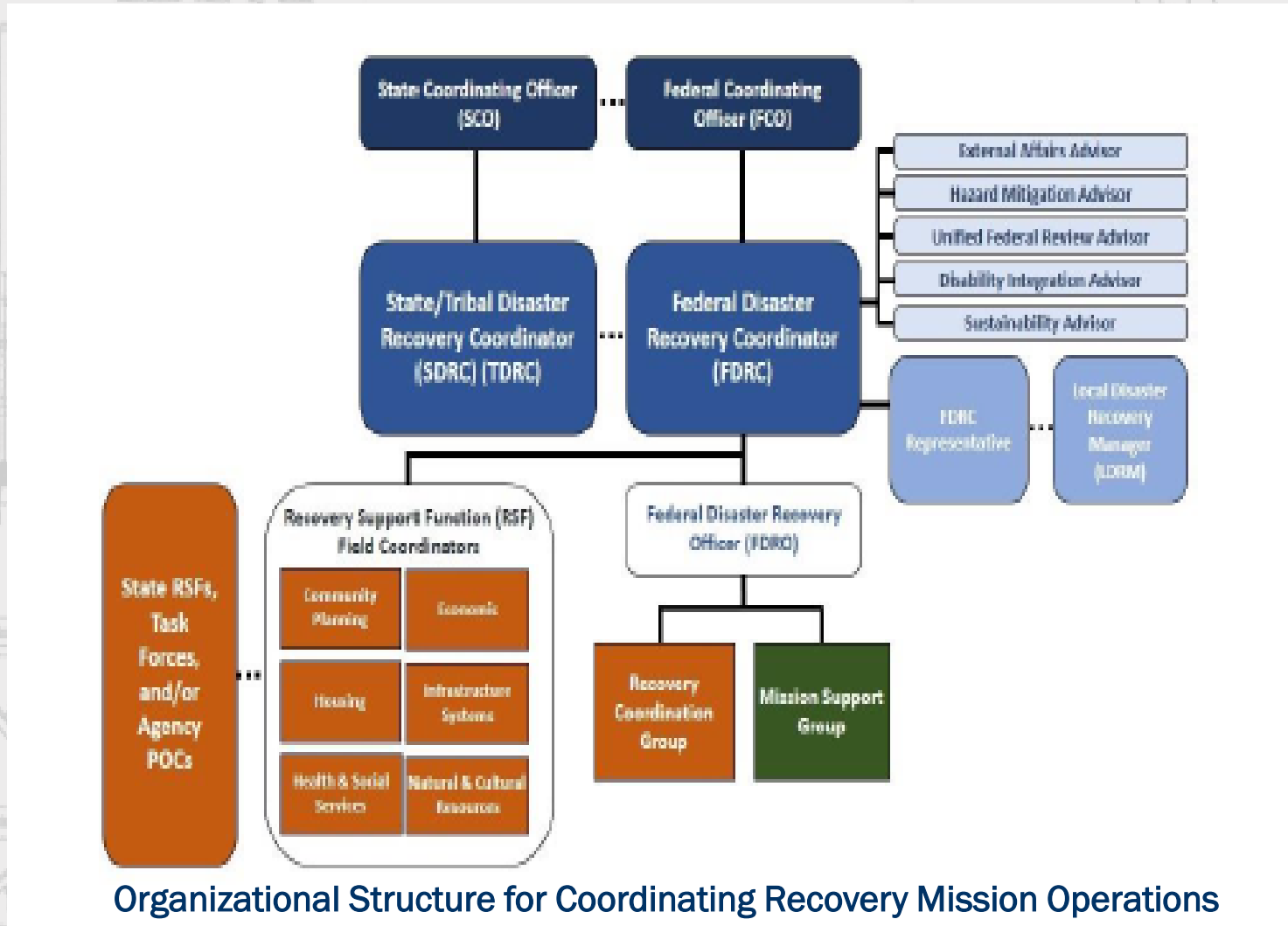
RECOVERY MISSION – MISSION ORGANIZATIONAL STRUCTURE

SIX RECOVERY SUPPORT FUNCTIONS (RSFS)

- 
Community Assistance (FEMA)
- 
Economic (Dept. of Commerce/EDA)
- 
Health, Education and Human Services
- 
Housing (Dept. of Housing & Urban Development)
- 
Infrastructure Systems (US Army Corps of Engineers)
- 
Natural and Cultural Resources (Dept of Interior)



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Organizational Structure for Coordinating Recovery Mission Operations

The objective of the RSFs is to facilitate the identification, coordination and delivery of federal assistance to local, state, tribal and territorial governments and the private and nonprofit sectors, accelerating the process of recovery, redevelopment and revitalization.

KEY POST-DISASTER ACTIVITIES - IS-RSF MISSION

Recovery Needs Assessment

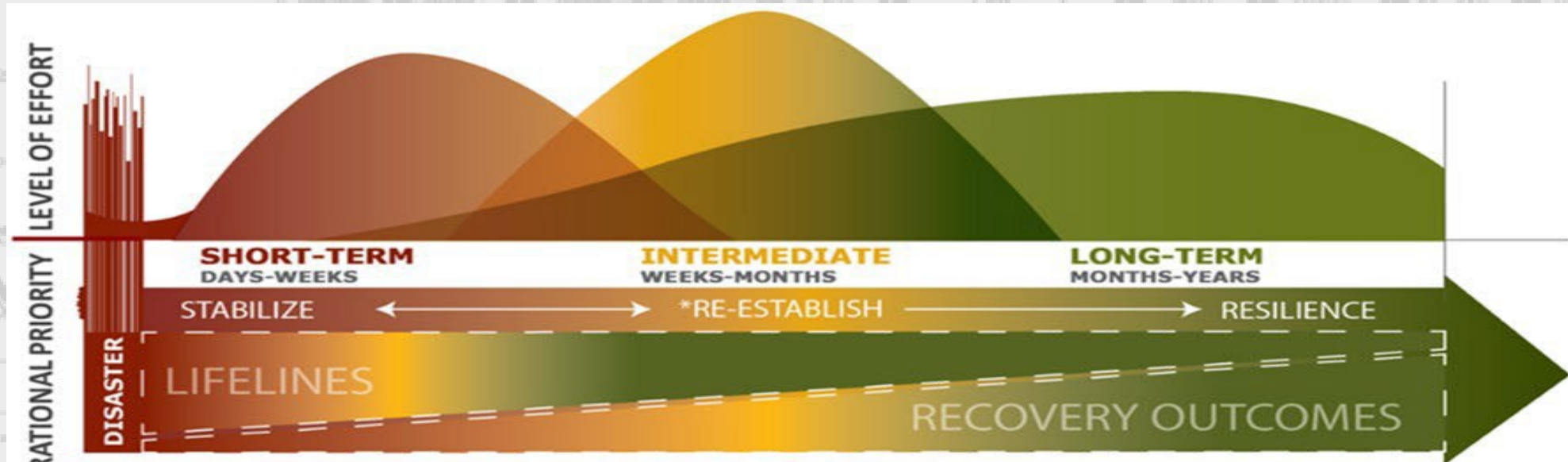
Determine infrastructure systems recovery priorities by first evaluating the damages, problems, and needs, then assess possible recovery options and practical solutions.

Recovery Strategy Development

Develop viable recovery options with achievable results that support infrastructure systems restoration while strengthening systems resiliency to withstand and rapidly recover from future disaster events.

Long-term Recovery Assistance

Supports long-term recovery through recovery planning and implementation strategies that address financial and technical assistance gaps, improves and strengthens infrastructure systems resiliency, and considers/respects cultural and community concerns.







* Reporting on Lifelines will transition to reporting on Recovery Outcomes during the re-establishment period. Lifeline reporting ends but Recovery ensures Lifelines are fortified for future events and for resilience efforts.



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INFRASTRUCTURE SYSTEMS – RECOVERY SUPPORT FUNCTION (IS-RSF)

CURRENT IS-RSF RECOVERY MISSION ASSIGNMENTS – 2024



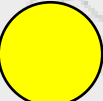
Mission	Event Type	Event Symbol	Start Date	End Date	Major Issues
DR 4672 - Alaska	Typhoon		4-4-23	Current	Erosion, DW, Energy Resiliency, Solid Waste Management
DR 4720 - Vermont	Flooding		8-8-23	Current	Grid Resiliency, DW/WW Repairs
DR 4277 - Hawaii	Wildfire		8-20-23	Current	Sediment/debris Management, Infrastructure Repair (Drinking Water/Wastewater, Roadway)
DR 4728 - Illinois	Severe Storms & Flooding		3-11-24	Current	Chronic Flooding, Infrastructure Impacts

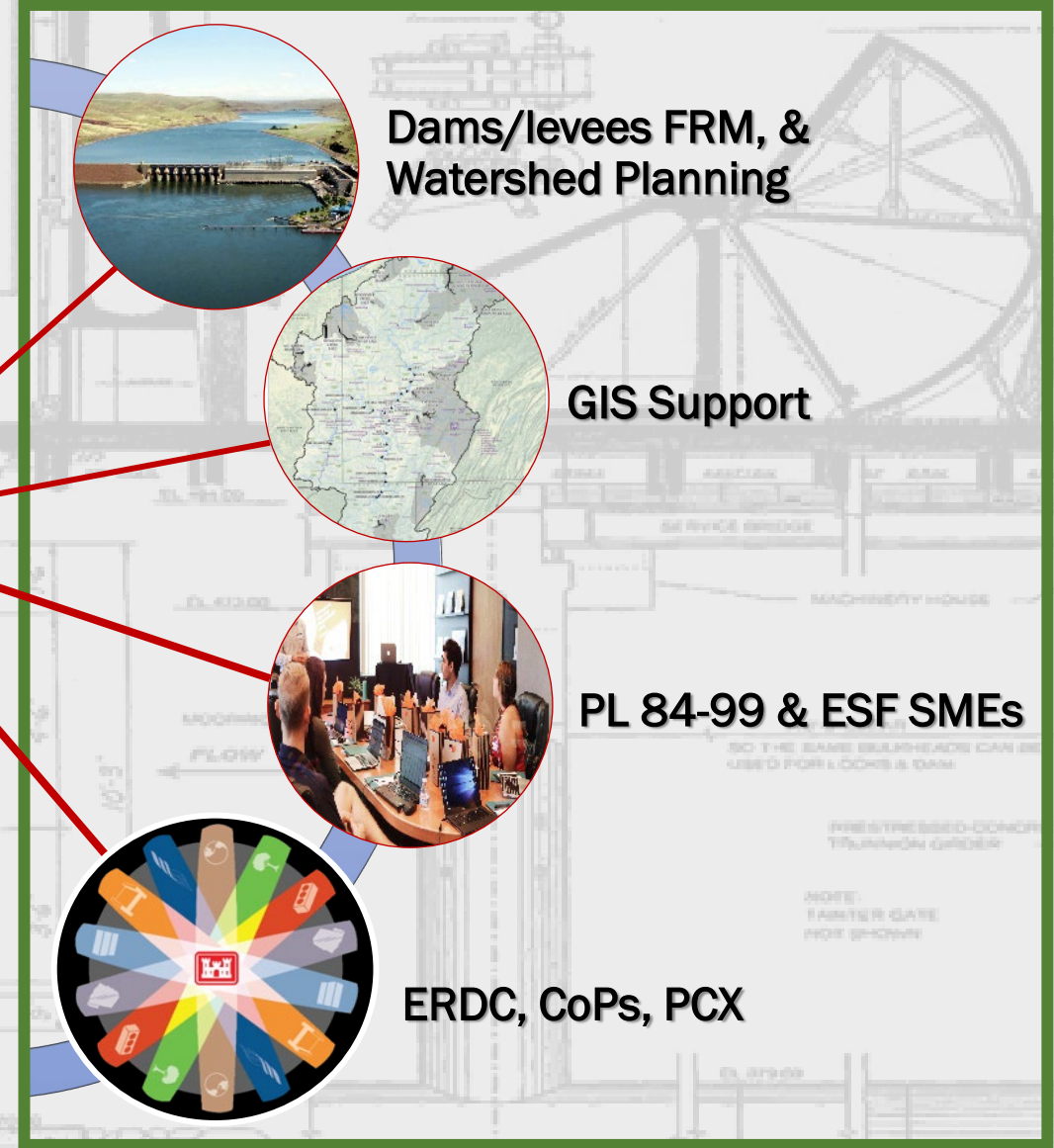
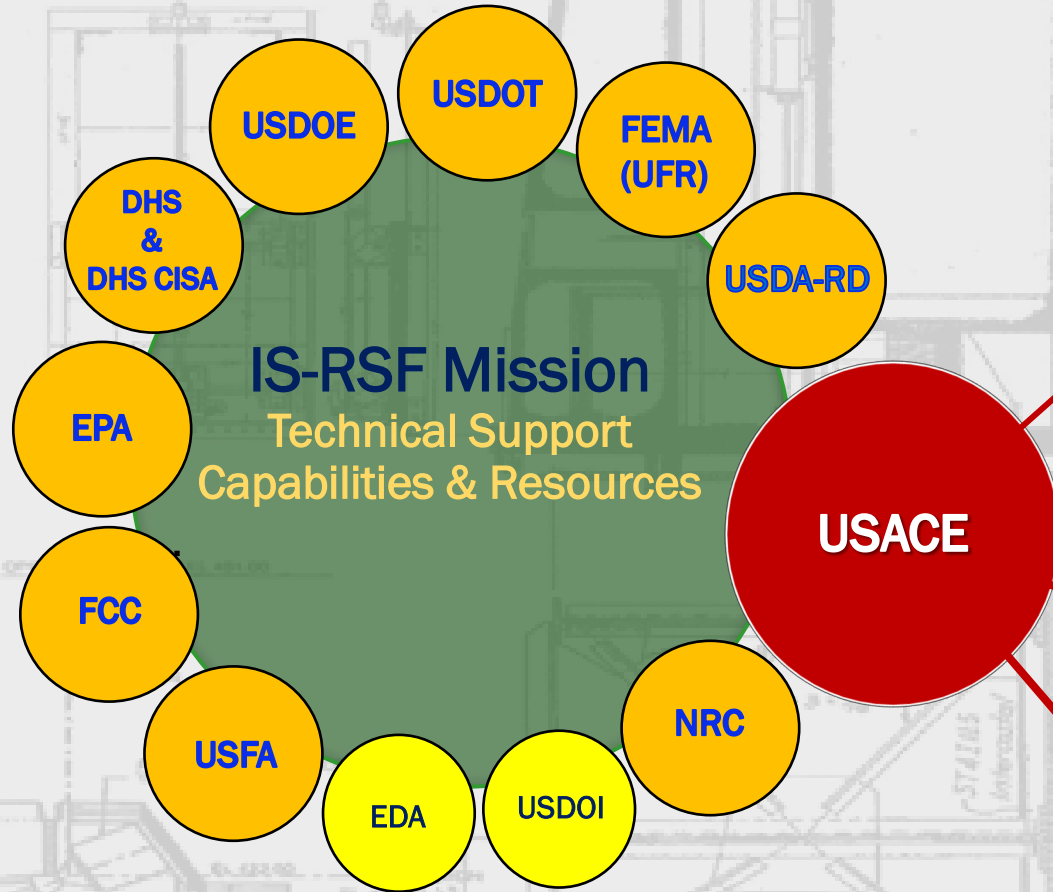


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IS-RSF STRUCTURE – COORDINATING AGENCY / PARTNER & SUPPORT AGENCIES

USACE REACHBACK – TECHNICAL SUPPORT, CAPABILITIES & RESOURCES

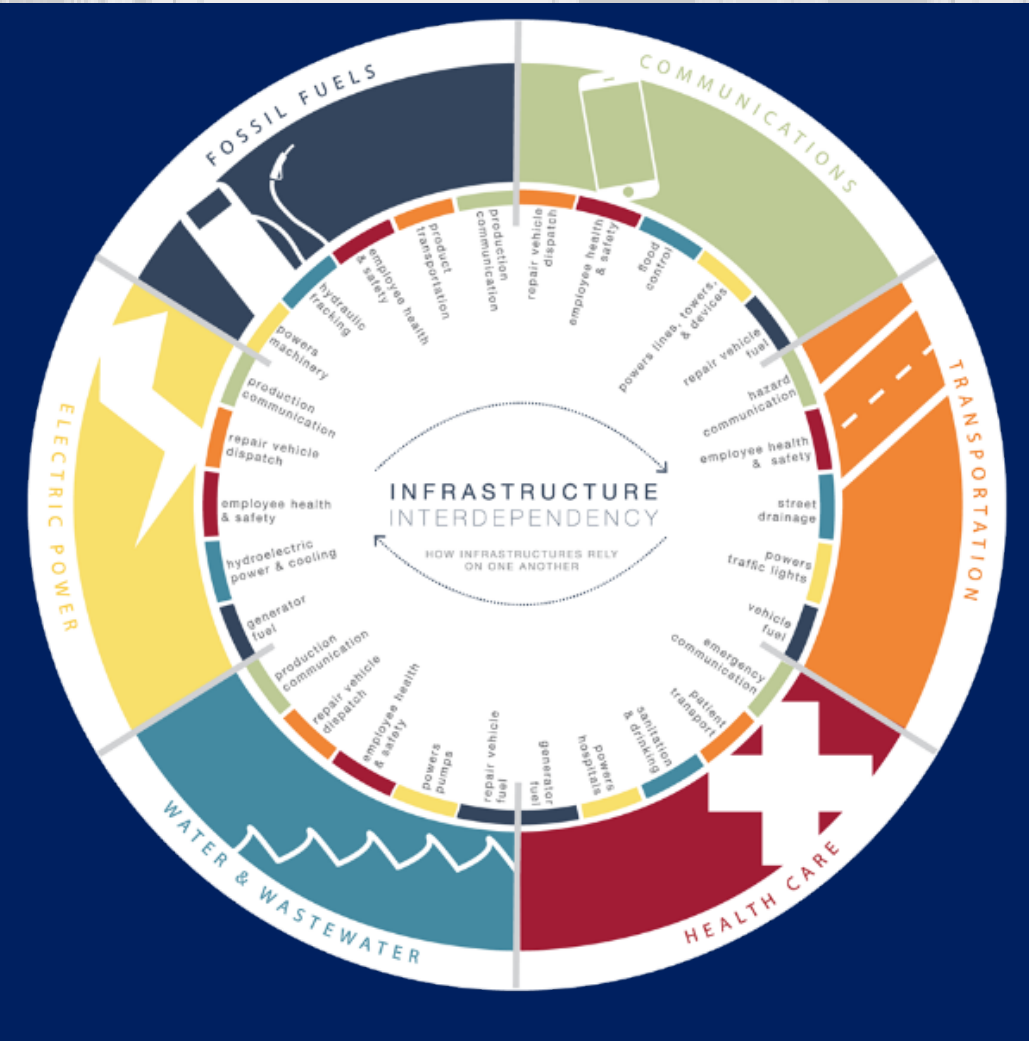
-  Coordinating Agency
-  Partner Agency
-  Supporting Agency



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The IS RSF is a group of Federal agencies and national organizations identified in the NDRF to have authorities, expertise, and other resources applicable to infrastructure systems recovery and resilience. **USACE** is the Coordinating Agency lead for the IS-RSF.

INFRASTRUCTURE INTERDEPENDENCY – FEDERAL AGENCY SUPPORT



US Army Corps of Engineers

Infrastructure Systems (IS) Recovery Support Function (RSF) Mission Coordination / Responsibilities and Roles for Partnering Federal Agencies

Transportation

Interstates, railroads, ports, airports, and navigable waterways (DHS-CISA, USDOT, USCG, USACE)

Communications

Communications systems, - fiber optic lines, telephone lines, cellular communications facilities, cable, broadband (DHS, FCC, USDA,)

Health Care

Maintaining critical emergency services operations - fuel availability for service vehicle fleets, maintain redundant emergency communications, recovery/disposal of nuclear medical byproducts (USDOT, DHS-CISA, FCC, NRC)

Water & Wastewater

Dam & Impoundment conditions (USACE)
Drinking Water & Sewerage Treatment Systems (EPA, USDA, USACE,)

Electrical Power

Electricity generation and transmission (USDOE, NRC)

Fossil Fuels

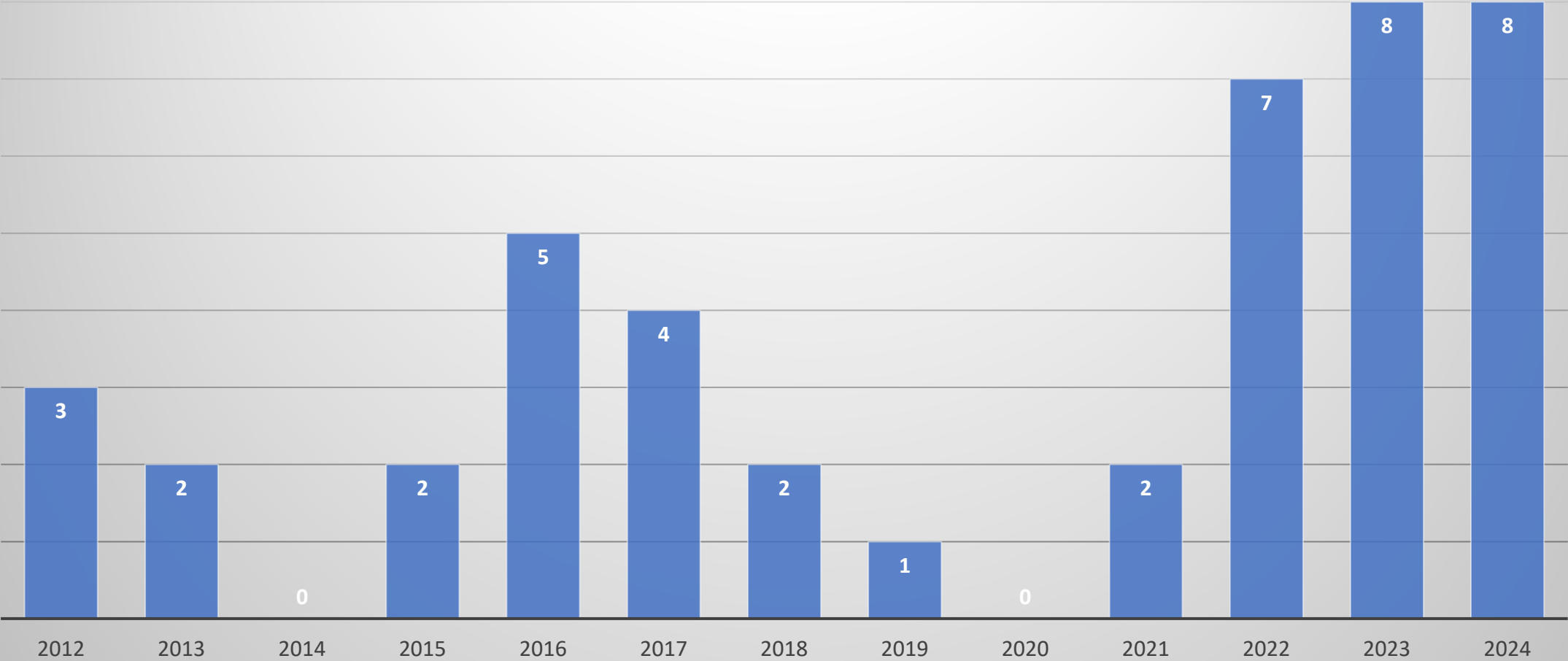
Transportation of fuel (ports and roadways): Two main types of fuel are needed to sustain power sector response activities - Gasoline for response assets and Diesel for generator assets (USDOT, USCG, USACE)



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Volume of FEMA IS-RSF Recovery Missions Assignments Conducted by USACE Since 2012

Number of IS-RF Missions Assigned (per Year)



Calendar Years (2012 – 2024)



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Kentucky

Flooding Event

Flood Event - IS-RSF Mission Ended 1-9-2023

Long-term Recovery - Projects done under USACE's authorities (blue skies)

- Planning Assistance to States (PAS) Study with the Commonwealth of Kentucky - looks at the flooding in Eastern KY.
- Feasibility Phase – Flood Study in Beattyville KY
- Two Floodplain Management Services Studies (FPMS) ongoing in Breathitt and Powell Counties to develop hydraulic models for the region, flood inundation maps, and offer some potential solutions to the community.
- Continued to collaborate and communicate with the Area Development Districts and other partners in the region.
 - Attended a Community Flood Resilience Work Group in Whitesburg, KY - November 2023.
- Two Potential WRDA 22 Projects in Eastern KY.



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Mississippi

Tornado and Severe Storms Event

The IS-RSF Field Coordinator worked with the impacted communities and other RSFs to Identify Recovery Issues & Resources.

- New Rolling Fork City Hall Water Tower Generator - FEMA Mitigation
- New Rolling Fork City Hall Water Tower Stirrer and New Rolling Fork Hwy 14 Water Tower - USDA/RDA & Rolling Fork Water Assets
- Rebuilding Moss Point City Hall - USDA/RDA
- Rolling Fork Water Lines Replacement - USDA/RDA
 - Replace roughly 2000 ft of Concrete- Asbestos lined water pipes
- PAS - Drainage Study for the Town of Batesville - USACE



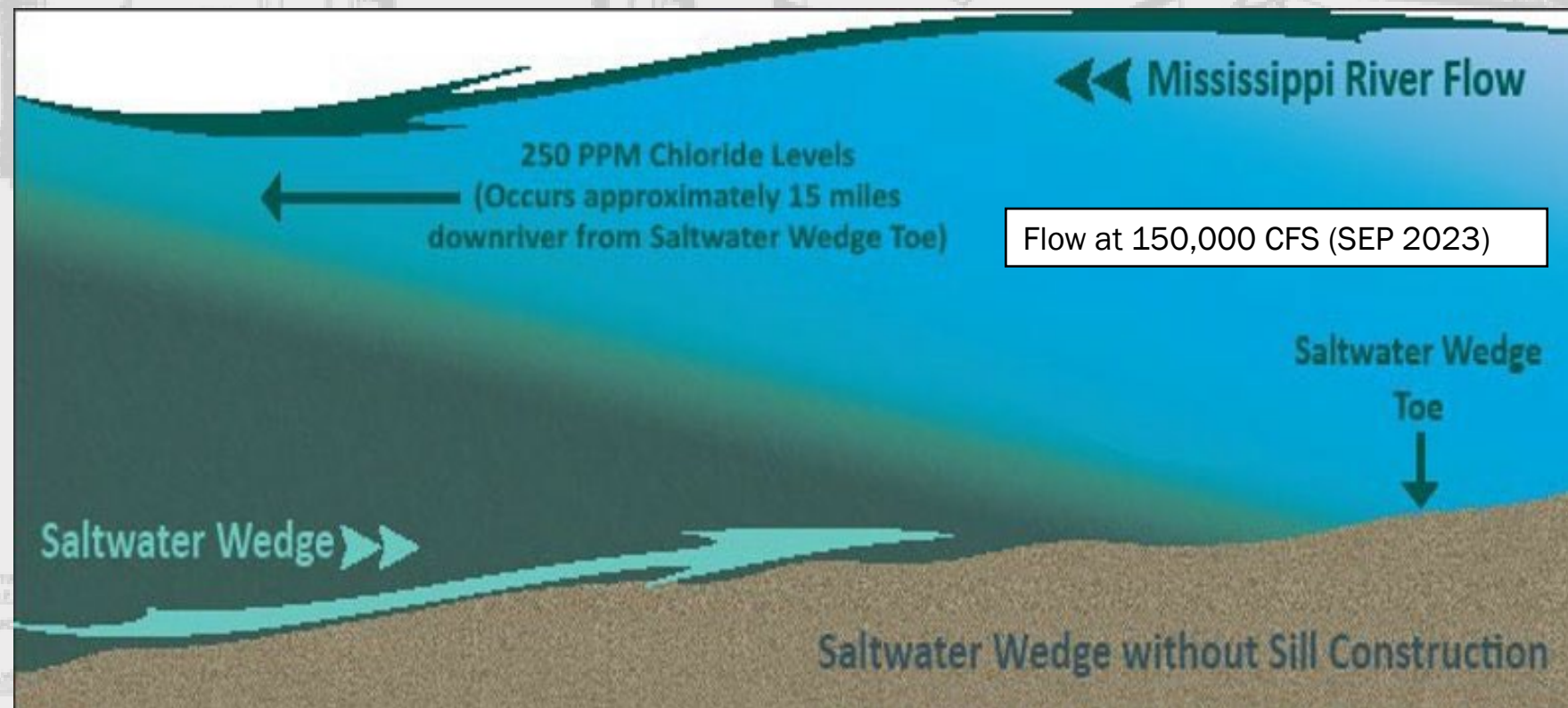
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Louisiana

Saltwater Intrusion of the Mississippi River 2023

- Saltwater wedge began moving up the Mississippi River in June 2023 with the onset of a drought.
- As Water Levels drop on the Mississippi River, the Saltwater Wedge moves upstream.
 - Thalweg (line or curve of lowest elevation within a watercourse) is below Sea-level for approximately 300 Miles (Natchez).

Mississippi River : Needed flow of 300,000 CFS to prevent Saltwater Intrusion



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Louisiana

Saltwater Intrusion of the Mississippi River 2023 – Strategies & Resources

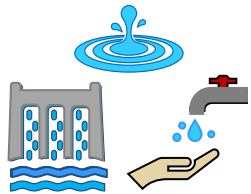
Planning Strategies

- Tailored Solutions for Parishes to address drinking water issues
- Cooperation between Parishes & State/Federal Partners
- Parishes are now focusing on Future Water Needs
 - Water Resource Planning for future needs
 - Planning for Infrastructure Upgrades and Replacements

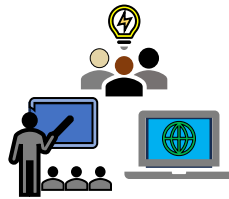
Next Steps for Long-term Recovery



Upgrade and Replace Systems



Water Resource Planning and Technical Assistance



Conduct Additional Research and Studies



Build Sustainable and Resilient Projects



Initial Response, Strategies for Future Planning, and Potential Resources

December 2023



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Louisiana

Saltwater Intrusion of the Mississippi River 2023 – Strategies & Resources Cont.

Resource Provider	Program/Website	Description	Eligibility	Details
US Army Corps of Engineers - Department of the Army	Planning Assistance to States (12.110)	Assists states, local governments, Tribes, and other non-Federal entities with preparation of comprehensive plans for development, utilization, and conservation of water and related resources of drainage basins, watersheds, or ecosystems.	Local Government & Authority, Nonprofit Organizations, Public/Private Institutions of Higher Education, State, Territory, Tribe	Not Identified.
Department of Commerce - Economic Development Administration	Public Works & Economic Adjustment Assistance Programs (11.300 & 11.307)	Grant funding for applicants in rural and urban areas to provide investments that support construction, non- construction, technical assistance, and revolving loan fund projects under EDA's Public Works and EAA programs.	For-Profit Organizations, Local Government & Authority, Nonprofit Organizations, State, Territory, Tribe	Min Award: \$100,000 Max Award: \$3,000,000 Funding Amount: \$200,000,000
Department of Agriculture - Rural Development	Water & Waste Disposal Loan Guarantees (10.760)	Provide loan and grant funds for water and waste projects serving the most financially needy communities. Financial assistance should result in reasonable user costs for rural residents, rural businesses, and other rural users.	For-Profit Organizations, Local Government & Authority, Nonprofit Organizations, State, Territory, Tribe	No Award Information Identified.
UDSA Rural Development	Community Facilities Guaranteed Loan Program	Community Facilities Programs offer direct loans, loan guarantees and grants to develop or improve essential public services and facilities in communities across rural America.	Local Government & Authority, State, Territory, Tribe	Not Identified.
Army Corps of Engineers - Silver Jackets	National Flood Risk Management Program / Silver Jackets Program	To facilitate strategic life-cycle flood risk reduction, improve processes, leverage and optimize resources, improve and increase flood risk communication and present a unified interagency message, and establish close relationships with SLTT.	Local Government & Authority, State, Territory, Tribe	Not Identified.



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Identified Potential Resources & Providers

Thank You

David P. Apple, P.E.
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US Army Corps
of Engineers®



Engineering With Nature®

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SAME
Sept. 2024



U.S. ARMY



**US Army Corps
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EWN Engineering With Nature[®]

EWN is the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental and social benefits through collaboration.



COLLABORATE



RESEARCH



IMPLEMENT



COMMUNICATE



**THE NETWORK
FOR ENGINEERING
WITH NATURE**
N-EWN.org





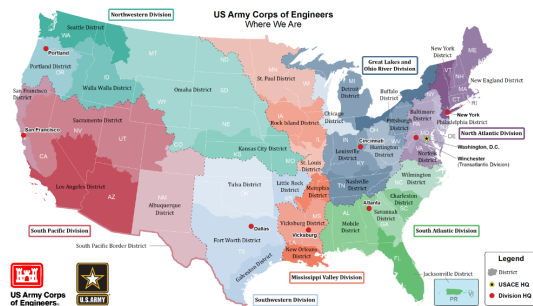
USACE EWN COLLABORATION

N-EWN, the Practice Leads, Proving Grounds, & Implementation Cadre

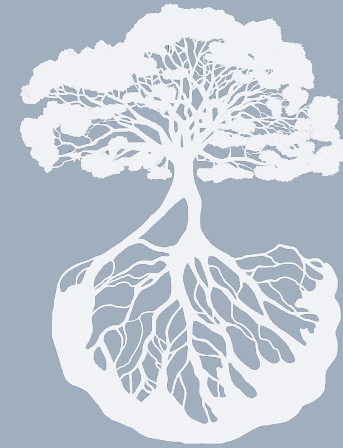
Proving Grounds

- Galveston District
- Buffalo District
- Philadelphia District
- Mobile District
- San Francisco District
- St. Louis District
- Los Angeles District

- South Pacific Division
- South Atlantic Division
- Northwest Division



USACE EWN Practice Leads



THE NETWORK FOR ENGINEERING WITH NATURE



N-EWN.org

A network of vested organizations creating a resilient future by integrating conventional and natural infrastructure to improve societal well-being by sustainably delivering more value and benefits to people and ecosystems.



50+ Active Research Tasks

- Remote Sensing Methods for EWN Designs
- Best Practices for Financing Natural Infrastructure Projects
- Optimizing Nature-Based Solutions for Cold Regions
- Blue Carbon
- Maximizing EWN in Urban Environments
- Equitably Incorporating Wellbeing Benefits of Nature
- 3D Printing Nature Inspired Infrastructure from Dredged Sediment
- EWN Modeling Toolkit – Expansion R&D
- Quantifying the Efficacy of Floating Vegetated Canopies for Shoreline Protection
- Computational Modeling of Manmade Oyster Reefs: Life-cycle, Wave Attenuation, Performance, and Reliability
- Engineering With Nature® (EWN®) Jekyll Island “Sand Motor”
- Maximizing the Long-Term Function of Coastal Islands Derived from EWN Efforts
- Characterizing Engineering Performance of NNBF Combined with Conventional Measures
- More...



Remote Sensing Methods



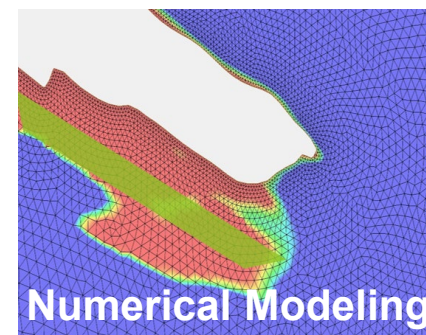
Sand Motor



Dune Vegetation



Urban Vegetation “Tutu”



Numerical Modeling



Physical Modeling



International Guidelines on the Use of Natural and Nature-Based Features for Flood Risk Management

A collection of international expertise, across sectors, using NNBF for flood risk management while expanding and diversifying project value through economic, environmental and social benefits.

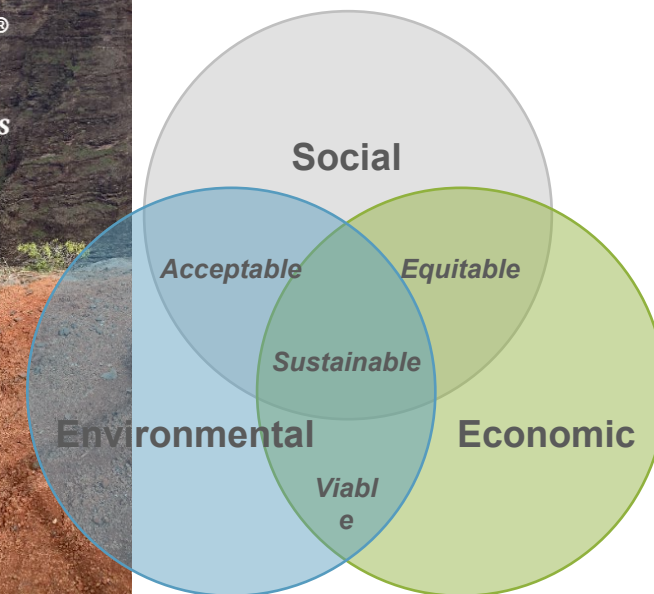
- Published September 2021
- Multi-author: government, academia, NGOs, engineering firms, construction companies, etc.
- Addressing the full project life cycle
- 4 Parts
 - ▶ Overarching Topics
 - ▶ Coastal Applications
 - ▶ Fluvial Applications
 - ▶ Conclusions





Engineering With Nature for the Department of Defense (DoD)

- Provide system-level natural hazard and vulnerability assessments
- Evaluate the use of EWN strategies to increase mission resilience
- Provide technical expertise to installations when implementing, operating, and maintaining the recommended infrastructure solutions
- Optimize, design, and evaluate nature-based solution resilience strategies





Any Questions?

International Guidelines on NNBF for Flood Risk Management
 Publication September 2021.
[MORE](#)

EWN Engineering With Nature®

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Sustainable Collaboration

Engineering With Nature

Engineering With Nature® is the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental, and social benefits through collaboration.

[MORE INFO >](#)

EWN On the Road
 A tour of EWN projects across the heartland of America.
[MORE](#)



The Engineering With Nature Podcast
 Enjoy meaningful conversations between cross-sector partners leading the way natural and nature-based solutions.
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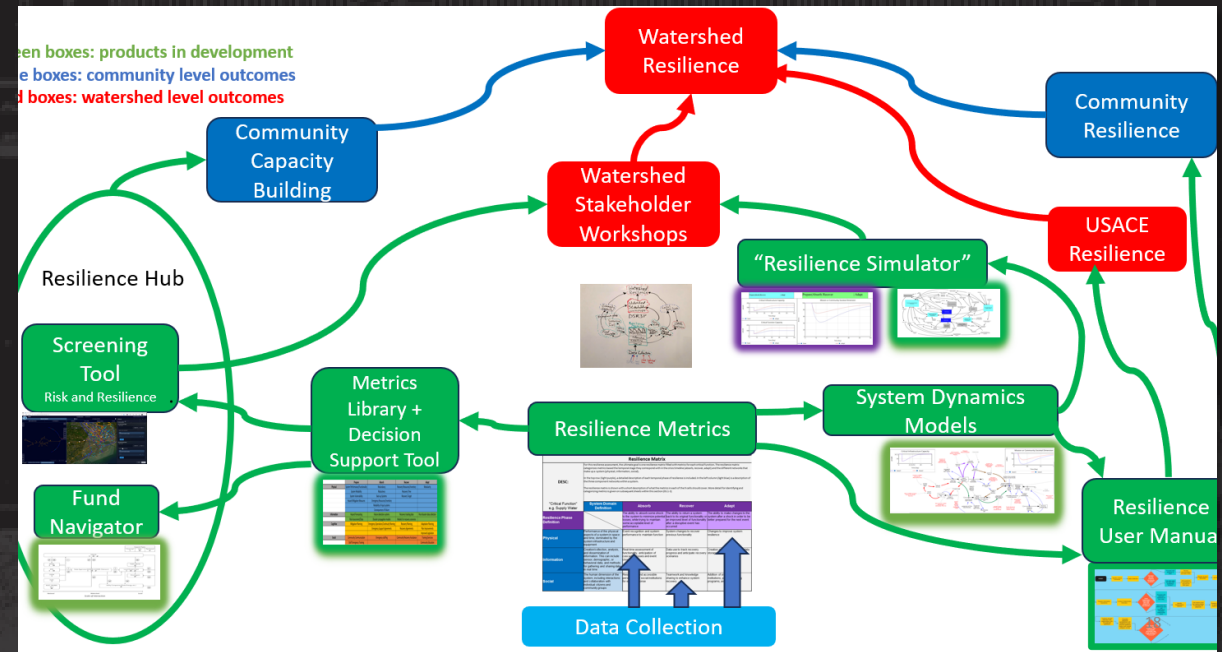
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US Army Engineer Research & Development Center

www.EngineeringWithNature.org

USACE DAM SECTOR REGIONAL RISK AND RESILIENCE PROGRAM (DSR3P)

Frank Randon
Office Of Homeland Security
Frank.Randon@usace.army.mil



USACE Resilience Assessment Methodology

Missions and Threat Scenarios

Resilience Matrix

Metric Name	Unit of Analysis	Resilience Phase	Metric Category	Critical Function	Measure Full Name	Level of Detail
Risk Assessment Score	Capability	Physical	Absorb	System Vulnerability	FSM	Score from most recent Risk Assessment
Last Inspection Date	Capability	Information	Absorb	Risk Assessment	FSM	Comprehensive inspection of the dam
Last EAP Revision	Capability	Information	Adapt	Planning Improvements	FSM	Years since the most recent revision to the emergency action plan (EAP)
Last EAP Exercise	Capability	Social	Adapt	Training Exercises	FSM	Years since the most recent EAP exercise
Worst Case Consequences Estimate	Capability	Physical	Absorb	Consequences of Failure	FSM	Estimated economic cost for the worst-case dam failure scenario (Maximum High Flood - Breach)
Operations Plans	Capability	Information	Absorb	Mitigation Planning	FSM	Degree (0-5) of completeness of operations plan
Planning Review	Capability	Information	Adapt	Planning Improvements	FSM	Years since the most recent emergency operation test exercise (or most recent emergency response)
Emergency Exercises	Capability	Social	Adapt	Training Exercises	FSM	% of exercises/events in the past 5-10 years where an after-action report was generated and reviewed by the district
After-Action Reports	Capability	Information	Adapt	Post-disaster Data Collection	FSM	

Metrics Library

Solicitation Template

Scorecard

	Absorb	Recover	Adapt
Physical	3.8	5.0	3.5
Information	4.4	3.8	4.4
Social	3.7	5.0	5.0

Assessment Findings

Measuring USACE Resilience in the Savannah Basin - manuscript for peer review

The Savannah Watershed serves as a critical component, crucial to the well-being of numerous communities and ecological systems. Leading in the maintenance of this significant resource is the United States Army Corps of Engineers (USACE). With an established history in water resource management, the USACE is responsible for executing a range of essential missions within the watershed. These include flood risk management, hydro-power generation, aquatic ecosystem restoration, water supply, navigational infrastructure maintenance, and recreational land-use. This paper aims to examine the various roles of the USACE to guarantee mission assurance in this critical region. It places particular emphasis on the collaborative efforts between the USACE, local government, and various stakeholders.

Final Report

A Resilience Matrix Approach to USACE MISSION in the Savannah Watershed



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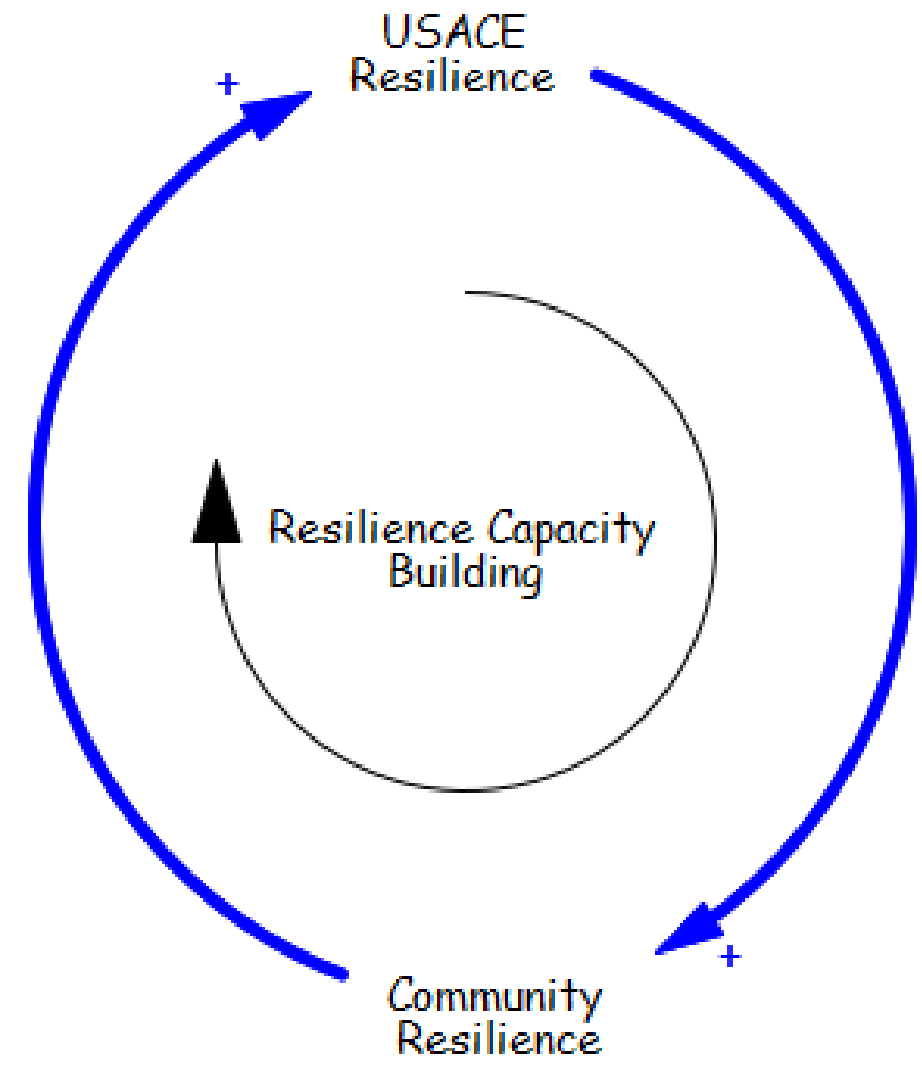


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DSR3P HYPOTHESIS #1: RESILIENCE CAPACITY BUILDING

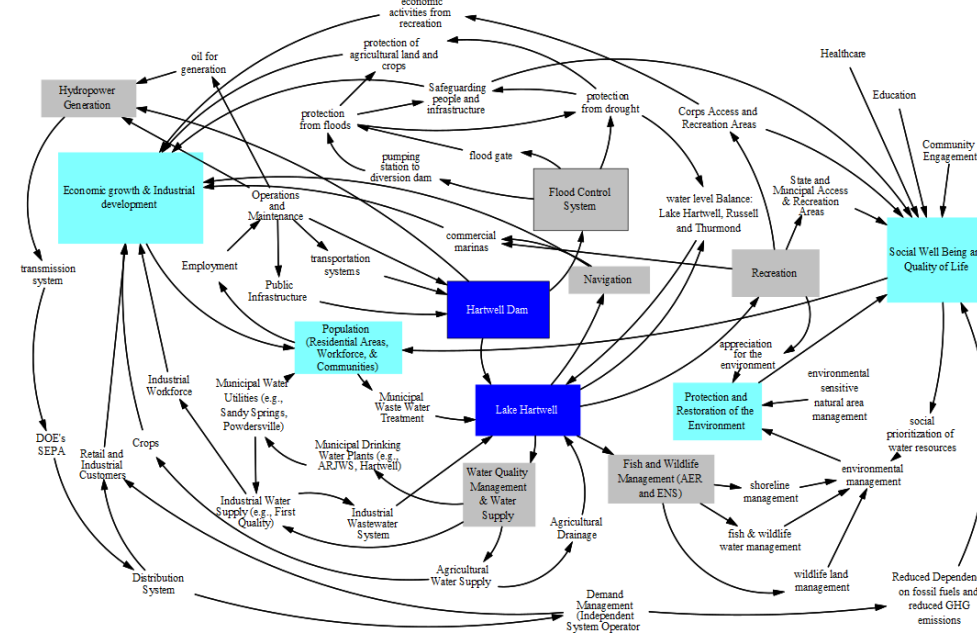
The resilience of USACE projects improves community resilience.

Community resilience improves the resilience of USACE projects.



INTERDEPENDENCY NETWORK OF CRITICAL FUNCTIONS

Influence Diagram: Connecting USACE Missions w/ the community goals



Influence Diagram w/ Resilience Heat Map

Savannah River Basin Resilience by County
DSR3P Resilience Score (32.04) (3.90) 24.24

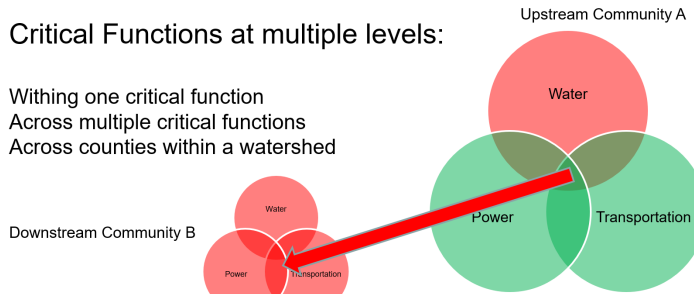


*scores modified from RAPT tool for DSR3P

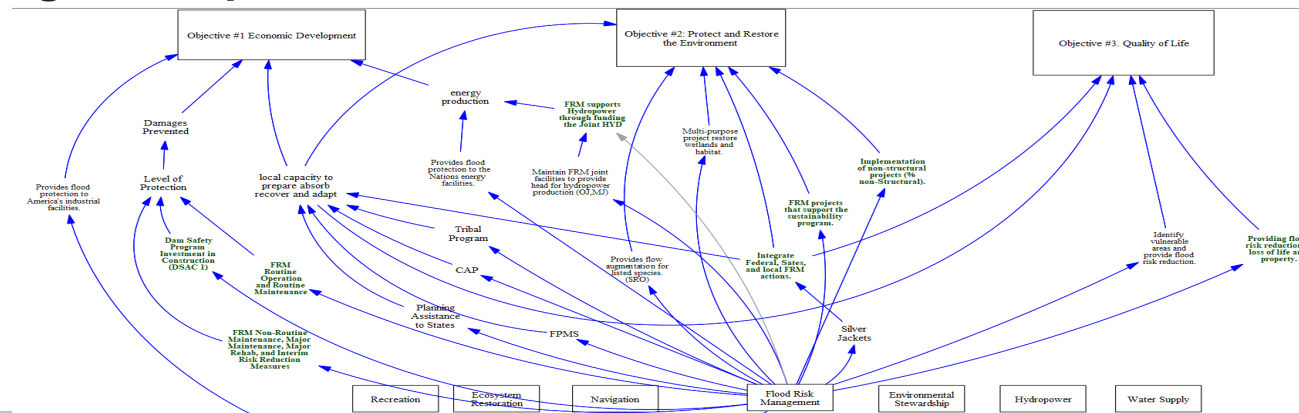
Influence Diagram: critical functions connected across the basin

- Critical Functions at multiple levels:

- Withing one critical function
- Across multiple critical functions
- Across counties within a watershed



Influence Diagram Triple Bottom Line: USACE Value to the Watershed



- Common operating picture
- Process to identify metrics



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PARTNERS

USACE HQ OHS, IWR, ERDC EL, MVK-MMC, Savannah District

DHS CISA HQ and RIV

Idaho National Laboratory (INL)

FEMA

Clemson (Anderson Co, SC)

University of Georgia (UGA) (Augusta, GA)

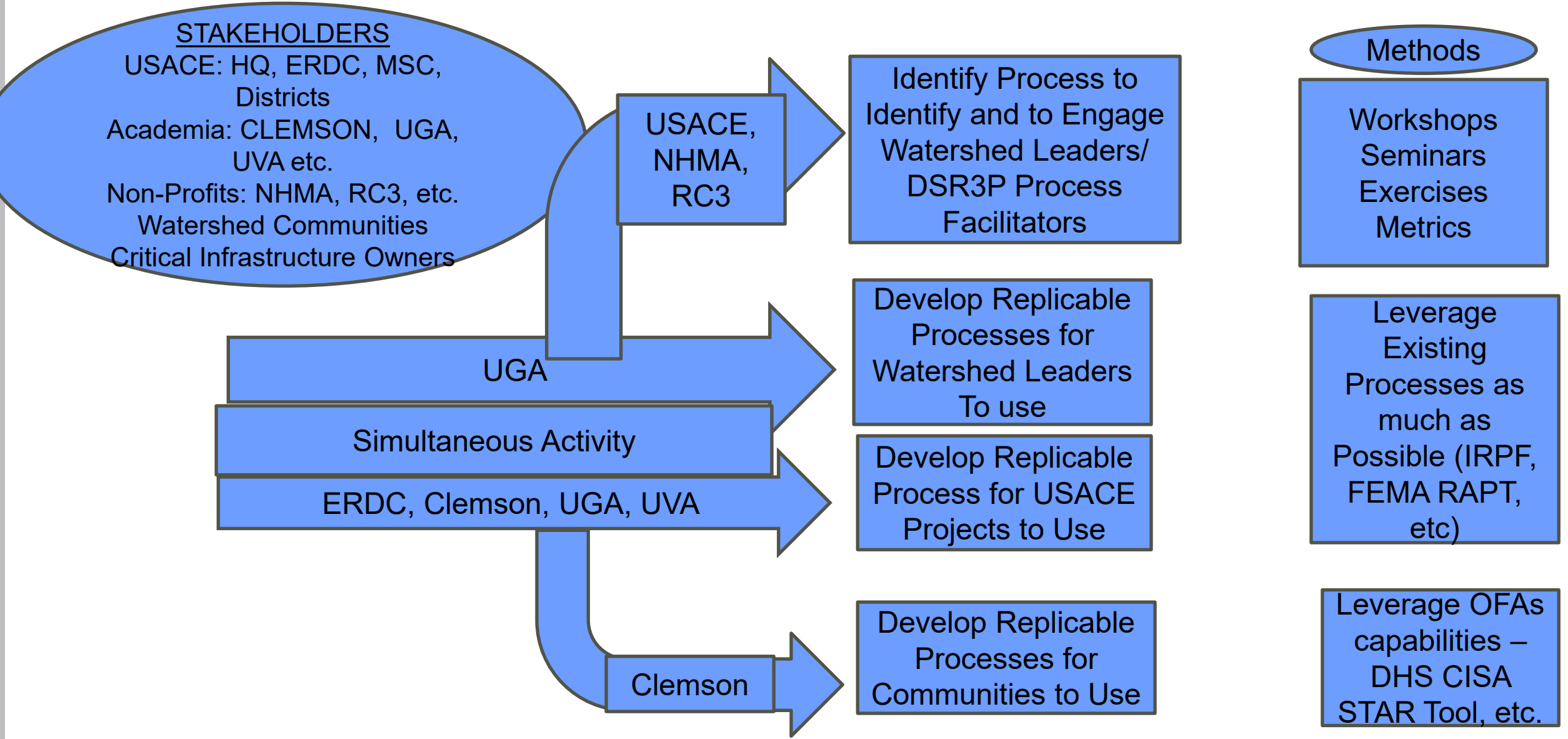
University of Virginia (UVA) (CI screening tool)

Natural Hazard Mitigation Association (NHMA) (Steering Committee)

Regional Collaborative Coordinating Council (RC3) (Strategy and Goal for External Promotion)

Steering Committee – Sprayberry, Smith, Hecker, Scalingi, Matheau

APPROACH





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DESIRED OUTCOME

- Customizable processes for USACE and under tech transfer to others
- USACE Operational Projects and Watershed Communities More Resilient to All-Hazards