



CENTRALINA
REGIONAL COUNCIL

Regional Resilience Collaborative (RRC) Workshop #7

March 20, 2024

Welcome & Introductions

- In the Teams Chat, please write your:
 - Name
 - Title
 - Jurisdiction

Agenda

- Welcome & Introductions
- Workshop #1-6 Recap
- Workshop #7 Sessions
 - Climavision
 - PDRP
 - Roadmap
 - Grant Prep
- Next Steps
 - REHAT



Recovery Capability Development

Workshop #1-6 Recap

	2022	2023						2024			
	December	January	March	May	July	September	November	January	March	May	June
Project Management	Re-Engage and Project Timeline				RRC Luncheon: State of the RRC						RRC Luncheon: State of the RRC
Capability Development		Self Assessment, Establish Targets	Improvement Planning, Prioritizing Projects	Review Roadmap, Establish Improvement Metrics			Review Roadmap	Annual Self Assessment and Improvement Planning,			
Grant Development		Summary of Grant Process	Grant Education	Information Collection, Prioritize Projects		Develop LOIs		Application Status, Summary of Grant Process	Grant Education	Information Collection, Prioritize Projects	
PDRP Development		Kick-off	Base Plan	Annex A: Community Planning and Development Committee Annex		Annex B: Economic Recovery Committee Annex	Annex C: Health and Social Services Committee Annex	Annex D: Housing Committee Annex	Annex E: Infrastructure Committee Annex	Annex F: Natural and Cultural Resources Committee Annex	

Workshop #1 Recap

- Roadmap to Resilient Recovery
 - Discussed Self Assessments for jurisdictions
 - Learned the importance of establishing targets and need for improvement planning
- Grants Workshop
 - Previewed the Grant Workshop Schedule
 - Reviewed steps of the grant processes
- Pre-Disaster Recovery Plan TA Workshop
 - The importance and benefits of PDRP
 - Reviewed goals and timelines
 - Discussed the types of assistance and tools to be provided

Workshop #2 Recap

- Roadmap to Resilient Recovery
 - Discussed the significance Self-Assessment elements and target scoring while using SMART Targets to develop Improvement Planning.
- Grants Workshop
 - Learned about the Catalog of Domestic Assistance (CFDA) and available mitigation grants.
 - Reviewed the upcoming grant application and submission process.
- Pre-Disaster Recovery Plan TA Workshop
 - Discussed the elements of a Base Plan and the responsibilities of partner agency and org structure.
 - Overview who should review the Recovery Committee Annexes.

Workshop #3 Recap

- Roadmap to Resilient Recovery
 - Reviewed the Self-Assessment and Improvement Process
 - Common Roadmap Categories and Top Improvement Actions
- Grant Workshop
 - Reviewed and discussed information collection and mitigation project
- Pre-Disaster Recovery Plan TA Workshop
 - Reviewed Community Planning and Development Recovery Committee (Appendix A) and FEMA's National Resilience Guidance

Workshop #4 Recap

- Pre-Disaster Recovery Planning
 - Provided an overview of the Economic Recovery Committee Annex
 - Identified three subcommittees that will lead and support business recovery centers, restore business activities post-disaster, and offer job placement and training resources.
- Grant TA Workshop
 - Discussed how assistance would be provided to counties to prepare to submit their LOI application to receive grant funding.

Workshop #5 Recap

- Roadmap to Resilient Recovery
 - Reviewed the Roadmap Progress
 - Introduced the concept of Assessment Validation for the Program Self-Assessment
 - Overview of Planning Insights that shapes how to target and implement approaches by utilizing Roadmap Element Concepts
- NCEM Programs/Grants Update
 - Overview of the 2023 FMA Grant Timeline, Flood mitigation Projects, and Infrastructure Projects
 - Discussed the process of writing BRIC Grants
- Pre-Disaster Recovery Plan TA Workshop
 - Reviewed Health and Social Services Committees and Sub Committees

Workshop #6 Recap

- PDRP – Annex D
 - Reviewed State and Local Partners
 - Discussed Housing Committee and Housing Sub Committee needs.
- Geospatial Tool
 - Introduced and provided an overview of the new Centralina Resilience Equity and Hazard Assessment Tool (REHAT).
 - Demonstrated the tool’s functionalities and guided participants through an exercise to familiarize them with the processes.
- Roadmap Update
 - Updated the assessment scores, identified lessons learned, best practices and reintroduced the roadmap assessment process.



Apoorva Bajaj

Climavision

A circular image showing a dramatic sky with dark, heavy clouds and a bright lightning bolt striking down over a green field at sunset or sunrise. The image is partially obscured by blue curved shapes on the left side of the slide.

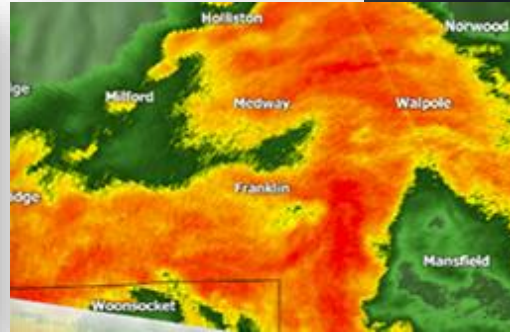
Weather Radar Network for Resilience to Severe Weather

March 20, 2024

Emergency Management & Weather Radar

Emergency managers work closely with the National Weather Service, city and state officials to prepare communities for severe weather and lead the first response efforts.

EMs develop real-time situational awareness on hazardous weather through weather apps, social media and storm coverage on TV.

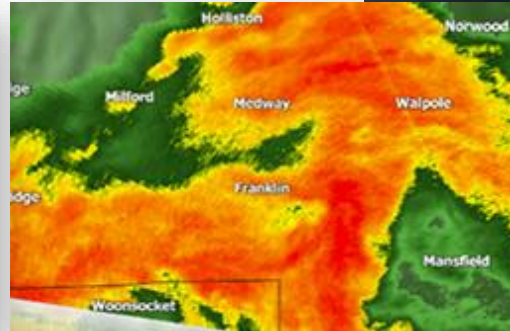


Emergency Management & Weather Radar

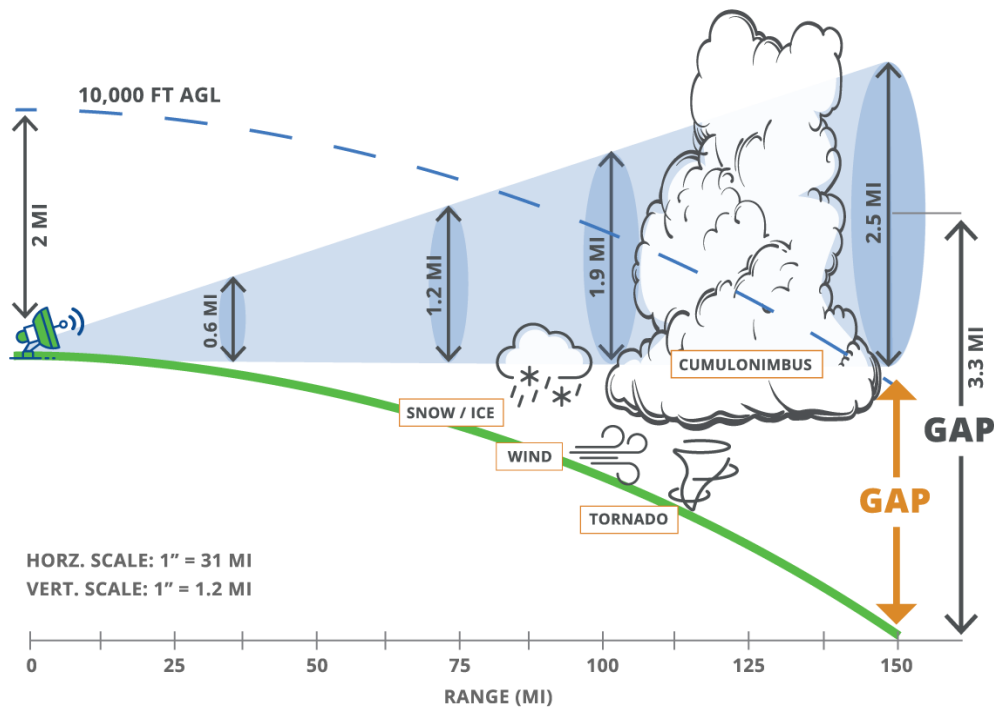
Weather radar is the best tool for

- Real-time situational awareness
- Planning response activities

HOWEVER counties served by Centralina COG have faced a challenge!



Why Do Coverage Gaps Exist?



■ The Earth is not flat – the planet’s curvature in tandem with radar beams that climb higher into the atmosphere the further you move away from each radar are the key factors

■ Blockage can also be significant in mountainous regions or urban areas.

■ Filling in these blind spots is critical for:

- Flash floods
- Low-level winds
- Tornadoes
- Improved forecast modeling which depend on measurements near the surface

Capital Weather Gang

Meteorologists have warned about North Carolina's 'radar gap' for years. It's taking a toll on forecasts.

Charlotte is the location of one of the country's biggest storm blind spots, which government efforts have yet to address.



NOAA's Efforts To Fix Critical Weather Radar Gaps Are Slow Going

 Dennis Mersereau  7/11/2018 05:14:00 PM  NOAA Radar  Leave A Reply



NWS has lowered its beams. NWS may install a radar in 2040.

Public/Private Partnership Approach

We take on the burden of infrastructure and get new, low-level data into the right hands

Low-level observations are needed

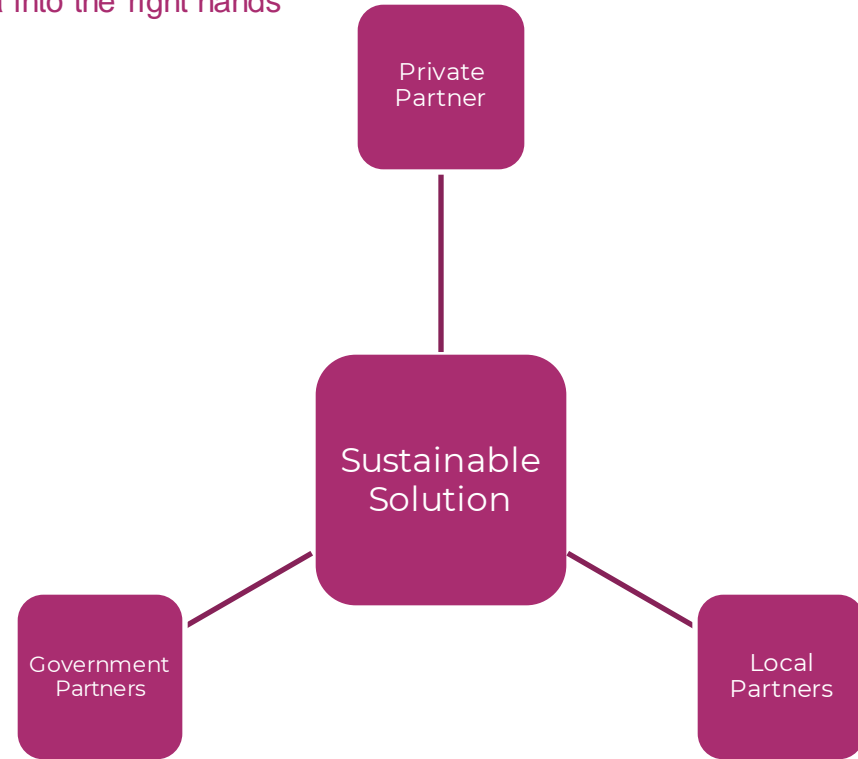
Challenges to solutions:

- Limited funding
- Ongoing investment
- Novel expertise
- Speed

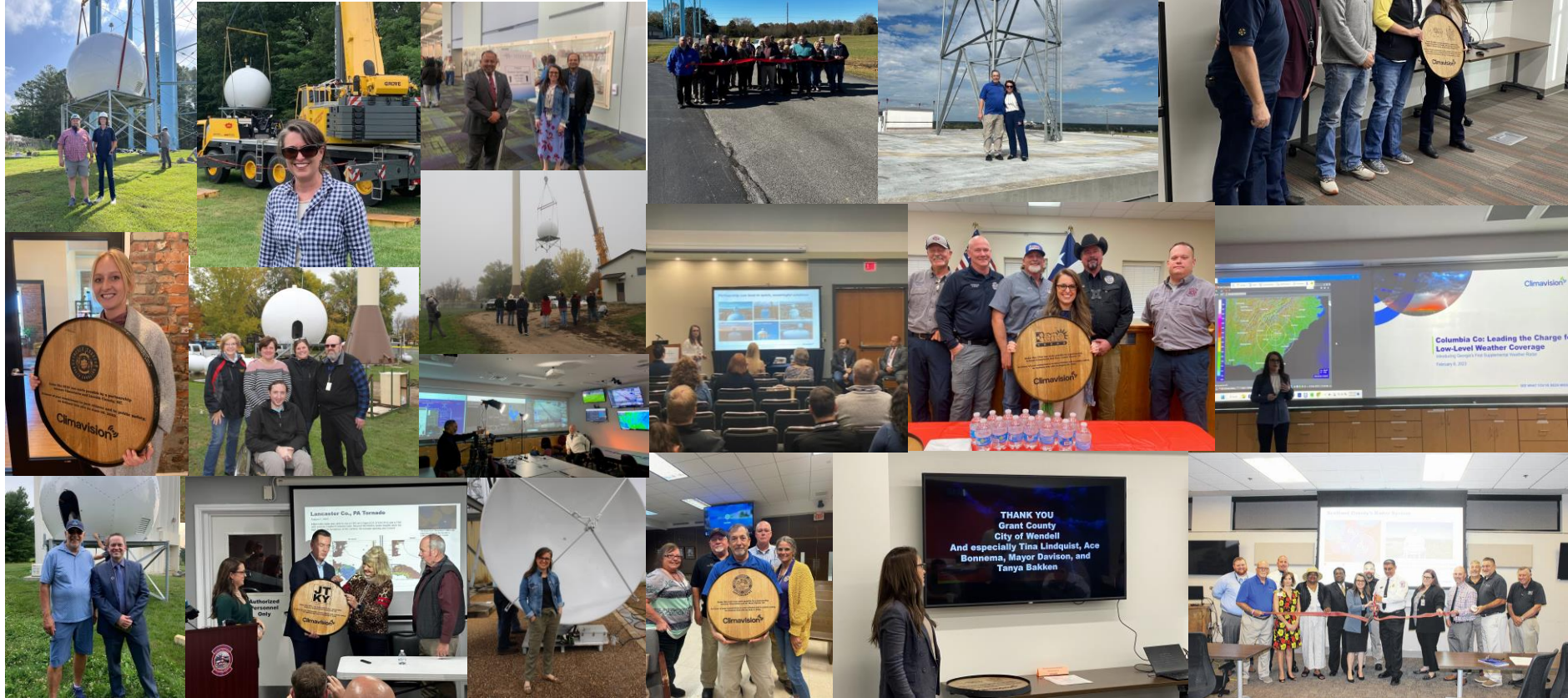
We're designed to address these challenges.

Our partnerships:

- Accelerate the solutions – radar site partners
- Take on the burden of ownership
- Enable faster, downstream solutions
- Are not transactional, we embed with communities
- Are comprehensive

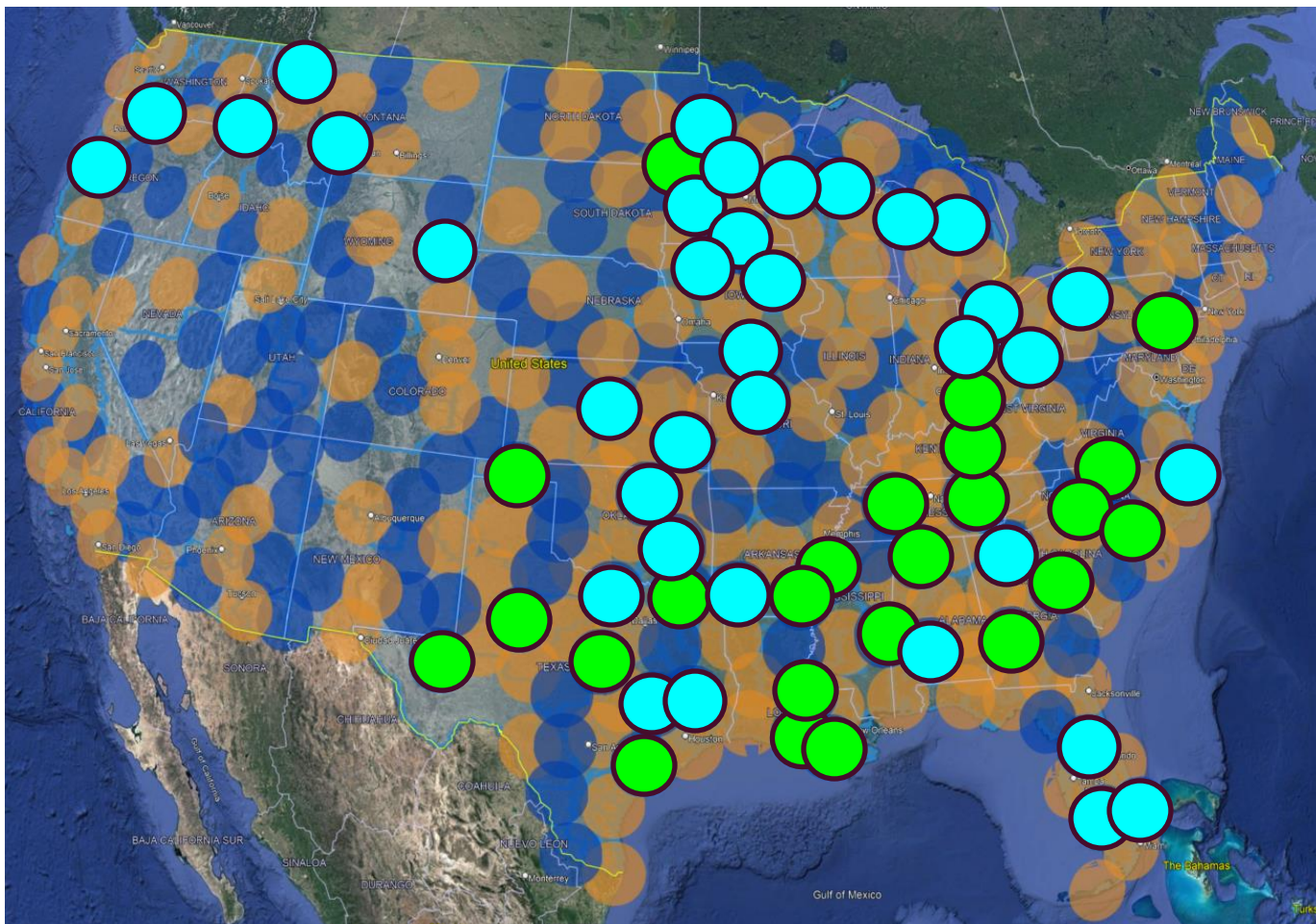


12 states and counting!



Operational Fleet & Plan

As of January 2024

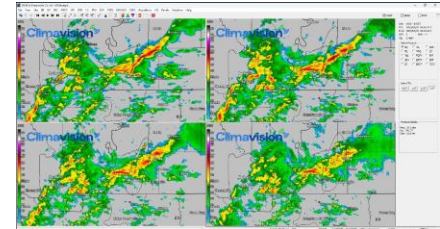


-  NEXRAD at 4,000ft AGL
-  Planned Climavision site
-  Operational (24)
-  Planned 2024 (36)

Collaborations & Partnerships

- CRADA (Cooperative Research and Development Agreement) with NOAA Research-NSSL
- NWS National Mesonet Program Contract
- Research Partnerships (e.g. Millersville University)

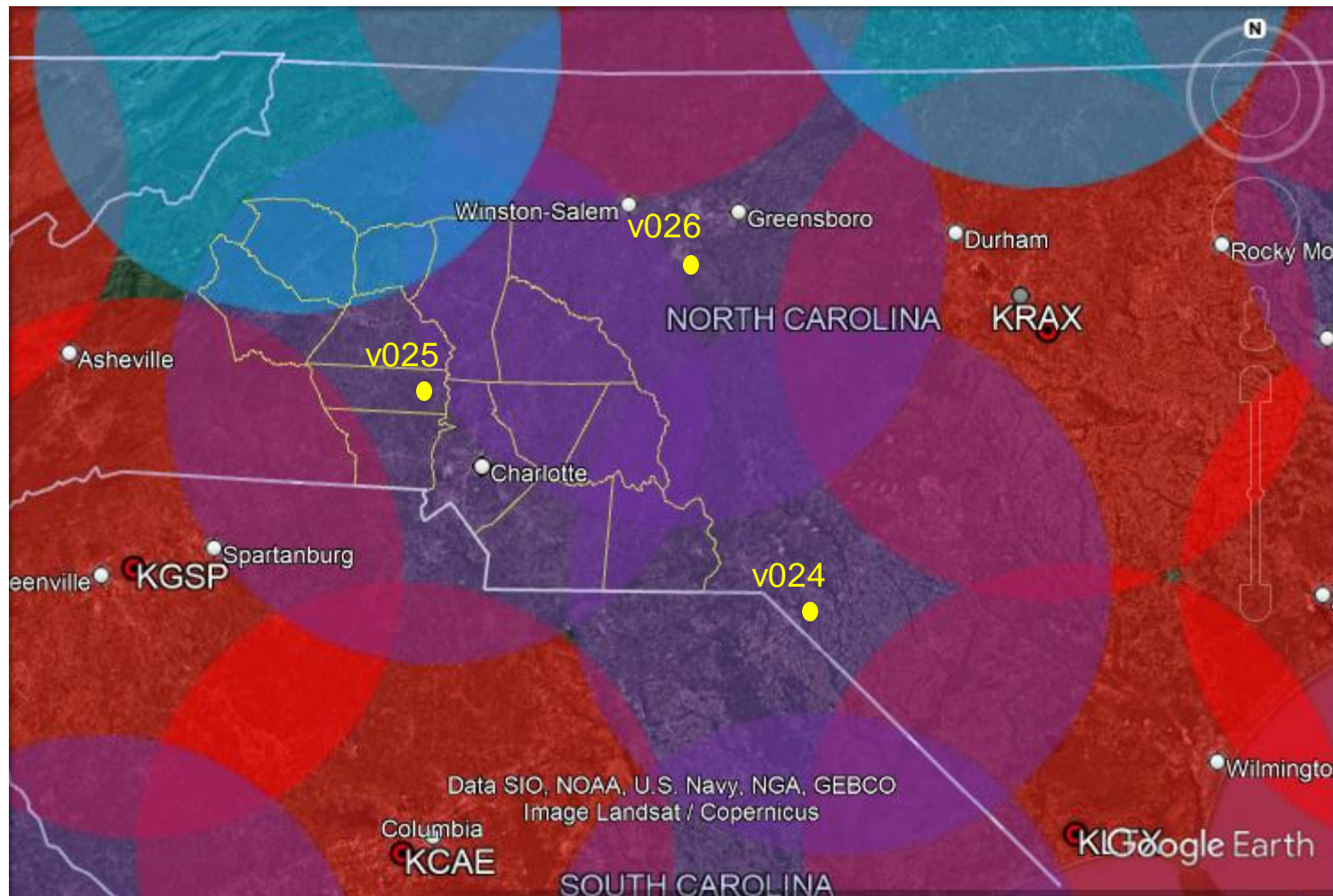
WFO Code	WFO Office	WFO Code	WFO Office
OHX	Nashville	CTP	State College
FWD	Dallas/ Fort Worth	GSP	Greer
LIX	New Orleans/ Baton Rouge	ILM	Wilmington
MEG	Memphis	LWX	Sterling
LCH	Lake Charles	PHI	Mt. Holly
HGX	Houston	RNK	Blacksburg
FFC	Peachtree City	FGF	Grand Forks
CAE	Columbia	MPX	Minneapolis
RAH	Raleigh	ABR	Aberdeen
CHS	Charleston	OUN	Norman



Over 20 NWS offices looking at our data



Over 15 TV stations broadcasting radar imagery



Texas County, OK Tor

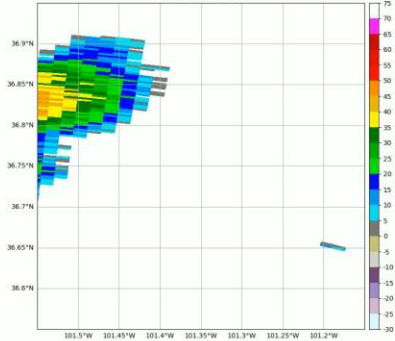
June 17, 2023

A tornado near Climavision's Guymon, Oklahoma radar was spotted by broadcast media on June 27th, per SPC reports, before becoming rain wrapped. Climavision radar was able to detect and track this specific tornado incidence with high resolution and clarity.

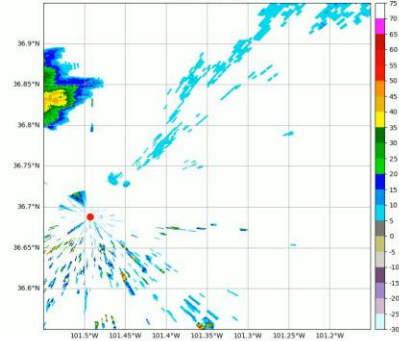


The beam height from Climavision's Guymon radar over Adam, OK is approx. 1,300 ft AGL whereas the beam from KDDC is approx. 8,600 ft AGL and KAMA 11,000 ft AGL.

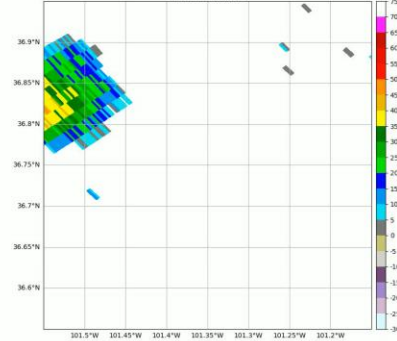
KAMA (Amarillo) - NEXRAD



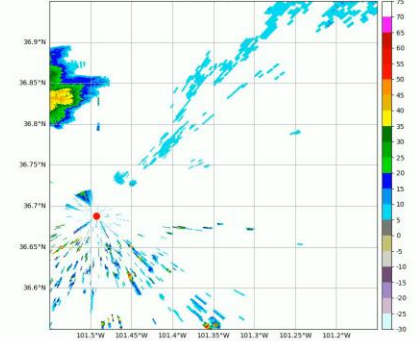
Climavision



KDDC (Dodge City) - NEXRAD



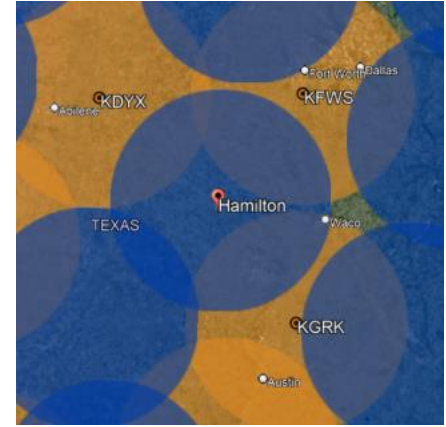
Climavision



Hamilton, TX Wind Damage

January 8, 2024

On January 8th, damage was sustained by the Hamilton Municipal Airport in Hamilton, Texas. No warnings were issued, and the SPC did not receive any wind or tornado reports, but damage at the airport is evidence of a strong storm.



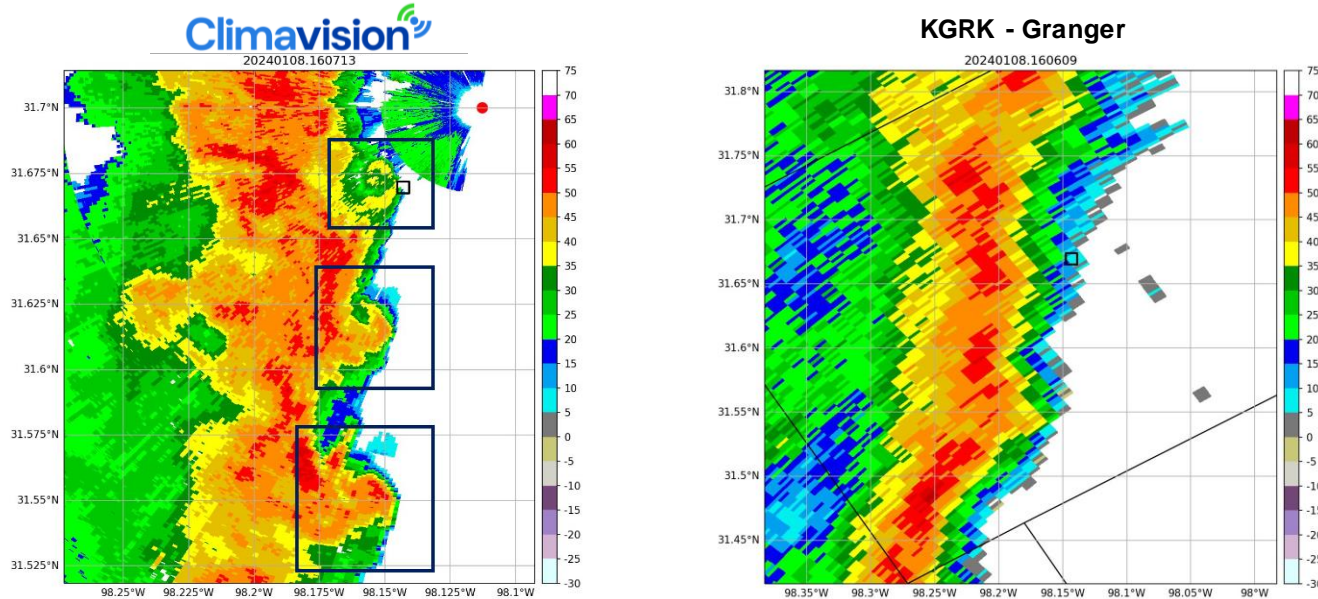
Climavision's radar in Hamilton is in a prime location to detect weather phenomena just above ground level at the Hamilton Municipal Airport. Next nearest radar beam heights above Hamilton are:

- KFWS ~ 6,300 ft AGL
- KGRK ~ 6,800 ft AGL
- KDYX ~ 7,400 ft AGL

Credit: City of Hamilton Administration, Ryan Polster

Hamilton, TX Wind Damage

January 8, 2024

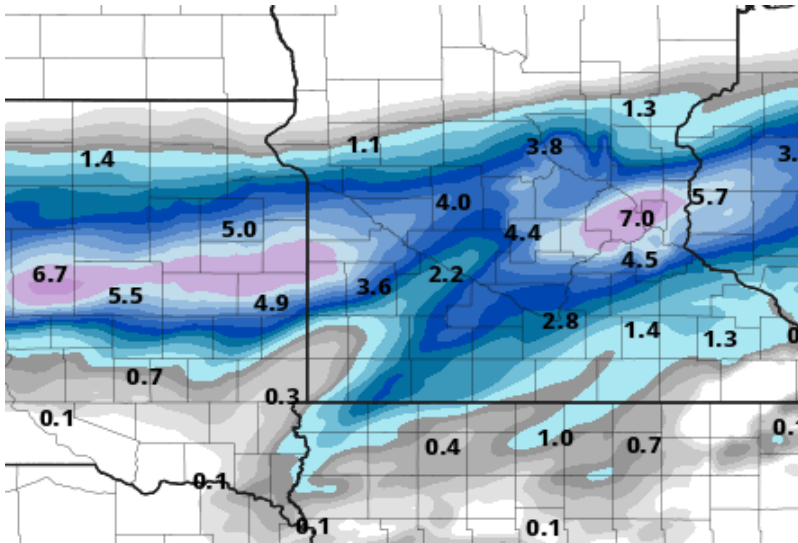


Climavision's reflectivity indicates front reflectivity notches (highlighted w/ navy boxes). Working in conjunction with the radial velocity from Granger, one would be able to determine the beginning stages of rotation in these locations.

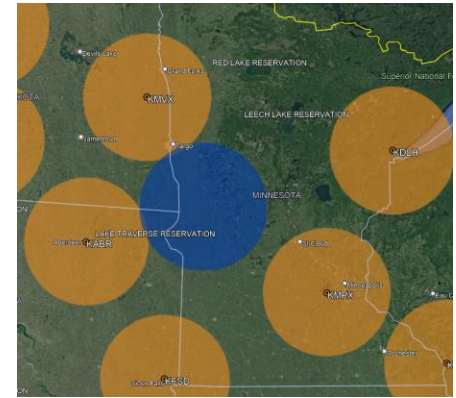
Western MN Snow

February 14, 2024

On Valentines Day, snow was reported near Climavision's Wendell, MN radar site. The image below shows snowfall totals reported from a variety of locations. Nearby NEXRAD radars overshoot the precipitation that made it to the ground, leading to underestimations in the expected precipitation, whereas Climavision's Wendell radar was able to detect heavier bands of snow.



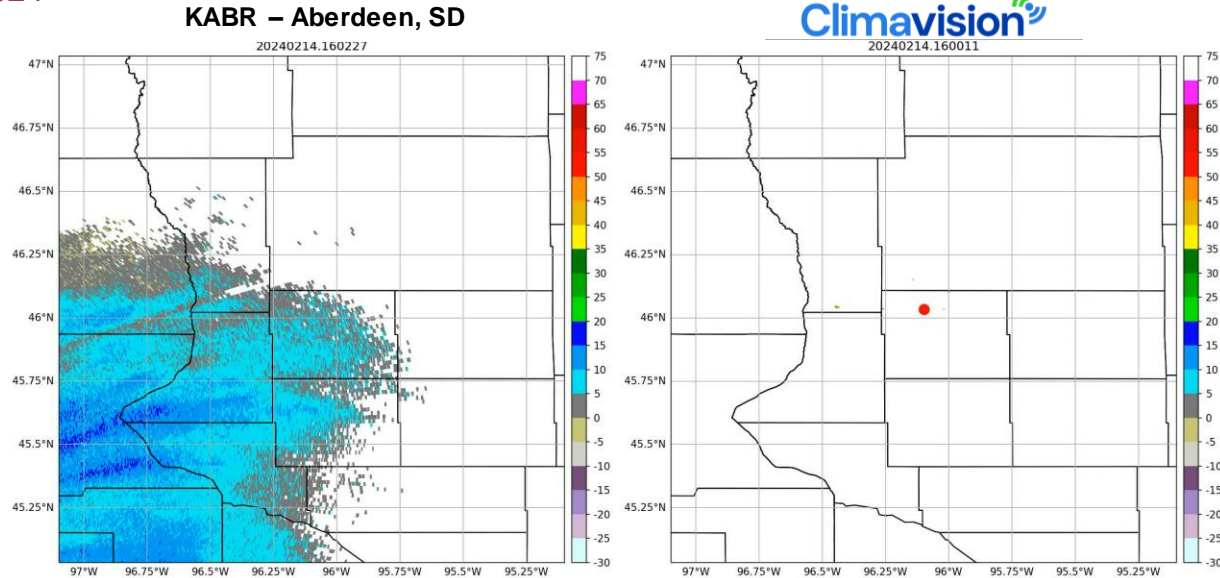
Data: 48-Hour Snow Accumulation via PivotalWeather
Photos: twincities.com (top), nujournal.com (bottom)



Climavision's radar in Wendell, MN sits in a prominent weather radar gap. The two closest NEXRAD radars sit over 100 miles away in North Dakota and South Dakota. The radar beams from KMXV and KABR sit at over 12,000 ft AGL over Wendell.

Western MN Snow

February 14, 2024

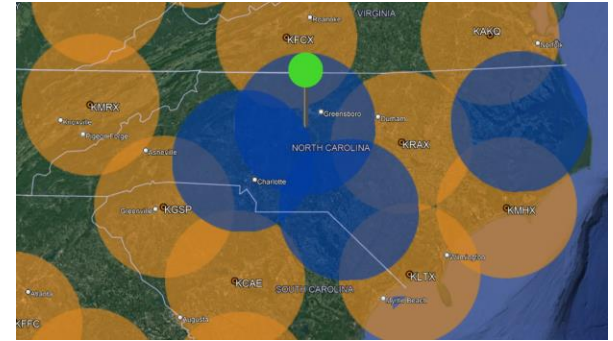


Climavision's radar imagery (right) showcases heavier bands of snow to the southeast of the Grant County radar location that KABR overshoots. With the supplemental low-level coverage, we are able to identify the heaviest bands of snow and better understand the precipitation that actually made it to the surface.

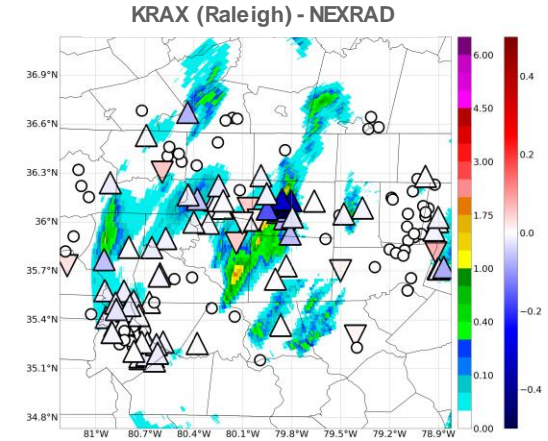
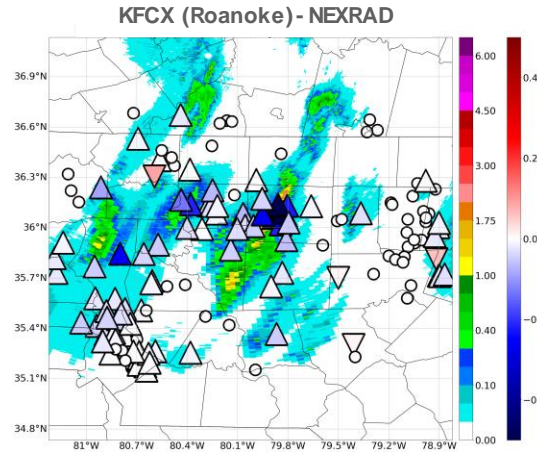
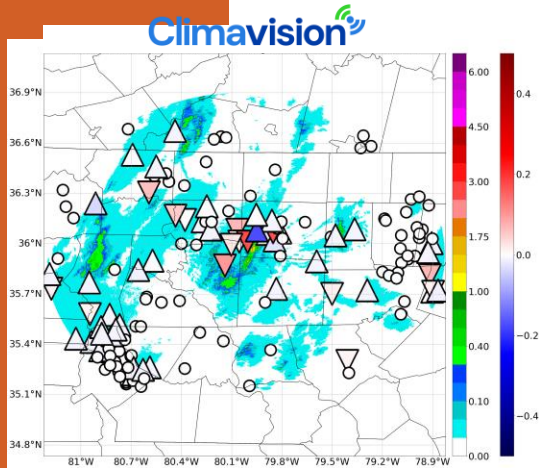
Rainfall Measurement – High Point, NC

April 14, 2023

In the QPE images below, upward blue shaded in arrows indicate an overestimation of rain, whereas downward red shaded arrows indicate an underestimation. In comparison with nearby KFCX and KRAX radars, Climavision's High Point radar displayed superior accuracy.



Location of Climavision's High Point, NC Radar



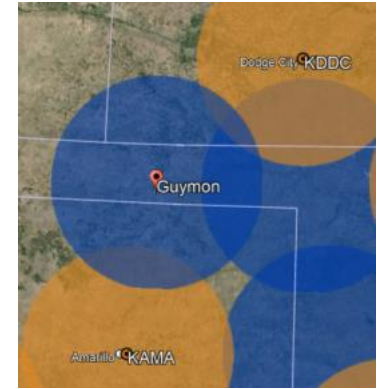
Oklahoma Fire

March 3, 2024

At the beginning of March, several blazes were burning across Oklahoma and Texas, fueled by dry conditions and high winds. One of these fires occurred near Climavision's radar site in Guymon, Oklahoma. Nearby NEXRAD radars did not pick up on the smoke, but Climavision's radar was able to detect smoke plumes across the OK Panhandle.



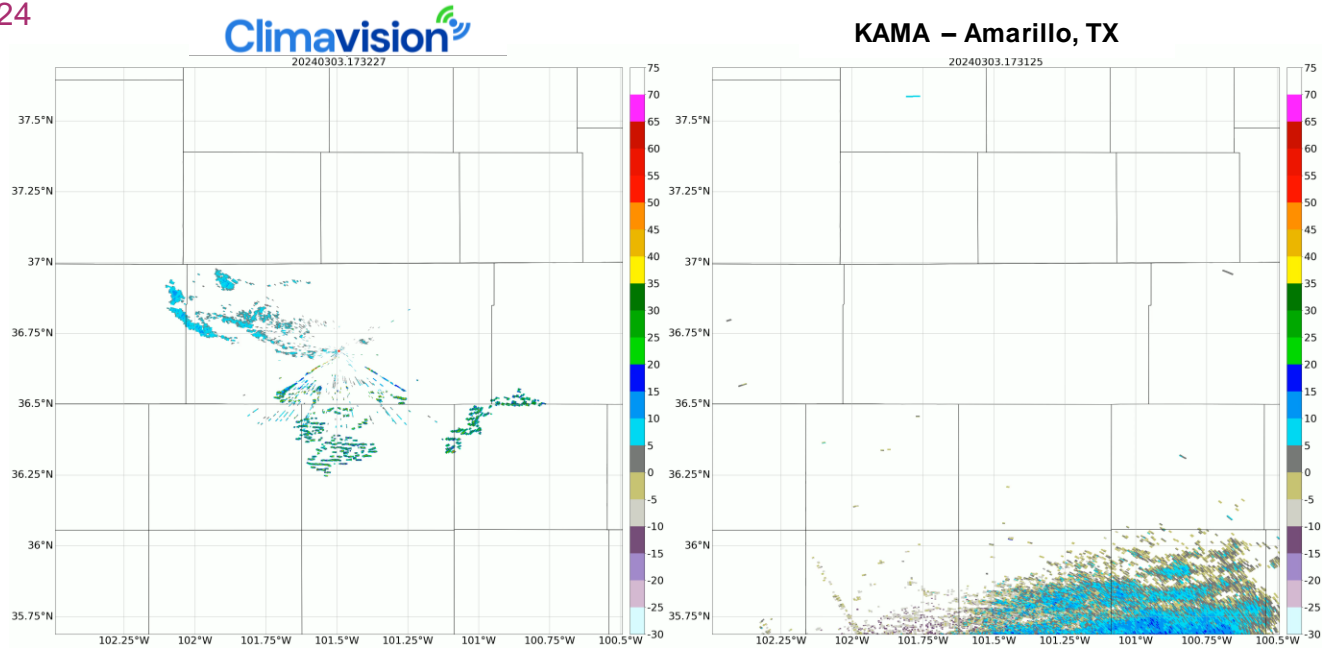
Photo of neighboring fires on the Texas panhandle
Courtesy of Brandon Sullivan, Climavision VP of Product



The next nearest radars to Guymon, Oklahoma are in Amarillo, TX and KDDC in Dodge City, KS. Their respective beam heights over Guymon are:
KAMA ~8.3k ft AGL
KDDC ~10.8k ft AGL

Oklahoma Fire

March 3, 2024



Climavision's radar imagery (left) clearly detects smoke plumes throughout Texas County and near the Oklahoma/Texas border. On the right-hand side, the KAMA NEXRAD in Amarillo, TX is not able to detect the smoke plumes that occur at ground level and just above.



Working together

Make use of these new radar observations!

- 01** Radar viewer for your EOCs
- 02** Integration into your dashboards
- 03** Regional trainings
- 04** Feedback on products – Help us improve!
- 05** Work together with NCEMA and the State

A circular graphic on the left side of the slide. It features a dark, stormy sky with a bright lightning bolt striking down over a green field at sunset or sunrise. The sky is filled with dark, heavy clouds, and the horizon shows a mix of orange and blue light. The field is a dark green color.

Thank you

CLIMAVISION.COM

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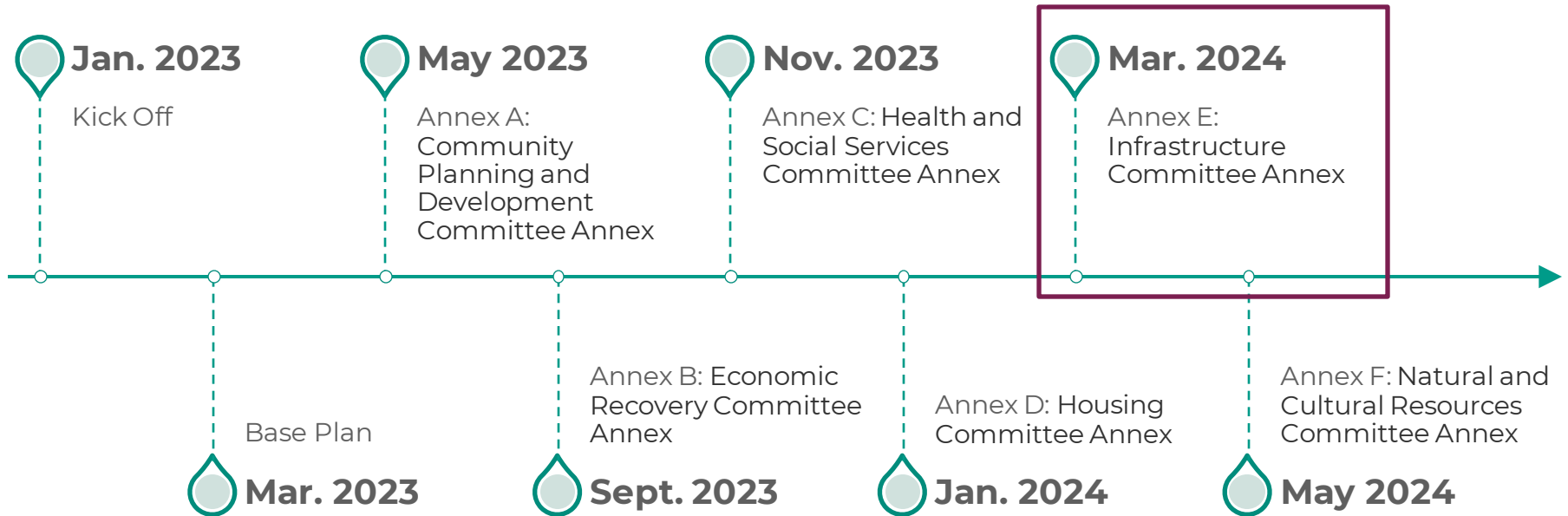
Questions?



Annex E

Pre-Disaster Recovery Plan Technical Assistance Workshop

Pre-Disaster Recovery Planning Timeline



Infrastructure Committee Annex

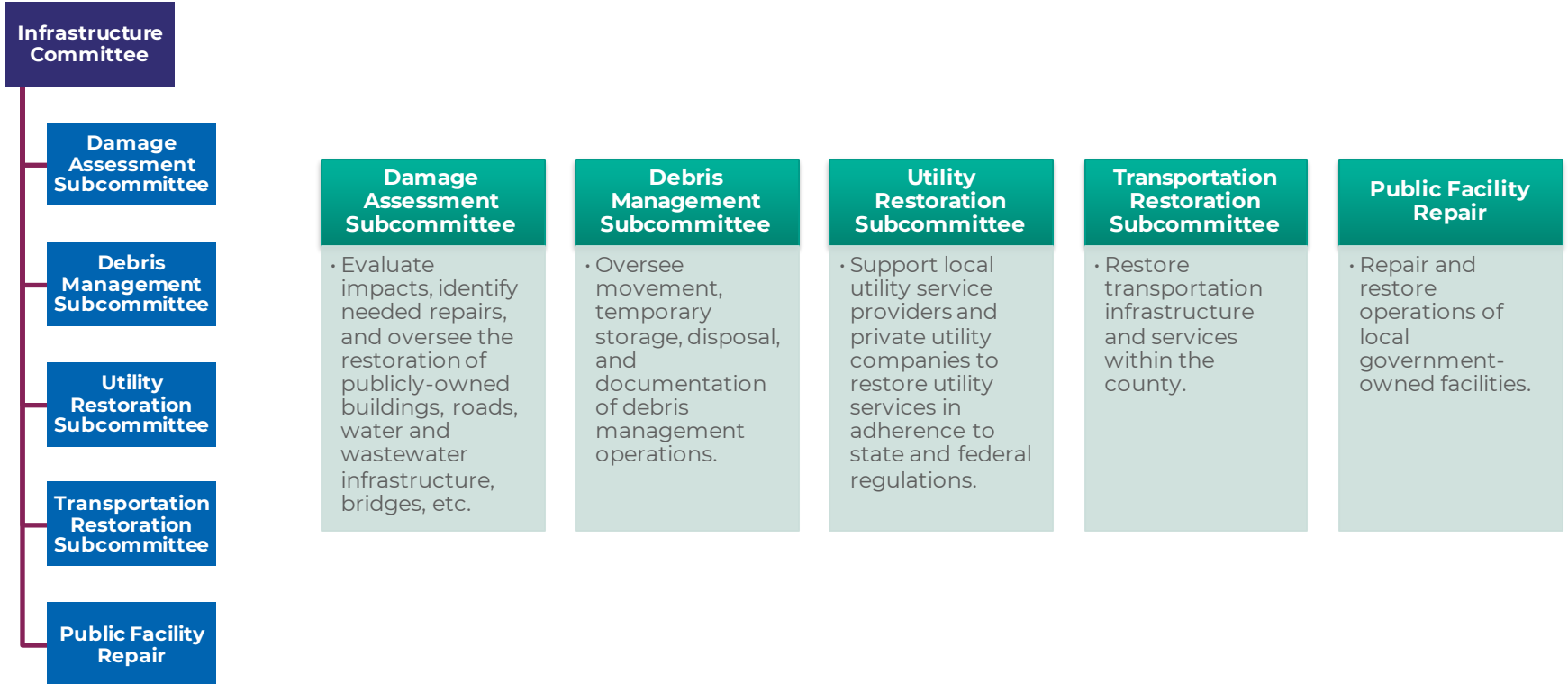
Mission

- Coordinate repairs and restoration of essential systems and structures.
- Oversee restoration and rebuilding of roads, bridges, and other public transportation infrastructure and infrastructure related to utilities.
- Coordinate short-term restoration of services as quickly as possible while also planning long-term rebuilding of the systems and structures related to infrastructure to improve the region's resiliency and efficiency.

Objectives

- Perform damage assessments of infrastructure assets and oversee repairs and reconstruction.
- Evaluate infrastructure recovery needs and required resources and capabilities.
- Oversee debris management.
- Restore mobility and critical services, including utilities and transportation.
- Consider long-term resiliency and the function of structures and systems during the rebuilding of public facilities and other infrastructure systems.

Subcommittees



Subcommittee Partners

To do: Identify a Lead and Support role for each cell.

Local/Regional Organization	Damage Assessment Subcommittee	Debris Management Subcommittee	Utility Restoration Subcommittee	Transportation Restoration Subcommittee	Public Facility Repair Subcommittee
Department of Public Works	Lead	Lead	Support	Lead	Support
Building Services/ Facility Department	Support	Support	Support	Support	Lead
Engineering Division	Support	Support	Support	Support	Support
Sanitation Services	Support	Support	Support	Support	Support
Communications and Information Technology Department	Support	Support	Support	Support	Support
Department of Transportation	Support	Support	Support	Support	Support
Office of Emergency Management	Lead	Lead	Support	Support	Support

Subcommittee Partners

To do: Identify a Lead and Support role for each cell.

Local/Regional Organization	Damage Assessment Subcommittee	Debris Management Subcommittee	Utility Restoration Subcommittee	Transportation Restoration Subcommittee	Public Facility Repair Subcommittee
Public Utilities <ul style="list-style-type: none"> • (e.g., municipal-owned, electric cooperatives) 	Support	Support	Support	Support	Support
Department of Water	Support	Support	Lead	Support	Support
Centralina Regional Council <ul style="list-style-type: none"> • Planning and Placemaking • Transportation and Mobility 	Support	Support	Support	Support	Support
Private Utilities <ul style="list-style-type: none"> • Area Electrical Companies • Area Gas Companies • Area Communications Companies 	Support	Support	Support	Support	Support

State & Federal Partners

North Carolina (Potential Recovery Partners)	Federal Recovery Partners
<p>Primary Agencies</p> <ul style="list-style-type: none">• Department of Environmental Quality• North Carolina Department of Agriculture and Consumer Services• North Carolina Cooperative Extension• North Carolina Department of Transportation• North Carolina Electric Membership Corporation• North Carolina Department of Public Safety, Division of Emergency Management• North Carolina Department of Public Safety, Office of Recovery and Resilience	<p>Coordinating Agency</p> <ul style="list-style-type: none">• U.S. Army Corps of Engineers <p>Primary Agencies</p> <ul style="list-style-type: none">• Federal Emergency Management Agency• U.S. Army Corps of Engineers• U.S. Department of Energy• U.S. Department of Homeland Security• U.S. Department of Transportation
<p>Supporting Organizations</p> <ul style="list-style-type: none">• North Carolina Advancing Energy Board• North Carolina Energy Policy Council• North Carolina Utilities Commission• North Carolina Wildlife Resources Commission	<p>Supporting Organizations</p> <ul style="list-style-type: none">• U.S. Department of Agriculture• U.S. Department of Commerce• U.S. Department of Defense• U.S. Department of Education• U.S. Department of Health and Human Services• U.S. Department of Homeland Security• U.S. Department of Housing and Urban Development• U.S. Department of the Interior• U.S. Department of the Treasury• U.S. Environmental Protection Agency• Federal Communications Commission• General Services Administration• Nuclear Regulatory Commission

Annex Elements

- Mission
- Objectives
- Partners
- Subcommittee Sections
 - Objective
 - Overview
 - Pre-Disaster Preparedness Activities
 - Transition Phase Activities
 - Short-term Recovery Activities
 - Long-term Recovery Activities
 - Information and Data Collection

Damage Assessment Subcommittee

- Objective
 - Evaluate impacts, identify needed repairs, and oversee the restoration of publicly-owned buildings, roads, water and wastewater infrastructure, bridges, etc.
- Overview
 - Comprises experts in the fields of transportation, transit, communications, water, power, gas, facilities, and general infrastructure.
 - Requires qualified and credentialed representatives from public works, roads, utilities, information technology, communications, etc.

Damage Assessment Subcommittee

Phased Activities

Pre-Disaster Preparedness

- Ensure that infrastructure-related GIS systems and staff can coordinate and share information easily.
- Annually review critical infrastructure system statuses

Transition Phase

- Maintain proper cost documentation processes.
- Continue damage assessments.
- Identify structures or areas for which access should be restricted.
- Prepare maps locating infrastructure damages, power outages, road closures, and other conditions.
- Identify priorities for repairs to damaged infrastructure.

Short-term Recovery

- Document costs of all infrastructure recovery efforts.
- Support the joint PDA.
- Provide local representatives, qualified engineers, and transportation for PDA teams. Determine the level of insurance coverage for affected structures.
- Review damage assessments of individual resources to understand damage by neighborhood.

Long-term Recovery

- Document costs of all infrastructure recovery efforts.
- Coordinate engineering surveys of major damage, identify repair and reconstruction needs, and estimate associated costs.

Debris Management Subcommittee

- Objective
 - Oversee movement, temporary storage, disposal, and documentation of debris management operations during disaster recovery.
- Overview
 - Requires experts and equipment to execute debris removal, transfer, and disposal.
 - Maintains meticulous cost documentation to ensure federal reimbursement for debris management costs.

Debris Management Subcommittee

Phased Activities

Pre-Disaster Preparedness

- Create a Disaster Debris Removal Plan.
- Designate responsible departments and staff to oversee debris removal.
- Locate potential staging sites and determine permit requirements.
- Execute and manage stand-by debris removal contracts.

Transition Phase

- Document costs of all infrastructure recovery efforts.
- Activate debris management contract (if applicable) and oversee implementation of debris-removal operations.
- Conduct roadway and public right-of-way debris removal.

Short-term Recovery

- Implement and follow proper documentation processes.
- Coordinate debris removal activities.
- Provide information on proper disposal and recycling programs and processes to residents and businesses.

Long-term Recovery

- Document costs of all infrastructure recovery efforts.
- Continue to coordinate debris removal activities.
- Oversee debris disposal site capacity issues.
- Coordinate with agencies responsible for clearing debris from waterways, as necessary.

Utility Restoration Subcommittee

- Objective
 - Support local utility service providers and private utility companies to restore water, wastewater, telecommunications, electricity, natural gas, and other utility services per the plans of individual infrastructure holders and in adherence to state and federal regulations.
- Overview
 - Includes experts in telecommunications, information technology, power, gas, and water who can monitor repairs by qualified engineers, work crews, and contractors in order to resume services.
 - Close coordination with private sector companies providing these services is critical, as is the timely and accurate conveyance of public information.

Utility Restoration Subcommittee

Phased Activities

Pre-Disaster Preparedness

- Conduct recovery planning and exercises with private sector utility providers.
- Pre-identify critical assets and equipment for the region.
- Pre-plan communications infrastructure repair processes.
- Work with energy providers to identify priority customers.
- Develop a regional energy restoration plan.
- Establish plans for fuel distribution and supply for critical service providers during recovery.
- Establish a mapping program that tracks the operational status of water and wastewater conveyance lines.
- Develop a plan for the temporary distribution of potable water across the region.
- Evaluate alternatives to and establish policy direction for the potential bypassing of wastewater into local water bodies.
- Develop a plan for providing portable or composting toilets for residents and businesses.
- Establish a post-disaster code that allows the use of portable and composting toilets.

Utility Restoration Subcommittee

Phased Activities

Transition Phase

- Continue coordination of response-phase power restoration activities and support utility companies as requested.
- Identify priority areas for restoration of systems that support the safety and welfare of vulnerable populations.
- Provide utility restoration timelines and service outage information to the public.

Short-term Recovery

- Continue utility restoration activities and provide information on utility restoration timelines, service outages, and utility payment relief programs to the public.

Long-term Recovery

- Coordinate repairs, reconstruction, and restoration of critical utilities infrastructure.
- Identify hardening and mitigation opportunities to incorporate into reconstruction plans.
- Encourage investment in redundant assets to maintain communications and supply temporary service.
- Manage capital projects, as needed.

Transportation Restoration Subcommittee

- Objective
 - Restore transportation infrastructure and services within the jurisdiction, including local and state-owned roads, bridges, and public transit systems.
- Overview
 - Monitor operations of qualified engineers, work crews, and contractors to repair and restore the service of roads, highways, bridges, and public transit.
 - Focus on appropriate prioritization of repairs to ensure the safety and well-being of responders and the public.
 - Ensure the community is informed of the status of the various transportation systems throughout the recovery process.

Transportation Restoration

Subcommittee Phased Activities

Pre-Disaster Preparedness

- Develop and manage a list of transportation infrastructure POCs.
- Identify priority routes for transporting commodities into the jurisdiction.
- Establish processes for coordination and communications to reopen routes ASAP.
- Engage major employers to identify transportation interdependencies that impact business supply chains.
- Encourage major employers to include workforce transportation in business continuity plans.

Transition Phase

- Document costs of all infrastructure recovery efforts.
- Coordinate repairs and interim provisions to establish safe ingress and egress routes for response vehicles and equipment.
- Provide ongoing public status updates on a timeline for re-entry.
- Conduct priority repairs to inroads for critical facilities to support continuity of supply chains and public re-entry into the area.
- If road capacity is constrained, limit access by private vehicles and/or work with local bus networks to expand public transit service and add additional routes.

Transportation Restoration Subcommittee Phased Activities

Short-term Recovery

- Document costs of all infrastructure recovery efforts.
- Coordinate repairs and interim provisions to establish safe ingress and egress routes for response vehicles and equipment.
- Provide ongoing status updates on the accessibility of roads and bridges and a timeline for re-entry.
- Conduct priority repairs of inroads critical facilities to support continuity of supply chains and public re-entry into the area.
- If road capacity is constrained, limit access by private vehicles and/or work with local bus networks to expand public transit service and add additional routes.
- Consider alternative uses for existing transportation infrastructure.
- Complete repairs to local roads through public works and contract support.
- Support engineering surveys of major damage, identify repair and reconstruction needs, and estimate associated costs.
- Coordinate procurement and contracting for significant repairs that exceed local capabilities.

Long-term Recovery

- Continue proper cost documentation of all infrastructure recovery efforts.
- Coordinate Public Assistance projects, as needed.
- Support engineering surveys of major damage, identify repair and reconstruction needs, and estimate associated costs.
- Coordinate procurement and contracting for significant repairs that exceed local capabilities.
- Identify hardening and mitigation opportunities to incorporate into reconstruction plans.
- Coordinate repairs and reconstruction of roads and bridges.
- Provide ongoing updates on the status of transportation infrastructure and public transit service.
- Integrate sustainable transportation strategies into recovery efforts and identify opportunities to support multi-modal transportation systems.
- Manage capital projects, as needed.

Public Facility Repair Subcommittee

- Objective
 - Coordinate efforts to repair and restore operations of local government-owned facilities.
- Overview
 - Requires city/county staff who are familiar with government buildings and other city and county owned facilities such as jails, event halls, and museums.
 - This team should include local government staff, such as general services and facilities management, who oversee maintenance and operations of facilities.

Public Facility Repair Subcommittee

Phased Activities

Pre-Disaster Preparedness

- Develop and manage an inventory of public buildings and identify POCs.
- Maintain COOP plans for all government buildings.
- Conduct assessments of public buildings to identify mitigation measures and include as part of the current Hazard Mitigation Plan.

Transition Phase

- Document costs of all infrastructure recovery efforts.
- Implement departmental COOP/COG plans and relocate to alternate facilities to resume essential government functions.

Short-term Recovery

- Document costs of all infrastructure recovery efforts.
- Continue implementation of departmental COOP/COG plans as long as necessary.
- Complete minor repairs to facilities through existing city and county maintenance staff.
- Provide ongoing updates to the public about the timeline for reestablishing operations.

Long-term Recovery

- Document costs of all infrastructure recovery efforts.
- Coordinate Public Assistance program activities.
- Provide the public with periodic updates on facility status.
- Conduct engineering surveys to identify repair and reconstruction needs, and estimate associated costs.
- Coordinate procurement and contracting for significant repairs.
- Identify hardening and mitigation opportunities.
- Coordinate and manage Public Assistance projects, as needed.

Action Items

- Evaluate templated structure; modify as needed
- Identify lead and support agencies
- Complete template
- Identify strategy to begin working on each subcommittee's pre-disaster recovery activities

Next Workshop



Workshop #8 Partners
May 15, 2024

Annex F: Natural and Cultural Resources Annex

- Environmental Remediation and Restoration Partners
- Community Arts and Recreation Partners
- Historic Preservation Partners
- Agriculture Partners

Questions?

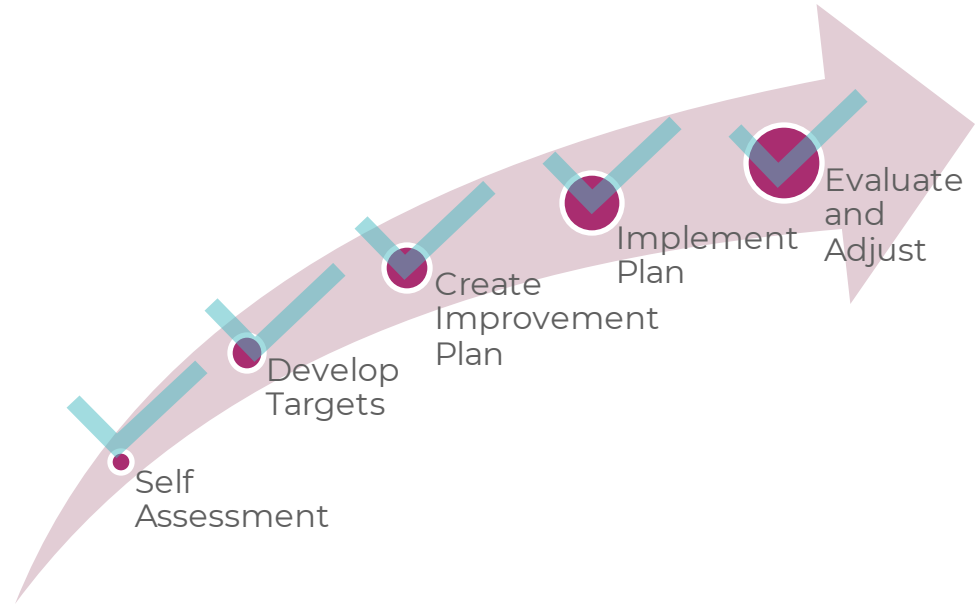




Recovery Capability Development

Roadmap to Resilient Recovery Workshop

Resilience Roadmap



Assessment Validation

Roadmap	Resilient Recovery Roadmap		Program Implementation Self-Assessment					Assessment Validation	
			Not Identifiable	Limited Activity	Active Program	Robust Program	Best Practice	Document in 1-3 sentences why you chose that score.	
Roadmap	Recommended Activities	Suggested Elements	0	1	2	3	4		
Part 1: Organizing	Organize Local Leadership	Champions identified and engaged in program				3		<i>[Use this space to provide a few sentences about why you chose this score. Please provide specifics about programs, activities, and efforts that support the scoring.]</i>	
	Involve the Whole Community	Whole Community representatives identified and engaged					4		
	Establish Coordination Methods	Voluntary Organizations Active in Disaster (VOAD) developed and engaged			2				
		Local Emergency Planning Committees Community Resilience Committees			2				
Part 2: Recovery Planning	Assess Capabilities and Threats	Stakeholder Preparedness Review (SPR)			2				
		Threat and Hazard Identification and Risk Assessment (THIRA)			2				
		Hazard Vulnerability Assessment			2				
	Create Recovery Plans	Long-Term Recovery Plan developed		1					
		Metrics for successful recovery established		1					
		Recovery goals determined		1					
	Integrate Hazard Mitigation with Recovery	Mitigation actions integrated with recovery programs	0						
	Prioritize Projects	Recovery priorities determined			2				
		Additional prioritization considerations				3			
	Implement Resilient Systems	Implementing resilient systems approach			2				
Integrate Approach to Recovery Programs	Implementing integrated recovery approach		1						
Part 3: Managing Recovery Programs	Identify Recovery Staffing	Recovery staffing identified			2				
	Manage Financials	Finance Department engaged in recovery programs				3			
		Recovery financial plan developed		1					
		Supporting Whole Community financial resilience	0						
	Leverage Available Resources	Existing recovery resources identified and engaged			2				
	Pursue Grant Opportunities	FEMA grant opportunities assessed				3			
		Other grant opportunities assessed				3			
	Implement Improvement Process	Application developed/ submitted			2				
Improvement process implemented				2					
Determined recovery program success factors Regularly assess progress and implement improvements					3				
Total:			0	7	22	18	4		
Recovery Program Self-Assessment Score *							1.89		

* A score of 2 indicates an active recovery program. The score is determined by adding up the value of all of the indicated elements and dividing that number by the total number of elements.

Assessment Validation

Assessment Validation

Document in 1-3 sentences why you chose that score.

[Use this space to provide a few sentences about why you chose this score. Please provide specifics about programs, activities, and efforts that support the scoring]

[Roadmap_Self-Assessment_20240103.xlsx \(sharepoint.com\)](#)

Roadmap Overview

- **Submitted**

- Cabarrus
- Concord
- Iredell
- Rowan
- Union

- **Past Due**

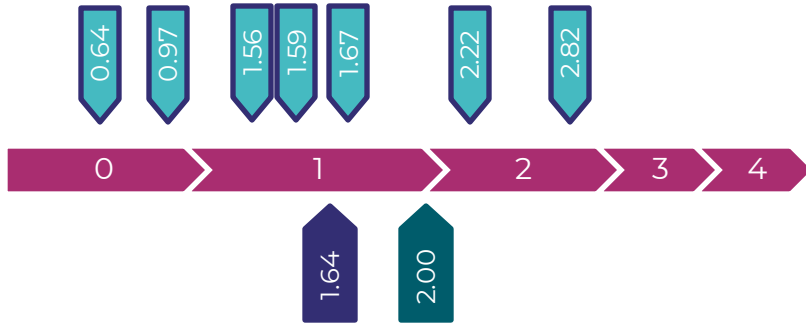
- Anson
- Mecklenburg
- Lincoln
- Monroe
- Stanly
- Gaston

**NON-RESPONSIVE
= NO UPDATES,
NO IMPROVEMENT**

Late Submission Accepted until COB 3/29/2024

Review of Self-Assessment

2022 - Assessment

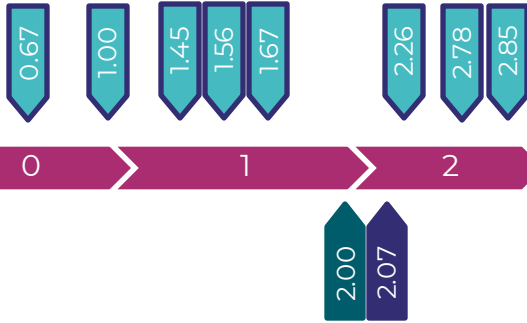


Roadmap	Resilient Recovery Roadmap		Program Implementation Self-Assessment				
			Not Identifiable	Limited Activity	Active Program	Robust Program	Best Practice
	Recommended Activities	Suggested Elements	0	1	2	3	4
Part 1: Organizing	Organize Local Leadership	Champions identified and engaged in program		1	2	4	
	Involve the Whole Community	Whole Community representatives identified and engaged		3	2		2
	Establish Coordination Methods	Voluntary Organizations Active in Disaster (VOAD) developed and engaged	2	2	1	2	
		Local Emergency Planning Committees Community Resilience Committees	3	4	4	2	1
Part 2: Recovery Planning	Assess Capabilities and Threats	Stakeholder Preparedness Review (SPRR)	1	2	2	1	1
		Threat and Hazard Identification and Risk Assessment (THIRA)			2	3	2
		Hazard Vulnerability Assessment			2	2	3
	Create Recovery Plans	Long-Term Recovery Plan developed	2	3	2		
		Metrics for successful recovery established	2	3	2		
	Integrate Hazard Mitigation with Recovery	Recovery goals determined	1	3	3		
		Mitigation actions integrated with recovery programs	2	3	1		1
	Prioritize Projects	Recovery priorities determined	1	1	5		
		Additional prioritization considerations	2	1	2	1	1
	Implement Resilient Systems	Implementing resilient systems approach		4	2		1
Integrate Approach to Recovery Programs	Implementing integrated recovery approach	1	5			1	
Part 3: Managing Recovery Programs	Identify Recovery Staffing	Recovery staffing identified	1	2	3		1
	Manage Financials	Finance Department engaged in recovery programs	1	2	1	2	1
		Recovery financial plan developed	2	4	1		
	Leverage Available Resources	Supporting Whole Community financial resilience	3	4			
		Existing recovery resources identified and engaged	1	1	5		
	Pursue Grant Opportunities	FEMA grant opportunities assessed	1	1	2	2	1
		Other grant opportunities assessed	1	1	1	3	1
	Implement Improvement Process	Application developed/submitted	1	2	3		1
Improvement process implemented		2	1	4			
Determined recovery program success factors		2	3	2			
	Regularly assess progress and implement improvements	2	3	2			
Total:			34	59	56	22	18
Recovery Program Self-Assessment Score *			1.64				

* A score of 2 indicates an active recovery program. The score is determined by adding up the value of all of the indicated elements and dividing that number by the total number of elements.

Roadmap Progress

2023 - Assessment

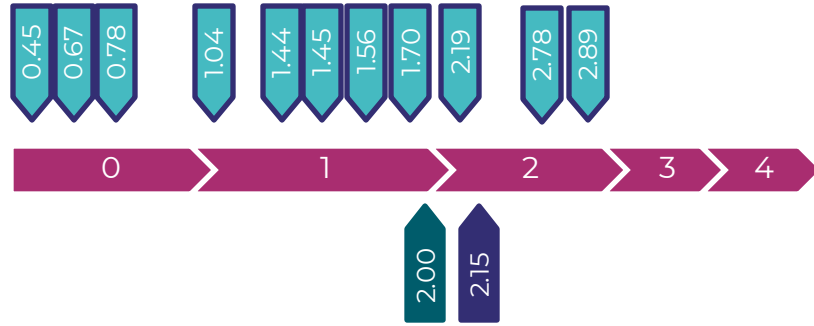


Roadmap	Resilient Recovery Roadmap		Program Implementation Self-Assessment					
			Not Identifiable	Limited Activity	Active Program	Robust Program	Best Practice	
Roadmap	Recommended Activities	Suggested Elements	0	1	2	3	4	
Part 1: Organizing	Organize Local Leadership	Champions identified and engaged in program	1	2	4	4	0	
	Involve the Whole Community	Whole Community representatives identified and engaged	0	4	5	0	2	
	Establish Coordination Methods	Voluntary Organizations Active in Disaster (VOAD) developed and engaged	2	3	1	4	0	
		Local Emergency Planning Committees	1	0	6	2	2	
		Community Resilience Committees	6	4	0	1	0	
Part 2: Recovery Planning	Assess Capabilities and Threats	Stakeholder Preparedness Review (SPR)	3	2	4	1	1	
		Threat and Hazard Identification and Risk Assessment (THIRA)	0	0	3	6	2	
			Hazard Vulnerability Assessment	0	0	4	4	3
	Create Recovery Plans	Long-Term Recovery Plan developed	5	3	2	1	0	
		Metrics for successful recovery established	4	4	2	1	0	
		Recovery goals determined	3	4	3	1	0	
	Integrate Hazard Mitigation with Recovery	Mitigation actions integrated with recovery programs	2	6	1	1	1	
			Recovery priorities determined	3	1	6	1	0
	Prioritize Projects	Additional prioritization considerations	4	2	4	0	1	
			Implementing resilient systems approach	1	4	4	0	1
Implement Resilient Systems	Integrate Approach to Recovery Programs	2	6	1	0	1		
		Implementing integrated recovery approach	2	6	1	0	1	
Part 3: Managing Recovery Programs	Identify Recovery Staffing	Recovery staffing identified	3	3	3	0	2	
		Finance Department engaged in recovery programs	2	4	1	2	2	
	Manage Financials	Recovery financial plan developed	6	2	3	0	0	
		Supporting Whole Community financial resilience	4	6	1	0	0	
	Leverage Available Resources	Existing recovery resources identified and engaged	1	2	6	2	0	
		FEMA grant opportunities assessed	0	1	5	3	2	
	Pursue Grant Opportunities	Other grant opportunities assessed	0	2	3	5	1	
		Application developed/submitted	2	2	5	0	2	
	Implement Improvement Process	Improvement process implemented	4	2	4	1	0	
		Determined recovery program success factors	4	4	2	1	0	
Regularly assess progress and implement improvements		4	4	3	0	0		
Total:			67	77	86	41	23	
Recovery Program Self-Assessment Score *			2.07					

* A score of 2 indicates an active recovery program. The score is determined by adding up the value of all of the indicated elements and dividing that number by the total number of elements.

Roadmap Progress

2024 - Assessment



Roadmap	Resilient Recovery Roadmap		Program Implementation Self-Assessment					
			Not Identifiable	Limited Activity	Active Program	Robust Program	Best Practice	
Roadmap	Recommended Activities	Suggested Elements	0	1	2	3	4	
Part 1: Organizing	Organize Local Leadership	Champions identified and engaged in program	1	3	2	5	0	
	Involve the Whole Community	Whole Community representatives identified and engaged	0	5	4	0	2	
	Establish Coordination Methods	Voluntary Organizations Active in Disaster (VOAD) developed and engaged	3	3	1	4	0	
		Local Emergency Planning Committees	1	0	6	2	2	
		Community Resilience Committees	6	4	0	1	0	
Part 2: Recovery Planning	Assess Capabilities and Threats	Stakeholder Preparedness Review (SPR)	3	1	5	1	1	
		Threat and Hazard Identification and Risk Assessment (THIRA)	0	0	4	5	2	
	Create Recovery Plans	Hazard Vulnerability Assessment	0	0	5	4	2	
		Long-Term Recovery Plan developed	4	4	2	1	0	
		Metrics for successful recovery established	4	4	2	1	0	
	Integrate Hazard Mitigation with Recovery	Recovery goals determined	2	6	2	1	0	
		Mitigation actions integrated with recovery programs	3	5	0	2	1	
	Prioritize Projects	Recovery priorities determined	2	2	6	1	0	
		Additional prioritization considerations	3	3	4	0	1	
	Implement Resilient Systems	Implementing resilient systems approach	1	2	6	0	1	
	Integrate Approach to Recovery Programs	Implementing integrated recovery approach	1	6	2	0	1	
	Part 3: Managing Recovery Programs	Identify Recovery Staffing	Recovery staffing identified	1	4	3	1	2
		Manage Financials	Finance Department engaged in recovery programs	1	3	3	2	2
Recovery financial plan developed			6	3	2	0	0	
Supporting Whole Community financial resilience			3	5	4	0	0	
Leverage Available Resources		Existing recovery resources identified and engaged	0	1	8	2	0	
		FEMA grant opportunities assessed	0	1	4	4	2	
Pursue Grant Opportunities		Other grant opportunities assessed	0	2	2	6	1	
		Application developed/submitted	1	3	4	0	2	
Implement Improvement Process		Improvement process implemented	3	3	4	1	0	
	Determined recovery program success factors	3	5	1	2	0		
	Regularly assess progress and implement improvements	3	5	3	0	0		
Total:			55	83	89	46	22	
Recovery Program Self-Assessment Score *			2.15					

* A score of 2 indicates an active recovery program. The score is determined by adding up the value of all of the indicated elements and dividing that number by the total number of elements.

Improvement Planning Insights

<i>Roadmap Element</i>	<i>Improvement Target</i>	<i>Implementation Approach</i>
Create Recovery Plans	Develop a Long-Term Recovery Plan that established goals and metrics for successful recovery by the completion of the RRC Recovery Planning Workshop.	Attend RRC Recovery Workshops, Participate in the Recovery Technical Assistance, Promote Recovery with peers and potential stakeholders.
Integrate Mitigation Actions with Recovery Programs	While developing the Pre-Disaster Recovery Plan with the RRC Workshop (2023-2024), review the Hazard Mitigation Plan (HMP) actions and align as many of the activities as possible to identify efficiencies in funding, staffing, and resources.	Review the HMP mitigation actions in a joint session with the Long-Term Recovery Committee (LTRC) and Local Emergency Planning Committee (LEPC). Identify common efforts and align priorities. Update the HMP and the LTRP accordingly.
Manage Financial Recovery	Develop a Financial Recovery Plan that that involves the finance department and support the whole community resilience by the completion of the RRC Financial Recovery Program.	Participate in the RRCs Financial Recovery Program.
Pursue Grant Opportunities	Identify, assess, and apply for state and federal grant opportunities that are offered to municipalities in support of mitigation and recovery goals, during the 2023-24 grant cycle.	Discuss local mitigation needs with multiple departments and select the most appropriate grant path. Participate in the RRC Grant workshops.

Questions?

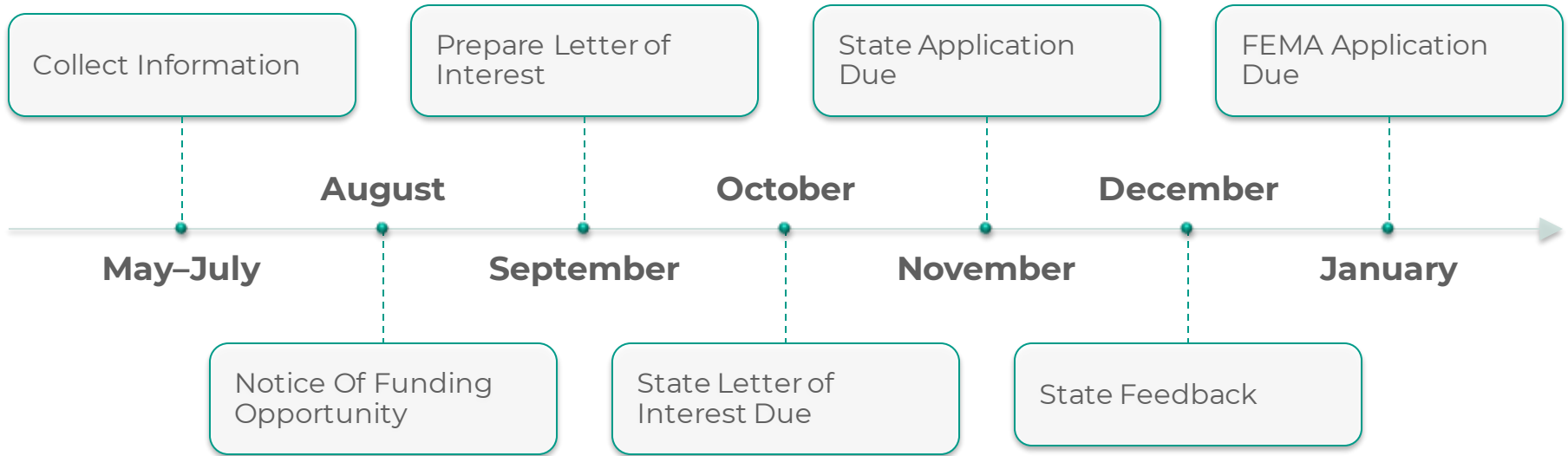




Grant Capability Development

Grant Workshop

Typical Grant Application Cycle



Grant Overview



Phase: May – July



Information Collection



Projects



Prioritization

Poll Question

Raise your hand (in Teams) if you are planning on developing a grant application this year?

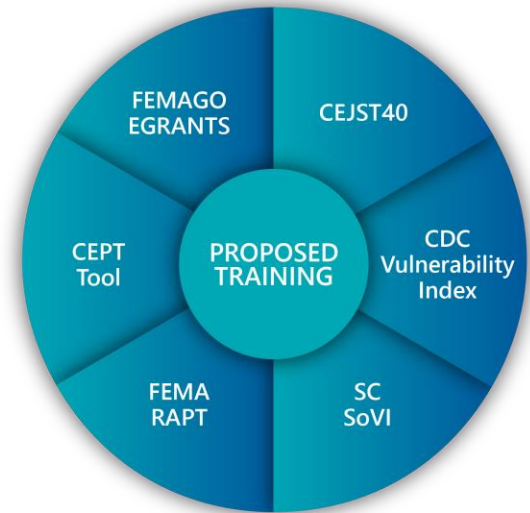
Put into the chat which grants you are most likely going to pursue.

Keys to Success

- **Establish Accounts in all State and Federal Grant Systems**
 - SAM.GOV
 - FEMAGO (go.FEMA.gov)
 - State System EMGrants.nc.gov
- **Develop and Submit Application to State**
 - FEMAGO
 - Family of SF-424
 - *A-B for non-construction*
 - C-D for construction
 - Funding Match Letter and Maintenance Agreements
- **Information Collection – Who, What, Why, When and Where**
 - Collect as much relevant technical information as possible such as:
 - Partners
 - Lifelines
 - Building Codes
 - Nature Based Solutions
 - Future Conditions

Information Collection

1. Gather any studies or reports that have been done on the project you want to initiate.
2. Look to see if there are any disadvantaged, or underserved populations.
3. How will the project reduce the risk to climate change.
4. Have you included any nature-based solutions.
5. Look up the population that will be affected by the Mitigation project in total.
6. Know the who, when, why, what, and how of the project.
7. Check the jurisdictions building codes for information on nature based solutions, hazard mitigation, etc.
8. Ensure your jurisdictional leaders are on board to do the project.



Focus Thoughts

- How does your MHMP Identify mitigation priorities that could be supported by Federal Grants?
- As we enter the budget planning cycle, how does your capital budget account for mitigation project spending (e.g. 25% funding match)?
- Does your community comprehensive plan and codes intersect with resiliency and hazard mitigation?

Grant Workshops Schedule



Grant Workshop Action Items

- Grant Preparation
- Review Your Mitigation Actions
- Select the action you want to move forward on
- Ensure you have buy-in
- Gather all studies, reports

Questions?





Next Steps

Action Items

- Climavision
 - .
- PDRP
 - Evaluate templated structure; modify as needed
 - Identify lead and support agencies
 - Complete template
 - Identify strategy to begin working on each subcommittee's pre-disaster recovery activities
- Roadmap
 - Submit Late Assessments by 3/29
- Grants
 - Grant Preparation
 - Review Your Mitigation Actions
 - Select the action you want to move forward on
 - Ensure you have buy-in
 - Gather all studies, reports

Next Meeting

- May 15th, 2024 @ 10am

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THANK YOU

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