

Ridge to River

# Rebuilding for Resilience

Western North Carolina

A Convening Report

April 17, 2026

Hosted By



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*Rebuilding for Resilience*



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## Digital Assets: PowerPoints, Case Studies

**Discloser:** This report utilized AI as a tool for summaries, clarity, and topic categorization of recorded transcripts and session notes. All content was reviewed and edited by humans for accuracy and relevance.



## Executive Summary

**Ridge to River: Rebuilding for Resilience WNC** was a one-day peer-to-peer regional convening held on **April 17, 2026**, at the Land of Sky Regional Council in Asheville, North Carolina. Sponsored by EPA and planned with federal, state, regional, nonprofit, philanthropic, and academic partners, the event brought together Western North Carolina recovery and resilience practitioners to share lessons from Hurricane Helene, identify ongoing barriers, and connect communities with practical tools and funding resources.

The meeting surfaced a clear dual narrative: **Western North Carolina's recovery has been marked by extraordinary collaboration, ingenuity, and mutual aid, but communities continue to face major systemic barriers**—especially around housing, funding gaps, administrative burden, local capacity, infrastructure repair, and the transition from immediate recovery to long-term resilience.

A major theme was the strength of **relationships and regional coordination**. Participants repeatedly emphasized that local governments, nonprofits, churches, businesses, grassroots groups, Councils of Government, state and federal partners, and philanthropic organizations have worked together in unusually strong and cooperative ways. The five western Councils of Government were especially recognized for helping communities navigate FEMA Public Assistance, grant administration, staffing shortages, technical assistance, and regional coordination. Land of Sky Regional Council alone submitted more than **\$100 million in grant applications** after the storm, illustrating both the scale of need and the intensity of local recovery work.

The meeting also placed current recovery efforts in the context of **20 years of resilience-building** in North Carolina. Presenters described how long-standing federal, state, regional, and local partnerships have produced tools such as the North Carolina Resilience Exchange, climate data resources, and technical assistance networks. These investments helped the region respond more effectively to Helene, while also revealing the need for additional resources to move from recovery into long-term implementation.

The most persistent challenge discussed was the **funding gap**. Hurricane Helene caused an estimated **\$60 billion in damages** across western North Carolina. Federal assistance to date totals approximately **\$7 billion**, or about **12% of estimated damages**, while philanthropic contributions total about **\$1.4 billion**. Even combined, available resources fall far short of projected recovery needs. Participants also emphasized that funding programs are often fragmented, slow, reimbursement-based, and difficult for smaller communities to navigate.

**Housing** remains one of the region's most difficult recovery issues. State-supported volunteer housing programs have helped complete more than **650 homes**, but demand greatly exceeds available funding; applications for one \$28 million program totaled more than **\$83 million**. Many residents remain displaced, temporary housing remains insufficient, affordable housing is limited, and some households do not fit neatly into existing eligibility categories.



Infrastructure recovery has shown important progress, including road and bridge repairs, water and wastewater investments, reopening of Highway 64 at Bat Cave, and ongoing work on the Blue Ridge Parkway. However, major needs remain. Water and wastewater infrastructure needs are estimated at **\$1.3 billion**, with **\$861 million** awarded and a remaining gap of roughly **\$655 million**.

Participants also noted unresolved debris, damaged structures, streambank restoration needs, and the challenge of clearly communicating when repairs are temporary rather than permanent.

A repeated concern was the lack of funding for the **planning, engineering, and design work** required before construction can begin. The NC Flood Resilience Blueprint presentation emphasized the need to build a full project pipeline—from risk assessment and project concept through feasibility, design, engineering, and construction. Participants described a “planning-funding catch-22”: communities need plans to compete for implementation funding, but often lack the resources or capacity to develop those plans.

The peer-to-peer exchange surfaced common successes and barriers from across the region. **Successes** included collaboration and mutual aid, stronger Long-Term Recovery Groups, home repair and winterization progress, infrastructure repair, grant funding secured or submitted, local leadership, and technical assistance from regional partners. **Barriers** included funding and reimbursement delays, housing shortages, staff burnout, local government and nonprofit capacity constraints, grant complexity, permitting and compliance burdens, communication gaps, unresolved infrastructure needs, and continuing impacts to tourism and small businesses.

The convening also reinforced the need for **multi-hazard resilience**. While flooding remains central, participants emphasized the need to address wildfire risk, landslides, debris, streambank instability, and ecosystem recovery together. U.S. Forest Service representatives described proactive wildfire planning after Helene, including modeling fuel loads from downed trees and pre-positioning resources before fires broke out.

Breakout sessions focused on **practical recovery and resilience implementation strategies**, including post-buyout open space, resilient stormwater solutions, plans and ordinances, emergency preparedness, resilience hubs, and Red Cross flood preparedness training. The final funding session connected participants to the School of Government recovery funding portal, the NC Resilience Exchange, and other grant resources. Success stories from Hendersonville, Hot Springs, and Rebuild Haywood illustrated the value of stacking funding sources, filling federal gaps with state or philanthropic resources, and sharing lessons across communities.

Overall, the convening affirmed that Western North Carolina has made **meaningful recovery progress** through collaboration, local leadership, and technical assistance. At the same time, the region remains in a long-term recovery phase with **significant unmet needs**. The **clearest priorities** are to close funding gaps, simplify grant processes, invest in local capacity, support housing recovery, fund planning and design work, and embed resilience into every stage of rebuilding. Western North Carolina’s strongest asset is its network of people and institutions working together; sustaining that network will require flexible funding, clearer systems, and continued commitment to community-centered resilience.



Figure 1 Participants used one word to describe WNC's greatest strength during recovery

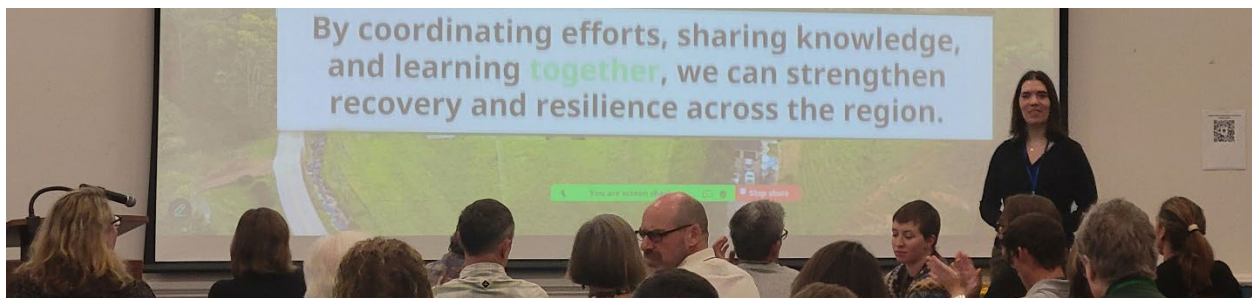
## Opening Context Presentations

After a welcome from Drew Parker, U.S. EPA Region 4, and a round of introductions, a series of presentations were given to set the stage for the convening. Notably, what is the purpose of this meeting, what's its role in the context of other meetings. Where are people today; what's been done; what needs to be addressed in the near, mid and long term. All the presentation slides, summarized below, can be found in this link: [Context Setting Presentation Regional Convening\\_Final.pdf](#)

### Context Setting: 20 Years of Resilience Building

Katie Lund and Matt Hutchins, from Fernleaf, presented the evolution of resilience initiatives over two decades including:

- Federal investments in climate data and resources starting after the 2004 floods
- State-level initiatives including the interagency leadership team and "Ask the Climate Question" program (2010)
- Development of the North Carolina Resilience Exchange with tools and guides for local implementation
- Partnerships between NOAA, US Forest Service, state agencies, and local governments





Matt presented a comprehensive overview of the evolution of resilience initiatives over two decades, emphasizing how partnerships at multiple scales have created an ecosystem of resources and support. The presentation highlighted how federal investments following the 2004 floods established a foundation for regional resilience work. These investments funded climate information programs and established the National Environmental Modeling and Analysis Center (NEMAC) at UNC Asheville, putting data and climate information directly into the hands of local decision-makers.

At the state level, the interagency leadership team formed 15 years ago initiated the "Ask the Climate Question" climate literacy program in 2010. This program encouraged state departments to consider climate resilience in all their planning and investments, from stormwater management to infrastructure development.

These federal and state resources helped form the North Carolina Resilience Exchange, which now provides a comprehensive set of tools, guides, and resources that flow down to the regional and local level. Regional entities like the Councils of Government use these resources to provide technical assistance to communities, which in turn supports grassroots organizations doing on-the-ground recovery and long-term resilience planning.

Matt emphasized that this 20-year story is fundamentally about partnerships - between NOAA, US Forest Service, state agencies, regional councils, and local governments. These partnerships have created the capacity, tools, and funding mechanisms that enable communities to respond effectively to disasters and build long-term resilience.

## **Regional COG Support**

Mary Roderick (Land of Sky Regional Council) provided an extensive overview of the key role played by the five western Councils of Government (Land of Sky, High Country, Foothills, Southwestern Commission, and Western Piedmont) in supporting disaster recovery:

- Direct technical assistance and FEMA PA (Public Assistance) support
- Grant administration across multiple programs
- Staff capacity support for jurisdictions experiencing personnel losses
- Over \$100 million in grant applications submitted by Land of Sky alone
- Immediate response efforts including supply distribution hubs
- Coordination of preliminary engineering and architecture reports through Southwestern Commission

### ***Immediate Response and Ongoing Support***

In the immediate aftermath of Hurricane Helene, the Land of Sky Regional Council building served as a major supply distribution hub. The entire conference room was filled with supplies, and staff members - including the executive director - drove throughout the region delivering critical resources to communities in need. This early response quickly transitioned into sustained, comprehensive support across multiple areas.

### ***Technical Assistance and Capacity Building***

The COGs provide day-to-day support through FEMA Public Assistance (PA) administration, grant management across every conceivable program, and direct staffing support for jurisdictions that experienced personnel losses. Mary noted that many local government employees either retired in the aftermath of Helene or were recruited to other levels of government (including the Governor's office), creating significant capacity gaps that COGs help fill.

### ***Grant Application Volume***

Mary shared significant numbers about the scale of grant work: Land of Sky's team alone has submitted over \$100 million in grant applications since the storm. In just one three-month period, the team submitted 28 different applications totaling \$35 million across programs including HMGP, every state grant program, FEMA PA, State Revolving Fund, and CDBG-DR. Mary described the last three months of the previous year as "totally a blur" due to this intensive application work.



### ***Specialized Regional Coordination***

The Southwestern Commission coordinated a particularly important program: preliminary engineering and architecture reports through a regional initiative. This program, led by Hillary Sherman (North Carolina Economic Development Administration, EDA), provides critical cost estimates that jurisdictions need before they can even submit grant applications - addressing a catch-22 where communities need funding to develop plans, but need plans to apply for funding.

### ***Integration with Ongoing Work***

Mary emphasized that COGs haven't stopped their pre-existing work to focus on recovery. Instead, they've integrated recovery efforts with ongoing projects and planning initiatives. For example, Land of Sky was already working on Laurel Park's comprehensive plan before the storm, but pivoted to incorporate recovery needs while continuing the planning process.

### ***Inter-COG Collaboration***

The five western COGs meet regularly to coordinate their recovery work and share strategies. They also meet with broader partners including the NC Association of County Commissioners, League of Municipalities, School of Government, and the Governor's Office. This unprecedented level of coordination has created efficiencies and works toward no community falling through the cracks.

Mary concluded by emphasizing that if communities' needs aren't being met, they should reach out to their COG: *"We are here to serve our jurisdictions and our communities. If there's a service that you need, and it's a need that's not being met, come to the COGs, and we will make it happen."*

## Flood Resilience Blueprint Program

Melanie Lander, French Broad River Basin lead for the North Carolina Flood Resilience Blueprint Program (Department of Environmental Quality), presented:

- Developing a river basin action strategy for flood resilience
- Working with communities to identify project and policy priorities
- Currently serving 3 sub-basins: Pigeon, French Broad, and Nolichucky
- Expected expansion to additional western NC areas pending legislative budget approval
- Building a project pipeline from conceptualization through design, feasibility studies, and construction

### Program Approach and Philosophy

The Flood Resilience Blueprint is developing a river basin action strategy that gathers priorities directly from communities - both projects and policies oriented around long-term flood resilience. Melanie emphasized the importance of linking local and regional goals while communicating to the legislature what makes flooding in western North Carolina unique and why it requires dedicated resources and support.

### Building the Project Pipeline

A key insight Melanie shared is that while funds for project implementation may be made available through grant programs, they don't always consider the many steps required to get a project to the construction phase. The Blueprint program is working to build a complete pipeline that includes:

- Conceptualizing projects by understanding data, risk, and vulnerability
- Assessing priorities at the community scale
- Identifying which jurisdictions are interested in pursuing specific initiatives
- Funding design, engineering, and feasibility studies
- Moving projects through to construction and implementation

This comprehensive approach addresses one of the major gaps identified throughout the meeting: the lack of funding for planning and design work that must happen before construction funding can be accessed.





### **Current Service Area and Expansion Plans**

The Blueprint is currently working statewide in six pilot or demonstration basins. Western North Carolina has one demonstration basin - the French Broad - which includes three sub-basins: Pigeon, French Broad, and Nolichucky. Melanie expressed optimism that when the General Assembly passes the budget in the upcoming legislative session, the program could expand to cover additional areas throughout western North Carolina.

### **Community Engagement Process**

Over the coming months and throughout the calendar year, Melanie plans to work directly with local governments, non-profits, and other interested organizations to develop long-term flood resilience goals. These can be either projects or policies. The priorities submitted by communities, as well as potential funding strategies, will be incorporated into the action strategy and communicated directly to the General Assembly as the needs of the region.

## **Governor's Recovery Office Update**

Veronica Butcher, Budget & Policy Officer, Governor's Recovery Office for Western NC provided a comprehensive overview of recovery status. Her slides are in the overall presentation above. Below is a summary of her combined presentation narratives, both the context setting and the presentation later in the day on Navigating the Funding landscape,

[FinalNavigatingResources\\_04\\_17\\_26.pdf](#), and in particular the Governor's Phase 3 Budget Request <https://bit.ly/FederalHeleneRequest>

### **The Funding Gap Reality**

Veronica opened with sobering numbers: Hurricane Helene caused an estimated \$60 billion in damages across western North Carolina. Federal assistance to date totals approximately \$7 billion - only 12% of the total damage estimate. Philanthropic contributions have been extraordinary, totaling about \$1.4 billion, but even combining all federal and philanthropic funding, the total represents less than one-third of projected recovery needs.

She emphasized that while the philanthropic response has been unprecedented and will never be fully quantified, the gap between available resources and actual needs remains enormous. The Governor's office collaborates closely with philanthropic partners to identify funding gaps and coordinate responses.

### **Funding Snapshot**

- Total estimated damages: \$60 billion
- Federal assistance to date: \$7 billion (12% of damages)
- Philanthropic contributions: \$1.4 billion
- Total funding available: Less than one-third of projected needs



## Housing: Complexity and Challenge

Veronica described housing repair, rebuilding, and relocation as extraordinarily complex, involving multiple overlapping systems including FEMA Individual Assistance, the federally-funded state-run Hazard Mitigation Grant Program (HMGP), and HUD programs through Commerce's new Division of Community Revitalization. She noted this complexity increased dramatically when federal funding mechanisms changed substantially during the recovery period.

The state appropriated \$28 million for volunteer organizations (particularly Habitat for Humanity and Baptist on Mission) to work on housing repair and reconstruction. This funding has been almost entirely awarded and has already resulted in more than 650 completed homes, with many more in progress. Significantly, the state received applications totaling over \$83 million for this program - a clear indication that demand far exceeds available resources. The Governor's Phase 3 budget request includes additional funding to address this gap. See page 12 for more on the request.

## Infrastructure Accomplishments and Remaining Needs

Veronica highlighted several infrastructure successes:

- **Highway 64 at Bat Cave:** Reopened ahead of schedule and under budget - a point of pride for a state government project
- **Private Roads and Bridges:** The state is running the most significant private road and bridge repair program in state history. Already, 421 households have regained emergency access through 74 completed projects, with 173 more projects well underway and the vast majority currently under construction
- **Blue Ridge Parkway:** Work proceeding seven days a week in collaboration with the U.S. Department of Interior, with additional federal resources committed. The goal is completion by the end of 2026, though Veronica acknowledged this is ambitious given the scale and the involvement of federal agencies

On water and wastewater infrastructure, Veronica noted she had to update her slides the morning of the presentation because the State Water Infrastructure Authority had just met in Hendersonville and fully awarded all remaining EPA State Revolving Fund money. Total awards for drinking water and clean water systems damaged by Helene now stand at \$861 million from combined federal and



state sources. However, the total identified need is \$1.3 billion, leaving a gap of \$655 million - which is why both the Governor's state and federal budget requests include additional water infrastructure funding.

The Capital Grants Program administered by the Office of State Budget Management moved very quickly to get funding out into communities. North Carolina was the first state to be granted EPA funding for water/wastewater infrastructure after 2024 disasters and the first to begin awarding that funding, demonstrating effective state-level coordination and responsiveness.

### ***HMGP Application Processing Delays***

Of 683 Hazard Mitigation Grant Program (HMGP) applications submitted by the state to FEMA, only 132 have been approved as of April 2026. Some applications have been pending since April 2025 (one full year), representing significant delays in property buyouts and mitigation efforts. The state submitted applications to FEMA faster than ever before, and the first review of those applications took almost a year for approval for the first rounds. The Governor's office continues to push FEMA for faster processing, with some progress noted when officials visit Washington D.C.

### ***Analysis of Resilience Funding***

Veronica presented a detailed analysis of where government funding (federal and state, not including insurance or philanthropy) has been directed for resilience-related recovery:

- Transportation, Roads, and Bridges: Average of \$1.9 billion (where resiliency is allowed as part of projects or has direct resilience benefits)
- Water Infrastructure: Average of \$305 million
- Repair, Replace, Debris Removal (including sediment): \$75 million
- Technical Assistance, Wildfire, Emergency Services: Average of \$20 million
- Landslide Prevention, Mitigation, Mapping, Dam Safety, Local Capacity, and Weatherization: Average of only \$8 million

Critically, Veronica noted that resilience planning received zero funding in the analysis - a gap she highlighted for philanthropic partners in the room and a priority in the Governor's recommendations.

### ***How the Recovery Office Incorporates Resilience***

Veronica outlined several ways the Governor's Recovery Office works to ensure resilience is embedded in recovery efforts:

- Using resilient building materials in all reconstruction projects
- Applying the latest engineering standards and materials in road projects
- Coordinating extensively across federal and state agencies
- Deploying recovery coordinators throughout the region who work directly with communities on applications and problem-solving, ensuring resilience considerations are included in HMGP applications and Economic Development Administration grants



The recovery coordinators serve as on-the-ground resources who can help navigate the complex funding landscape and ensure communities don't miss opportunities to build resilience into their recovery projects. They are available throughout the region to help with problems, issues, grant applications, and understanding where funding is and what needs to be included.

## Governor's Resilience Subcommittee Recommendations

Veronica explained that the Governor's Advisory Committee on Western North Carolina established a Resilience Subcommittee (co-chaired by Mary Roderick) that began meeting at the end of the previous year. The subcommittee quickly determined that deep policy and funding conversations were needed to inform the Governor's budget recommendations. The full advisory committee adopted the subcommittee's recommendations in early March and transmitted them to the General Assembly.

### *Key recommendations include:*

- **Multi-Hazard Mitigation Funding:** Instead of separate applications for flood, wildfire, and landslide programs, create a unified program where applicants can apply for one, two, or all three hazards. The state would then match projects to appropriate funding sources, similar to how the State Water Infrastructure Authority operates. This would dramatically reduce the burden on small jurisdictions with limited staff capacity
- **Streamlined Grant Processes:** Reduce complexity and create more standardized requirements across programs
- **Rolling Application Deadlines:** Particularly for capital grants, eliminate fixed deadlines that communities might miss due to delays in FEMA determinations or other factors beyond their control. The OSBM Capital Grants Program had a deadline, money was fully awarded, but many communities did not have their FEMA determinations in time and missed the deadline
- **Stream Bank and Stabilization Restoration:** Critical for flood prevention efforts
- **Resilience Planning Funding:** Create dedicated funding for resilience planning, engineering, and design work - a huge unmet need with great opportunities for philanthropic partners
- **Temporary Housing Solutions:** Additional funding to address the critical housing crisis

Veronica encouraged attendees to share their stories with General Assembly members about why these recommendations matter, particularly as the legislature considers the budget in the upcoming short session starting next week.

### *Children, Families, and Economic Programs*

Many programs in the children and families category were critical immediately after the storm and are now wrapping up or will close out during the summer, particularly college and university emergency funding. However, ongoing needs remain around childcare access and affordability, rent assistance, and utility support due to difficult economic conditions. The Governor's budget includes items to address these continuing needs.



On economic recovery, more than 6,000 small business grants and loans have been provided through combined state, federal, and philanthropic efforts. The response has been extremely well-received, with significant feedback about the need for additional support. The Governor's Phase 3 request includes additional small business grant funding and forgivable loans, as well as \$10 million for Visit NC tourism promotion to help the hard-hit tourism sector recover.

## **Governor's Phase 3 Budget Request**

Veronica outlined key elements of the upcoming state budget proposal, with the General Assembly short session starting the week following the meeting:

| Category          | Key Components                                                                                                                                         |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Housing           | Additional funding for small business forgivable loans, temporary relocation assistance, volunteer organization grants                                 |
| Infrastructure    | Additional water/wastewater funding to address \$655M remaining need                                                                                   |
| Resilience        | Multi-hazard mitigation program (flood, wildfire, landslide combined), resilience planning funding, OSBM capital grants round 2 with rolling deadlines |
| Economic Recovery | Small business support, tourism promotion (\$10M for Visit NC)                                                                                         |
| Wildfire Risk     | Mitigation and fuel reduction programs                                                                                                                 |

### ***Federal Funding Request Highlights***

The federal funding request includes \$8 billion in additional HUD funding, \$540 million for EPA water infrastructure, and \$81.5 million for economic recovery. However, Veronica emphasized that even these substantial requests remain insufficient to meet the full scope of community needs.

### ***Unmet Needs and Community Engagement***

Veronica emphasized throughout her presentations that the Governor's office wants to hear from communities about unmet needs not covered in current proposals. She encouraged attendees to use index cards provided to give feedback, or through direct contact with recovery office staff. The office maintains close communication with recovery coordinators across the region specifically to identify gaps and urgent issues that need attention.

She concluded by reiterating the importance of community feedback and advocacy with the General Assembly on the budget priorities, particularly around the multi-hazard mitigation program, rolling deadlines for capital grants, resilience planning funding, and temporary housing solutions.



## Peer to Peer Exchange Session

The next session was designed for people to share stories of their experiences with response and recovery. People were asked to sit quietly and using post-it notes, jot down where have they seen success and achievements, and where have they experienced barriers or setbacks? After a few quiet moments, they were then asked to discuss and share at their tables for about 15-20 minutes. Next, in plenary the floor was opened up for people to share aloud, this lasted ~20-25 minutes.

From a transcription and analysis of the written post-it notes these are the topmost common themes.

### ***Most Common Success/Win Themes***

1. Collaboration and mutual aid
2. Formation and strengthening of LTRGs and grassroots groups
3. Home repair, winterization, and rebuilding progress
4. Infrastructure repair and public facilities recovery
5. Grant funding secured or submitted
6. Renewed focus on resilience and preparedness
7. Community engagement and local leadership
8. Technical assistance and regional coordination

### ***Most Common Challenges/Barriers Themes***

1. Funding gaps and reimbursement delays
2. Housing shortage and long-term displacement
3. Local government and nonprofit capacity
4. Grant complexity and administrative burden
5. Permitting, compliance, and red tape
6. Difficulty moving from response to long-term resilience
7. Data, communication, and resource navigation gaps
8. Burnout among staff, volunteers, and community leaders
9. Unresolved debris, damaged structures, and infrastructure needs
10. Economic recovery, tourism decline, and small business impacts



A grouping of the responses on post-its, by theme, can be found in **Appendix A**. The peer-to-peer plenary session after the at table discussions was a whole-room reflection period where attendees identified common successes, strengths, and challenges from their recovery experience following Hurricane Helene. This share-out was spontaneous, participant-led, and focused on surfacing raw insights before topic breakout sessions began.



### **Shared Successes and Strengths**

- **Collaboration over competition:** Participants described an unusually strong regional spirit of cooperation. Non-profits, COGs, and local governments have been sharing successful grant applications, reviewing one another's proposals, and issuing letters of support instead of competing for funds.
- **COG coordination and capacity:** The five western Councils of Government were praised for stepping into leadership roles—helping with FEMA PA, staffing, and grant management—and for routinely meeting together to ensure no community falls through the cracks.
- **Local mutual aid:** Numerous stories highlighted “neighbors helping neighbors.” Local residents with supplies, equipment, and informal communication networks saved lives when official systems were overwhelmed.
- **Grassroots organizing:** The Swannanoa Grassroots Alliance was specifically mentioned as an example of effective, community-driven recovery and advocacy.
- **Philanthropic recognition:** Direct Relief representatives noted that their national board had been impressed by the degree of inter-organizational cooperation in Western North Carolina compared with other disaster regions.

- **Rapid state response and proactive wildfire preparation:** Participants appreciated swift state action on infrastructure and the Forest Service’s early deployment of fire resources.
- **Shared learning networks:** The Western NC Disaster Case Management Network was cited as a productive bi-weekly peer forum offering both technical problem-solving and emotional support for case managers.



### **Common Challenges and Barriers**

- **Funding and processing delays:** Many spoke of long waits for FEMA HMGP approvals—only 132 of 683 applications approved as of April 2026—and chronic under-funding compared with the \$60 billion damage total.
- **Housing crisis:** The loss of buildable land, limited geography, and insufficient temporary housing left many displaced residents without viable relocation options.
- **Grant complexity and bandwidth limits:** Small jurisdictions struggled with differing program requirements and heavy documentation. Several urged the state to standardize checklists and streamline applications.
- **Planning-funding “catch-22”:** Communities cannot build without plans, yet lack funds to create those plans. Participants called for a dedicated stream for design and resilience planning.
- **Regulatory barriers:** Architects and planners cited North Carolina laws preventing more stringent local stormwater standards and lamented the removal of architects from the state Building Code Council.
- **Equity and representation:** One participant observed limited diversity in the room and urged inclusion of low-income, minority, and migrant-worker voices, noting examples of farm-worker communities providing unpaid emergency help.
- **Communication and expectation management:** Officials cautioned that messaging about “completed” roadwork should clarify when repairs are temporary to avoid public confusion.
- **Need for local recovery coordinators:** Several suggested every county should have a dedicated resilience or recovery manager to help residents navigate aid programs.
- **Maintaining open-space buyouts:** Discussion surfaced concern over future maintenance costs, liability, and the difficulty of stewarding scattered HMGP parcels across counties.



### **Wildfire Risk Management**

USDA Forest Service representatives James Melonas and Cavan Fitzsimmons described their proactive wildfire response in the months following Hurricane Helene (2024). As downed trees dried out over time, they created massive fuel loads and unprecedented fire risk. In January 2026—more than a year after the hurricane—the Forest Service ran models to assess the accumulated fuel loading and determine necessary staffing needs. Based on these projections, they pre-positioned resources on Friday before fires broke out Saturday—a decision that prevented catastrophic outcomes.

Overall, the Forest Service reported progress: 91% of trails and 92% of roads are now accessible, with \$750 million in agreements secured for fire preparedness and fuel reduction. The Good Neighbor Agreement with NC Forest Service is in final stages, enabling coordinated fire management across jurisdictions. Their story exemplified how sustained vigilance and data-driven planning turned a long-term threat into a managed response.

### **Takeaways**

This plenary exchange crystallized the region’s dual narrative: remarkable interagency and community collaboration contrasted with persistent systemic gaps—especially housing, planning support, and funding alignment. The energy and honesty of this mid-day sharing framed the topical breakout sessions that followed.



## Topic Breakout Groups

Mike Robinson of Summit Design and Engineering introduced the breakout topics session. His presentation set the stage for small-group discussions and guided participants in selecting which theme to join. Robinson’s goal was to help participants choose among several discussion topics and understand how each related to community recovery and resilience. Each breakout session would include a facilitator and a note-taker, but the emphasis was on peer discussion rather than lectures. Participants were encouraged to “vote with their feet”—starting in one group and moving between others as desired to share insights. Presentation: [breakout-session-overviews-041726.pdf](#)

### *Post-Buyout Open Space Opportunities*

What to do with parcels bought out via FEMA’s Hazard Mitigation Grant Program (HMGP) or other acquisitions. Themes are post-buyout land use for parks, wetlands, greenways, or temporary community activities such as markets or outdoor events. Emphasis on finding creative community-oriented uses that maintain floodplain benefits alongside recreational value. Breakout session notes in

#### **Appendix B.**

- Presentation: [open-space-management-041726.pdf](#)



### *Plans, Ordinances, and Codes for Community Resilience*

Aligning local plans—like hazard mitigation, comprehensive plans, and land use ordinances—to strengthen resilience. Discussion around plan integration, regulatory alignment, and opportunities to craft standalone resilience plans at the local scale. Breakout session notes in **Appendix C.**

- Presentation: [ordinances-and-codes-041726.pdf](#)



### *Resilient Stormwater Solutions*

Expanding use of green infrastructure and nature-based solutions (e.g., stormwater retention, wetlands, floodplain restoration). Encouraged exploration of related benefits—social, environmental, health, and economic—and case examples such as Asheville’s green roofs. Breakout session notes in **Appendix D.**

- Presentation: [stormwater-green-infrastructure-041726.pdf](#)

### **Emergency Preparedness Considerations**

Understanding emergency management's full cycle—preparedness, mitigation, response, and recovery. Participants could share examples of neighbor-to-neighbor response, lessons from local coordination, and strategies to prepare for future events. Breakout session notes in **Appendix E**.

- Presentation: [emergency-preparedness-041726.pdf](#)



### **Resilience Hubs**

How to design and implement community resilience hubs—safe, resource-equipped centers for emergencies, but that are also a full-time community asset in non-disaster times. Covered siting, available resources, and best practices. Breakout session notes in **Appendix F**.

- Presentation: [resilience-hubs-041726.pdf](#)



### **Red Cross Flood Preparation Training**

Presented by Amy from the American Red Cross as a train-the-trainer session. Tailored for Western North Carolina's non-evacuation context, focusing on educating residents through in-home visits or community workshops, providing emergency kits, and integrating a mental health component for post-disaster engagement. Trainers could later deliver the program locally with Red Cross materials and backpacks.

- Presentation: [red-cross-training-041626.pdf](#)

## **Funding Resources and Tools**

The final session after lunch was devoted to understanding the landscape of funding resources and tools. [FinalNavigatingResources\\_04\\_17\\_26.pdf](#) This information was consolidated in the Governor's Office Update section earlier in this report.

### **School of Government Funding Portal**

Amanda Stratton introduced a collaborative portal created by the Association of County Commissioners, League of Municipalities, School of Government, and western COGs. [https://ncrecoveryportal.com/funding-opportunities/?fp\\_sort=status\\_desc](https://ncrecoveryportal.com/funding-opportunities/?fp_sort=status_desc) This one-stop shop provides funding opportunities both current and coming soon, with content filterable by county and

area of expertise. The portal includes tools, training opportunities, and office hours, along with partner and agency contacts organized by region. While designed specifically for the Helene response, the platform will remain available for future disasters statewide.

### ***NC Resilience Exchange***

Mary Roderick highlighted the NC Resilience Exchange, <https://www.resilienceexchange.nc.gov/>, a comprehensive resource featuring a funding database for resilience-related opportunities. The database encompasses state, federal, and philanthropic funding sources and extends beyond disaster recovery to include long-term resilience programs. The platform provides tools and resources that have been developed over 20 years of resilience work.

### ***Grant Discovery Handout***

Mike Robinson introduced a funding resource guide this convening produced: [potential-funding-sources-041726.pdf](#), and which consists of one-page profiles for key grant programs, providing essential information including program purpose and focus areas, eligible applicants, funding ranges with minimum and maximum amounts, and key deadlines. Each profile includes QR codes linking directly to program websites, with color-coded formatting by level: federal programs in blue, state programs in red, non-profit and other sources in green, and local programs in teal.



## **Success Stories Shared**

### ***Town of Hendersonville***

The Town of Hendersonville demonstrated innovative funding coordination by using four different funding sources for a single floodplain restoration project: the Land and Water Fund, Water Resource Development Grant, Golden LEAF, and DWI Local Assistance for Small Infrastructure Investment. Land of Sky is providing grant management support for this multi-source project.

### ***Town of Hot Springs***

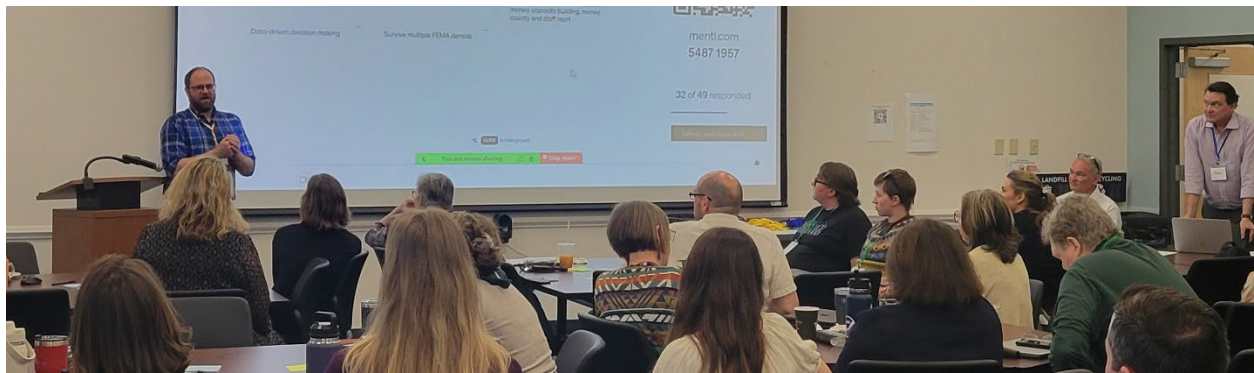
The Town of Hot Springs provided an example of creative gap-filling in wastewater treatment plant relocation. FEMA PA covered only the plant footprint, so the OSBM Helene Capital Grant Program filled the gap for full land acquisition. Similar needs have been identified for Marshall, demonstrating the importance of state funding to supplement federal limitations.

### **Rebuild Haywood**

Rebuild Haywood has been sustained through multiple funding sources, demonstrating the importance of diversified support. The organization started with a Southwestern Commission displaced workers grant, then received a Grow NC grant providing supplies and materials. A winterization grant from the Governor's Office was developed in response to specific community needs, supplemented by Lowe's corporate donation of gift cards. The organization now operates a home weatherization and hardening program for future storm preparedness and maintains a strong communication line with the Governor's Recovery Office.

### **Tips and Best Practices Shared**

- **Build relationships:** Connect with funding agency staff early and often
- **Tell compelling stories:** Include narratives in applications, not just data
- **Leverage multiple sources:** Stack different funding programs to complete projects
- **Seek technical assistance:** Use COG support for application development and grant management
- **Include local governments:** Add municipalities/counties to non-profit applications when appropriate
- **Share successes:** Offer letters of support and application reviews to other organizations
- **Collaborate not compete:** Partner on funding opportunities rather than competing
- **Use case studies:** Reference successful examples in applications



## Appendix A - Peer-to-Peer Exchange Results

What follows is a summary of the peer to peer exchange transcription and grouping of the contents of the post it notes participants wrote down before wider discussion.

### 1. Collaboration, Partnerships, and Community Networks

#### Successes

- Strong community collaboration across nonprofits, local governments, churches, businesses, grassroots groups, and agencies.
- Long-Term Recovery Groups have formed or strengthened across WNC.
- Pre-existing relationships helped recovery efforts move faster and more effectively.
- Mutual aid and neighbor-to-neighbor support were major strengths.
- Regional convenings helped connect practitioners, funders, communities, and technical assistance providers.
- COGs, nonprofits, local agencies, and state/federal partners are increasingly seen as resources.
- Examples noted:
  - Swannanoa Grassroots Alliance
  - Marshall Relief Alliance
  - Rebuild Haywood
  - Avery LTRG and SEARCH
  - MAA-Cat Co LTRG
  - Partnerships among local governments, nonprofits, churches, businesses, DOT, MPOs, COGs, and state agencies

#### Challenges / Barriers

- Coordination is still difficult to sustain beyond the immediate disaster response phase.
- Recovery efforts remain siloed across sectors and issue areas.
- Duplication of effort limits capacity.
- More trust-building and relationship-building are needed.
- “Who’s in charge?” remains unclear in many communities.
- Communities need better systems for connecting people to resources.
- Meeting/workshop fatigue and information overload are common.

### 2. Housing, Home Repair, and Displacement

#### Successes

- Many homes have been repaired, rebuilt, or winterized.
- Rebuild Haywood and other organizations moved quickly on repairs and winterization.
- Some communities reported completed home rebuilds and hundreds of households served.
- Private giving, philanthropy, churches, nonprofits, and neighbors helped meet urgent needs.



- Community Land Trust of WNC was established for permanently affordable homes.
- Several organizations supported home repair, bridge repair, debris removal, and private road/bridge design.

### **Challenges / Barriers**

- Housing remains one of the most intractable issues.
- Lack of affordable and available housing persists.
- Many people are still displaced 18+ months after the storm.
- Temporary housing and long-term affordable housing are both insufficient.
- Funding is needed for:
  - Major repairs by professionals
  - Mobile home replacement
  - Full home rebuilds
  - Housing materials
  - Private roads and bridges
- Some residents do not qualify neatly for available funding sources.
- Some people went into debt making repairs and may now be constrained by funding rules.
- Volunteer housing is also a barrier.
- Vacant and unrepaired homes, businesses, and damaged structures remain visible in many places.

## **3. Infrastructure, Public Facilities, Roads, Bridges, Utilities, and Debris**

### **Successes**

- Roads, bridges, trails, water/sewer systems, and other infrastructure have seen major progress.
- Many public infrastructure systems are operational again.
- Some infrastructure is being rebuilt stronger or with resilience in mind.
- FEMA Public Assistance approvals have been secured for difficult projects.
- Several communities reported:
  - Road repairs
  - Stormwater infrastructure repair
  - Debris removal
  - Demolition of substantially damaged structures
  - Expedited permitting
  - Water/sewer recovery
  - Backup power investments
  - Bridge repairs
- Public forest roads and trails are largely open/passable.
- The Town of Hot Springs noted upcoming relocation of the sewage treatment plant.
- Hendersonville Water & Sewer noted quick recovery and renewed focus on infrastructure investment.

### **Challenges / Barriers**

- Large infrastructure projects are expensive and can deplete local fund balances.
- Cash flow is a major challenge, especially for smaller towns and counties.
- Local governments struggle to front costs while waiting for reimbursement.
- Slow mitigation determinations delay rebuilding.
- Some roads are described publicly as “done,” when they are actually patched, usable, and still need more work.
- Debris, damaged buildings, and homes in creeks remain unresolved in some places.
- Streambank restoration, floodway work, and environmental permitting are difficult.
- Communities need disaster-specific guidance for post-storm clearing, restoration, and rebuilding.
- Backup communications, including radios for utilities, local governments, and responders, are still needed.

## **4. Funding, Grants, Reimbursement, and Financial Capacity**

### **Successes**

- Significant grant funding has been submitted, secured, or deployed.
- Examples included:
  - Over \$80 million in recovery grants submitted in one region.
  - Nearly \$5 million in direct financial assistance distributed.
  - Around \$18 million in grants for equitable recovery in housing, small business, and resilience.
  - FEMA PA approvals for several difficult projects.
  - Multiple federal, state, Red Cross, Grow NC, and other grants.
- Counties and communities have been connected to additional resources, technical assistance, and training.
- Some partners have been creative with match grants, responsive state programs, and philanthropic support.

### **Challenges / Barriers**

- Funding is the most repeated challenge across the notes.
- Local governments often lack matching funds.
- Reimbursement timing creates cash flow problems.
- Funding programs are fragmented and difficult to navigate.
- Some projects do not fit neatly into available funding programs.
- FEMA PA denials, HMGP processes, BCA/BCR requirements, and grant compliance create major burdens.
- Small communities may lack the tax base or fund balance to take on large projects.
- Philanthropic investment is still needed.
- Funding freezes have slowed or halted both short-term and long-term recovery.
- Small businesses and outdoor recreation assets need more support, especially as tourism remains down.

## 5. Capacity, Staffing, Burnout, and Administrative Burden

### Successes

- Some communities and organizations successfully scaled up quickly.
- Medical Reserve Corps and volunteer networks increased response capacity.
- AmeriCorps placements and nonprofit capacity helped support recovery.
- Technical assistance providers, COGs, and consultants helped fill some gaps.

### Challenges / Barriers

- Staff capacity is a major recurring barrier.
- Local governments are overwhelmed by:
  - Too many funding streams
  - Too many meetings
  - Grant administration
  - Compliance requirements
  - Project management workload
- Volunteer-led communities are struggling with burnout and limited capacity.
- Smaller counties and small towns face disproportionate burdens.
- Engineering, design, GIS, data, and planning capacity are limited.
- Heavy reliance on a few people creates burnout and sustainability risks.
- Communities need clearer guidance on when to bring in COGs, consultants, or outside support.

## 6. Planning, Resilience, Mitigation, and Preparedness

### Successes

- Many communities are now more focused on resilience, preparedness, and mitigation.
- Some towns are rewriting ordinances or planning more resilient projects.
- Communities are pursuing:
  - Flood preparation education
  - Resilience planning
  - Greenway feasibility studies
  - Community-driven designs
  - Small area plans
  - Joint multi-organization response systems
- Preparedness activities before the storm, such as deep-water rescue training, proved valuable.
- Local governments are more willing to learn from what happened.

### Challenges / Barriers

- Immediate stabilization needs make long-term planning difficult.
- Communities struggle to move from tactical response to strategic recovery.
- There is tension between rebuilding quickly and rebuilding for long-term resilience.
- NC laws and policies were repeatedly described as not fully supporting resilience goals.



- Local codes, funding rules, and agency goals may not align.
- Communities need:
  - Evacuation plans
  - Disaster management plans
  - Household resilience tools
  - Wildfire prevention planning
  - Flood and debris mitigation
  - Better resilience standards for everyday conditions, not just disasters
- Planning consensus is difficult in small towns and unincorporated communities.

## 7. Permitting, Policy, Red Tape, and Regulatory Barriers

### Successes

- Some towns expedited permitting and inspections.
- Black Mountain reported working closely with nonprofits and community organizations to move projects through permitting smoothly.
- Some communities are revising ordinances or building more resilient policies.

### Challenges / Barriers

- Bureaucratic red tape slows recovery.
- Permitting and logistical barriers remain significant.
- Grant compliance is burdensome.
- FEMA PA, HMGP, BCA/BCR, and other federal/state processes are complex and slow.
- There is a need for disaster-specific regulatory flexibility.
- Environmental requirements and floodway rules can make post-storm restoration difficult.
- Policy language such as “temporary” can affect what actions are allowed.
- Reports and public communications may oversimplify progress, creating confusion.

## 8. Data, Communication, Information Sharing, and Resource Navigation

### Successes

- Regional resource guides and DCM training documents were created.
- Partners have improved communication and referral systems.
- There is growing recognition of the need for shared data, resource navigation, and better decision-support tools.
- Public engagement and planning efforts have helped communities identify priorities.

### Challenges / Barriers

- Data organization remains a challenge.
- Some agencies have difficulty obtaining timely health and administrative data.
- Communities need better tools to identify funding sources and track resources.
- Misinformation disrupted help efforts and caused confusion.
- Rural digital divides, internet outages, and power outages made communication harder.
- People need clearer information about who to contact and how to access help.



- There is a need for better public communication about what “done” means in recovery work.

## 9. Community Engagement, Local Voice, and Equity

### **Successes**

- Community engagement remained strong in many places long after the storm.
- Grassroots advocacy groups formed quickly and sustained momentum.
- Communities demonstrated pride, mutual aid, and local knowledge.
- Local knowledge helped connect people to help.
- Community-driven planning and design were noted as successes.
- Several notes emphasized the importance of Appalachian identity, continuity, and non-gentrification.

### **Challenges / Barriers**

- Some communities struggle to get enough engagement to develop acceptable plans.
- Missing voices remain a concern.
- Vulnerable populations continue to fall through the cracks.
- Homeless and low-income residents need more resources.
- Migrant farmworkers and other underserved groups were mentioned as underused or underserved.
- There is concern that resilience and rebuilding could unintentionally worsen displacement or inequity.
- Some communities need help balancing community identity, continuity, and policy requirements.

## 10. Economic Recovery, Small Business, Tourism, and Community Assets

### **Successes**

- Some communities are planning for future economic recovery through community centers, parks, trails, greenways, beautification, and outdoor recreation assets.
- Regional airports, manufacturing readiness, and resource guides were noted as potential strengths.
- Partner collaboration around cleanup and long-term stewardship may support future recreation and tourism.

### **Challenges / Barriers**

- Tourism remains down in parts of WNC.
- Small businesses and outdoor recreation assets need more support.
- Damaged and vacant businesses remain in places like Swannanoa.
- Towns face loss of tax base and vacant property.
- Economic impacts to towns and businesses continue.
- Funding for business recovery and community asset restoration is limited.

## 11. Health, Mental Health, Social Services, and Human Needs

### **Successes**

- Psychological first aid was implemented in schools, elder communities, and the general community.
- Medical Reserve Corps and health volunteers were activated.
- Community health provider capacity was strengthened.
- Social determinants of health and just recovery work are being supported.
- Churches, neighbors, and local networks provided essential human support.

### **Challenges / Barriers**

- People still lack basic needs such as functioning septic systems, wells, housing, and access to services.
- Health is often absent from recovery and resilience conversations.
- Access to healthcare services and medications remains a concern.
- Mental health impacts are significant, especially for people directly affected by floods and landslides.
- Messaging about disaster impacts needs care; affected residents already know how bad the damage was.
- Homeless residents, students, and low-income populations were affected by transportation disruptions and housing unaffordability.

## 12. Environment, Forests, Trails, Rivers, and Natural Systems

### **Successes**

- Environmental and resilience groups are collaborating more.
- Partners are seeking multiple benefits across recreation, conservation, and environmental function.
- Trail and greenway development has continued, with interest in resilience toolkits.
- Forest sector partners secured research grants for decision-support tools.
- Cleanup and stewardship planning along the French Broad River were noted.
- Many trails and forest roads are open/passable.

### **Challenges / Barriers**

- Ecosystem recovery needs more attention.
- Wildfire prevention and forest recovery planning are needed.
- Forest landowners need clearer guidance after disaster damage.
- There is no single hub for forest owners to find resources.
- Disaster management, rehabilitation planning, resilient forest practices, and education are needed.
- Flood, fire, debris, landslide, and streambank hazards all need to be considered together.

## Appendix B – Post-Buyout Open Space Opportunities

### 1. Funding, Acquisition, and Demolition Process

Most communities are relying primarily, or exclusively, on **Hazard Mitigation Grant Program funding**, so HMGP is the central focus for acquisition planning. However, the process is still in early stages following Hurricane Helene. No Helene-funded property closings have occurred yet, though Buncombe County expects to begin its first closings in June.

Communities are facing several acquisition challenges:

- **Checkerboarding of acquired properties**, where some parcels are acquired while others nearby are not, making long-term land management more difficult.
- **Different funding programs have different eligibility rules**, which complicates acquisition strategy.
- **Floodplain and floodway boundaries are changing**, both because of updated mapping and because Helene physically changed some floodplain and geomorphic conditions.
- New preliminary Flood Insurance Rate Maps based on post-Helene LiDAR are expected this year.
- Some desired acquisitions are related to **landslide mitigation rather than flood mitigation**, but landslide-related properties may not qualify under certain post-disaster funding programs.
- Long-term planning is difficult because funding award decisions can take a long time, making it hard to know which properties will ultimately be available for future community use.

### 2. Long-Term Use and Maintenance Challenges

Once properties are acquired, communities face ongoing questions about how the land should be used, maintained, and governed.

A major concern is that many acquired properties are located in neighborhoods with **homeowners associations**, which may make the local government a participant in the HOA. Communities are exploring ways to avoid or manage this, including removing properties from the HOA during deed transfer or leasing properties back to the HOA for maintenance and neighborhood use.

There are also concerns about **liability**, especially for landslide-prone properties. Local governments may be hesitant to acquire these parcels if they could be held responsible for future downhill impacts.

Another key tension is around **public access and expectations**. There may be an assumption that acquired properties should become public amenities, but that may not always be desirable, safe, or the best mitigation use. Similarly, neighborhood residents may expect these properties to be



maintained as lawns, while more natural landscapes may provide greater hazard mitigation, stormwater, ecological, or resilience benefits.

Other long-term management issues include:

- High maintenance costs, especially for rural properties far from public works facilities.
- Loss of tax base at the same time that local governments take on new maintenance responsibilities.
- Difficulty reconciling local lawn or nuisance ordinances with naturalized public properties.
- Uncertainty about what uses are allowed under different funding programs.
- Desire for more flexibility in reuse options, though some of this may reflect a need for clearer guidance on what is already allowed.

### 3. Allowed Uses for HMGP-Acquired Properties

HMGP-acquired properties can support several types of long-term uses, including:

- Hazard mitigation
- Recreation
- Trails and greenways
- Natural resources management
- Unimproved parking areas
- Low-impact camping with warning systems
- Agriculture
- Limited public features or buildings

Some uses may require additional review or approval depending on design, impacts, or site conditions. Buildings, cultivation, and similar activities may need special consideration.

Leases are also allowed under HMGP, including leases to:

- Adjacent property owners
- Homeowners associations
- Conservation organizations
- Limited agricultural users

Temporary or mobile events may also be allowed and could generate revenue. Examples include food truck events, music events, and farmers markets.

### 4. Needs and Opportunities

Communities need more support in identifying and using **alternative funding sources** beyond HMGP and other post-disaster programs. There is also a need for technical assistance on long-term reuse, maintenance, governance, and best practices for acquired properties.



Proactive planning is especially important. Communities can reduce checkerboarding and improve long-term outcomes by identifying priority properties, developing acquisition strategies, and conducting owner outreach before or early in the acquisition process.

Key opportunities include:

- Planning acquisitions around long-term community and mitigation benefits, not just individual parcel eligibility.
- Coordinating closely with the state coordinating agency to improve applications and learn from other communities.
- Exploring how CDBG-DR and other programs may help activate or improve properties acquired through HMGP.
- Developing lease structures that clarify roles, maintenance expectations, liability, and allowed uses.
- Thinking creatively about multi-functional uses, since federal funding programs may not specifically prioritize or incentivize them.

A central takeaway is that **FEMA will not necessarily design creative, multi-benefit projects for communities**. Local governments and partners need to plan intentionally for acquired land to serve multiple purposes, such as hazard mitigation, recreation, ecological restoration, neighborhood amenities, stormwater management, and resilience.

## 5. Cross-Cutting Themes from the Discussion

Several broader themes emerged across the conversation.

### *Getting the right information to the right people*

Residents are more likely to support acquisition and long-term land management if they understand the process, know who is responsible, and have clear information about what will happen to acquired properties. Informed residents can become advocates rather than opponents.

### *Including the right voices in policy and planning*

Effective acquisition and land management require coordination among decision-makers, technical experts, community leaders, residents, state agencies, and potential land management partners such as land trusts or HOAs.

### *Building funding and governance structures for complex hazards*

Post-disaster recovery often involves overlapping hazards and system failures, but funding programs may be designed around a single hazard or narrow project type. Communities need governance and funding strategies that can address flood risk, landslide risk, infrastructure impacts, housing concerns, environmental restoration, and long-term resilience together.

## Appendix C – Plans, Ordinances, and Codes for Community Resilience

### 1. Participants and Areas of Interest

The group included state resilience staff, regional planners, local government representatives, nonprofit and CDFI partners, federal agency staff, design/planning professionals, and community volunteers. The discussion focused on how communities can better integrate flood resilience, preparedness, land use planning, infrastructure planning, and funding strategies.

- Nicole Goddard, NCDEQ State Resilience Office, participated from the state resilience perspective.
- Melanie Lander, NCDEQ State Resilience Office / Flood Resiliency Blueprint, described work to develop a regional flood resilience plan and expressed interest in policies and project pipelines that can support flood resilience.
- Chris Joyell, MountainTrue / Appalachian Design Center, brought experience from the Swannanoa Small Area Plan and planning work with Marshall and Hot Springs.
- Jane Margaret Bell, Land of Sky Regional Council, participated as Water Resources Manager.
- Adam Stein, NOAA, participated from a federal climate and resilience perspective.
- Kaitland Finkle, Land of Sky Regional Council, described planning work based mostly in Marshall, while also supporting other communities with flood prevention ordinance updates.
- Sam Ruard, LISC, described LISC’s role as a CDFI engaged in resilience and disaster response, including work with community-based organizations on organizational resilience plans and local resilience hub efforts.
- Ann Philip, Black Mountain Floodplain Administrator, said she was interested in learning more about this space and incorporating preparedness into planning processes, including water agreements and debris removal planning. She noted that Black Mountain has a very small staff and that more advance planning could have helped.
- Alison Smith, NC Department of Commerce, Main Street & Rural Planning, described the department’s economic development planning services, including one-to-two-year strategies, five-year planning services, and audits of existing plans and policy frameworks.
- Melissa Truesdale, musician, teacher, volunteer, and ETRG director, attended to connect, learn, and support community members.
- Anne Darby, Planning Director, Summit Engineering, facilitator
- Becca Garman, U.S. Environmental Protection Agency



## 2. Using Planning Tools to Embed Resilience

A central theme was the need and desire for more intentional **resilience planning**. The group discussed how resilience can be designed, structured, and embedded into existing planning tools rather than treated as a separate or one-time effort.

**State resilience participants** emphasized that communities should be thinking long-term and integrating resilience into stormwater management plans, comprehensive plans, and other local planning frameworks. The group noted that flood resilience projects need to be identified and supported in plans because this makes them more feasible and strengthens the case for funding.

A key idea was that **high-level plans are often not detailed enough to support specific funding requests**, while more detailed plans can create a clearer pathway from concept to project funding.

The group cited the **Veterans Park project** as an example of a project that combines improved water quality, stormwater management, greenway design, economic development, and broader community benefit.

## 3. Land Use, UDOs, Floodplain Standards, and Regulatory Constraints

The group discussed how land use tools, Unified Development Ordinances, stormwater ordinances, overlays, and floodplain standards can support resilience, but also how recent state-level policy changes may constrain local action.

The “**downzoning bill**” that went into effect in **December 2024** was identified as a major constraint on regional and local governments’ ability to increase stormwater management restrictions. The notes indicate that many jurisdictions are not addressing some resilience-related land use changes because of this bill.

The group noted that many communities have been working on **UDO updates**, but that state restrictions on resilience and building codes have tightened.

### Asheville

- The **City of Asheville’s UDO update** was discussed as an example where resilience is a major driver. The notes indicate that Asheville is incorporating a “light” comprehensive plan update into the UDO update while also fixing inconsistencies. Asheville is interested in building to higher standards, raising freeboard requirements for structures in the floodplain, and focusing on stormwater management, floodplain regulations, and development allowances.
- Asheville is also considering separating the stormwater ordinance from the UDO. The group discussed whether future climate scenarios are being considered. The answer was “not really,” though Asheville is looking to places like **Durham and Charlotte**, which have stronger regulations around flood modeling and projections beyond FEMA maps, using NOAA data.

### Brevard, Woodfin, and Fletcher



Several communities were mentioned as examples of stronger floodplain elevation or development standards.

- **Brevard** was noted for passing a floodplain ordinance years ago with a “no impacts” approach that limits where development can occur.
- **Woodfin and Fletcher** were identified as communities that increased freeboard requirements to approximately three to four feet.

#### **Swannanoa / Buncombe County**

- The **Buncombe County Small Area Planning effort in Swannanoa** was discussed as a potential platform for policy changes. The group noted that the county is looking into a flood protection overlay beyond FEMA 500-year floodplain standards.
- This possible overlay could restrict certain uses and include evacuation-related requirements. The group discussed the value of adopting overlays strategically now, especially in areas with higher modeled hazard potential.

## **4. Community Rating System, Insurance, and Flood Risk Tools**

The group discussed the **Community Rating System under the National Flood Insurance Program** as a tool communities can opt into. CRS can directly reduce flood insurance costs for residents and can help improve a community’s rating, though participants noted that it involves significant paperwork.

The discussion also covered additional flood risk data and tools that can help communities plan beyond minimum regulatory standards.

**Melanie Lander / NCDEQ Flood Resiliency Blueprint** described the Flood Resiliency Blueprint tool, which is expected to integrate flood conditions and post-Helene modeling. The target release for the tool was noted as summer 2026, with post-Helene modeling available in Fall 2026. The tool is intended to help guide future risk modeling.

Other data sources and tools mentioned included:

- NC Flood Advisory flood data, which expands the area of flood risk beyond regulatory models.
- Additional state-supported research, including a river basin research repository.
- NOAA data for flood modeling and future climate-informed planning.

## **5. Connecting Plans to Capital Projects and Funding**

A recurring theme was the importance of tying resilience goals to specific projects and funding requests.

The group asked how communities can integrate policies into **Capital Improvement Plans** and connect broad goals to specific funded projects. Black Mountain was offered as a relevant example.

**Ann Philip, Black Mountain Floodplain Administrator**, described how Black Mountain updated its stormwater master plan to align with its broader master plan. The town outlined projects it wanted to pursue and used that chain of plans to advocate for state funding. This reinforced the idea that communities need a clear line from:

- **planning goals → adopted plans → project lists → budget requests → funding applications**
- The group also referenced the **APA Plan Integration Scorecard** as a tool for integrating resilience across plans.

## 6. Design Assistance, Volunteers, and Community-Driven Planning

The group discussed how volunteers and professional planning/design organizations can support resilience planning efforts.

Participants noted that volunteers can engage in community planning processes and that **NC APA** and planning/design organizations can provide useful support.

**Chris Joyell, MountainTrue / Appalachian Design Center**, described the Appalachian Design Center's role in surveying existing plans and providing planning and design assistance through volunteers who work in communities. The ADC approach was described as community-driven: the community shares its vision, and volunteers do not arrive with a predetermined solution.

**Appalachian Design Center** was also connected to a project in **Clyde**, where buyout parcels are being combined and redesigned into a public project. The notes indicate that the Flood Resiliency Blueprint is funding that effort.

The group also noted that **MountainTrue houses the Appalachian Design Center** and brings a strong advocacy background, while the advocacy and design functions remain separate.

## 7. State, Federal, and Partner Programs

The discussion identified several programs and support opportunities that could help communities advance resilience planning.

### Land of Sky Regional Council

- **Land of Sky Regional Council** was noted for helping communities align plans, including work in **Hot Springs before the storm** and **Flat Rock after the storm**.
- Land of Sky is also interested in incorporating **hydrologic analysis** into planning efforts and evaluating modeled flood risk areas. The group noted that if a community wants to restore a floodplain, it needs technical studies to support that work.

### NOAA Climate Smart Initiative

**Adam Stein, NOAA**, was connected to discussion of a **NOAA-funded Climate Smart Initiative**, with an RFP expected in the fall. The program was described as offering **\$100,000 planning grants**, with funding going to consultants who would support communities in climate-informed planning.

## **NC Wildlife Green Toolbox**

The **NC Wildlife Green Toolbox** was mentioned as a technical assistance program that supports planning for biodiversity and green infrastructure enhancements.

## **LISC**

**Sam Ruard, LISC**, described LISC’s experience funding resilience initiatives, including \$400 million in resilience work over the past 20 years. LISC has experience passing funds through to small businesses and NGOs and supporting nonprofits in developing organizational resilience plans.

Sam also discussed the **NC Resilience Bond**, described in the notes as a state insurance program or insurance-of-last-resort model involving a \$600 million bond to fund initiatives. LISC is exploring how to leverage that model elsewhere and is working with UNC to provide insurance guidance to other states.

LISC is also exploring **green bank structures** as a potential resilience finance tool.

## **8. Local Policy Examples and Models**

The group identified several examples that could serve as models for communities.

**City of Raleigh** was mentioned for a policy requiring consideration of nature-based solutions and green building for city facility construction. The notes indicate that these measures do not necessarily need to be included in the budget, but they must be assessed and voted on by Council.

Raleigh also has a program that incentivizes resilience measures through expedited permitting.

**New York State** was mentioned as a possible example for local governments. The group referenced Floods.org and a New York statewide code or comprehensive planning example that requires floodplain elevations to consider future conditions.

The group also noted that the **AIA** is working on asset management for water and wastewater systems, including planning for multiple hazards and uncertainty.

The **UNC Coastal Dynamics Design Lab** was mentioned as a possible partner, with a question about whether it is expanding capacity into western North Carolina.

## **9. Agriculture, Natural Systems, and Local Knowledge**

The group also discussed the relationship between planning, agriculture, natural systems, and long-term resident knowledge.

One comment noted that in Western North Carolina, development has occurred “where our elders would never build.” This theme emphasized the value of acknowledging natural forms, topography, long-term resident knowledge, and ties to land when making planning and development decisions.

Agricultural recovery and resilience were also discussed. Examples and partners included:



- **Blue Ridge Women in Agriculture**, in the High Country, as an example of partnering with the farming community on riparian buffers to mitigate future flood impacts.
- Farmers markets and cooperatives as community and agricultural resilience assets.
- **NC State 4-H agricultural programs**.
- Soil and water conservation districts.

## 10. Forums, Networks, and Coordination Spaces

The group identified several forums and networks that support regional coordination and information sharing. These included:

- **ConversaCore**, described as a vetted Slack forum.
- **UNC Council of Governments convenings** around Helene recovery, especially focused on financial questions, with planners, managers, and finance professionals available.
- The **NC NCIDR Network**, which holds a monthly call.

These coordination spaces were discussed as useful ways to connect communities with technical assistance, funding knowledge, planning support, and peer learning.

### Main Takeaway

The discussion emphasized that resilience planning needs to move from broad intention to specific, fundable, and enforceable action. Communities need to embed flood resilience into comprehensive plans, UDOs, stormwater plans, small area plans, capital improvement plans, and project pipelines. Participants also highlighted the importance of modeling future risk, using overlays and higher standards where possible, connecting plans to funding, leveraging volunteer planning/design support, and coordinating across state, federal, regional, nonprofit, agricultural, and local government partners.

## Appendix D – Resilient Stormwater Solutions

Facilitator: Russ Davis (Summit Engineering)

Notetaker: Catherine Mercier-Baggett (SSDN)

Participants:

- Michael Huffman (City of Hendersonville) – floodplain management
- Bobby Murray (Waxhaw Commissioner)
- Josh Piurowski (Town of Canton) – Street Department Supervisor
- James Melonas (USFS) - NC Forests Supervisor
- Seth Overton (Appalachian Public Health Innovation Corps) – nonprofit, health but starting into environmental
- Ethan Magnani (Appalachian Public Health Innovation Corps) – volunteer outreach
- Devon Hutton (Ecokulture, AIA WNC cochair for resilience and recovery)
- Hassena Kassim (Town Hot Springs) - Town Administrator
- Zoe Montgomery (McDowell County) Americorps LFNC Fellow, lots of grant writing recently
- Emily Barrett (Land of Sky)

### Successes

#### *Hendersonville*

- Construction is almost done on floodplain/stream restoration project on Mud Creek Adjacent to two federal roads, undersized NC DOT culverts, 26a site with commercial
- \$4M in grants (mostly state, including Blueprint), started in 2022.
- 95% of it is NbS: wetlands for flood storage on vacant lots bought by the City several years ago (20ish) for that purpose. Will include trails for community access.
- Constructing gate valves in first order stream in the channel to be able to close and allow to pond before reaching Mud Creek.
- Wildlands Engineering did the design, and Shamrock is prime on construction.
- Mud Creek Restoration Plan identified this project a few years prior.
- Can withstand 5- and 10-year events.

#### *National Forests*

- 26K assessments of infrastructure and now have more data than ever.
- Will be able to look at small watershed level and identify culverts to be replaced (often to upsize) and implement aquatic organism passages to reconnect habitat.
- None of the ones they had replaced in the last 20 years failed during Helene, so they know how to do it, now the challenge is to continue the upgrades over time.
- “Good Neighbor Agreement” \$290M (?) with NC Wildlife Resources Commission, can work with state or tribal entities

## **How can we implement more resilient Nature Based Solutions or Green Stormwater Infrastructure into other kinds of projects, rather than rebuild exactly like before?**

### **Hendersonville**

- New fire station, police station, parking deck, street revitalization projects completed over the last 10 years, and green/low impact has been implemented in each.
- Most have been supported by grant funding.
- Extra costs are often difficult to reconcile, especially with narrow ROW. Often infrastructure doesn't have recorded easements but is on private property.
- Michael is the champion and driver of all this, did not happen before he joined the City.

### **Hot Springs**

- Applied for a grant, with Mars Hill and Marshall (?) for a vac truck, for stormwater maintenance
- Typically the water level in Spring Creek is low, but it has flooded the city at least 3 times. Now the Creek is recognized as a tributary to the French Broad, enabling access funding.
- The bridge is owned by NC DOT and limits potential project scope.
- Looking at creating floodways, but there is not much room to work with. Need a feasibility study. Working with Blueprint.

### **Other**

- Hendersonville is also struggling with NC DOT bridges. FEMA doesn't allow for increased clearance underneath because it was determined it would cause a rise. So the new bridge will be as susceptible to flooding as the old structure.
- It's difficult to assess what could happen downstream. One issue is the 1-dimensional model used by FEMA, also maps are old. Blueprint is working on a 2-dimension model so it will be better than FEMA's, but still won't be able to model downstream impacts in full.
- There are few SW utilities in W NC, and those that exist can't fund capital improvement projects in addition to operations and maintenance. Departments have to stretch their personnel to assist with events (like Public Works having to install barriers to close the streets for events or install the holiday lights). Hot Springs has 4 guys doing everything.
- Incentives, ordinances, and simple asks of developers can help increase the adoption of low-impact development or green infrastructure.
- Real estate availability is tight in the mountains, and most development is redevelopment and they are not required to provide SW improvements.

## **GSI can be turned into community features, any good examples?**

- Devon: We need to make the marketing case and prove there is a return on investment, and often that requires a triple-bottom-line analysis



- Most sites are small and don't meet the 1a threshold to require certain improvements
- Cities were built in the floodplain because it's flat and there is nowhere to relocate

### **Issue with workforce to maintain vegetated and other LID practices**

- Devon: Write O&M into the grants
- Options for low-cost maintenance:
  - Adopt-a-... street, stream, park
  - 4H, Master Gardeners, Scouts
  - Put physical barriers for areas to keep standard maintenance outside

# Appendix E – Emergency Preparedness Considerations

## 1. Purpose and Participant Perspectives

The breakout group focused on lessons learned from Hurricane Helene and how communities, nonprofits, emergency managers, regional organizations, faith groups, and state/federal partners can improve emergency preparedness before the next disaster.

Participants came from a range of roles, including emergency management, recovery coordination, community development, affordable housing, faith-based preparedness, regional planning, forestry, infrastructure resilience, and local government. Several people were drawn to the session because Helene exposed major gaps in preparedness, especially in small towns and rural communities.

Key perspectives included:

- Preparedness often happens “in theory” under comfortable circumstances, but disasters reveal where plans are incomplete.
- Small towns may not have the capacity for full-time emergency management staff.
- Preparedness needs to include everyone, including people with disabilities, non-English speakers, and communities with overlapping vulnerabilities.
- Faith communities, nonprofits, regional organizations, and local networks can play major roles in preparedness and recovery.
- Resilience needs to be built into infrastructure, housing, communications, and community relationships before disaster strikes.

## 2. Core Preparedness Lessons

A major theme was that **preparedness depends on relationships, communication, and practical systems that are in place before an emergency.**

Participants emphasized that prior relationships are critical. Communities that already had strong local organizations, trusted leaders, and regional connections were better positioned to respond after Helene. McDowell County was cited as an example where existing community organizations helped support response and recovery.

Several practical lessons emerged:

- Communications systems are essential, including backup options such as ham radios.
- Communities need clear plans for welfare checks, especially when phone, internet, or road access is disrupted.
- Local governments need financial and administrative preparedness, including maintenance records, procurement procedures, and pre-positioned contracts.
- Recovery has a “white-collar” side that is often invisible but essential, including documentation, reimbursement, funding navigation, and financial controls.



- Emergency response plans should include staff accountability and family safety, since responders may not be able to work effectively until their own households are secure.
- Preparedness education should be ongoing and community-based, not limited to formal emergency management agencies.

### **3. Communications, Accessibility, and Community Reach**

Communications were identified as one of the most important preparedness needs. Participants discussed both emergency communications infrastructure and the need for clear, accessible messaging.

Important communications issues included:

- The intersection between emergency management and communications.
- The need for shared vocabulary so agencies, organizations, and residents understand each other.
- The difficulty of conducting welfare checks after a disaster.
- The importance of community-level communications plans.
- The need to reach people through trusted local institutions, such as churches, nonprofits, schools, and community groups.

Accessibility was also a major concern. Participants raised the need to plan for:

- People with disabilities.
- Deaf and hard-of-hearing residents.
- Spanish speakers and other language communities.
- Residents with overlapping vulnerabilities, such as disability, language barriers, poverty, geographic exposure, and limited access to transportation or technology.

The group recognized that preparedness must account for “stacking vulnerabilities,” where multiple risk factors compound a person’s exposure and difficulty accessing help.

### **4. Role of Faith Groups, Nonprofits, and Community Organizations**

Faith-based and nonprofit organizations were seen as important preparedness and recovery partners.

Churches and congregations can help residents develop individual and family preparedness plans. They can also serve as trusted hubs for information, supplies, welfare checks, and coordination. One participant emphasized that the more people are prepared individually and as families, the fewer people will need to be rescued.

Nonprofits and regional organizations also play a key role, especially in helping small communities navigate recovery systems. They may help residents and local governments understand FEMA programs, funding requirements, documentation needs, and long-term recovery resources.

Community-based preparedness opportunities included:

- CERT training.
- Preparedness fairs.
- Red Cross training.
- Youth-focused preparedness education.



- Family preparedness planning.
- Congregation-based preparedness planning.
- Creative education tools, such as games or interactive learning activities.

## 5. Infrastructure, Redundancy, and Systems Resilience

The group discussed the need to invest earlier in resilient and redundant infrastructure. Hurricane Helene exposed how dependent communities are on fragile systems, including water, communications, roads, and emergency services.

Participants noted that communities should be asking what risks keep staff and partners “up at night” and using those answers to identify resilience investments.

Examples and discussion points included:

- The importance of redundant water systems and reservoir management.
- The role of NC WARN and mutual aid networks in infrastructure response.
- Dedicated staff or call centers to coordinate utility and infrastructure needs.
- Embedding infrastructure partners in state emergency operations structures.
- Building resilience into repairs, rather than simply restoring damaged systems to their prior condition.
- Considering wildfire risk as a growing preparedness concern after Helene.

A key takeaway was that mitigation and resilience should be integrated into recovery decisions, not treated as separate or later phases.

## 6. Small Town and Rural Capacity Challenges

Small towns and rural areas face specific preparedness challenges. Many do not have the resources to support full-time emergency management staff, and some did not fully understand what they needed to know until after the storm.

The group identified several capacity needs:

- Regional training and preparedness support.
- Financial management systems for disaster recovery.
- Maintenance records and documentation systems.
- Pre-disaster procurement planning.
- Clear understanding of FEMA Public Assistance and other funding programs.
- Help navigating the transition from response to recovery.
- Support for rural governments that may lack administrative capacity.

The discussion emphasized that the worst time to develop financial controls, procurement procedures, or recovery documentation systems is after a disaster has already occurred.

## 7. Preparedness Education and Youth Engagement

Participants discussed the importance of making preparedness education more accessible, practical, and engaging.



General preparedness messages can be difficult for the public to absorb, especially when they are abstract or fear-based. The group discussed the value of focusing on young people, including middle school students, as important messengers within families and communities.

Examples included:

- Preparedness education through schools.
- Community fairs with activities for children.
- Red Cross training opportunities.
- Lessons from typhoon preparedness education in the Philippines, where middle schoolers were treated as important community actors.
- Interactive games and activities that make preparedness less intimidating.

The group saw youth engagement as a way to build household preparedness and normalize disaster readiness across generations.

## 8. Recovery Waves and Long-Term Risk

The group discussed how disaster impacts continue long after the immediate emergency. One participant described a “second wave” of failure that can occur months later, when people begin losing homes, jobs, rental housing, or businesses.

Economic recovery was identified as a major concern, especially in rural communities where small businesses and local employment may be fragile. Getting businesses reopened and stabilizing residents financially are key parts of long-term recovery.

The group also noted that additional hazards can emerge or intensify after the initial disaster. For example, wildfire risk may become a “third wave” concern as landscapes, debris, infrastructure, and community conditions change.

## 9. Cross-Cutting Themes

Several broad themes emerged across the discussion.

### ***Preparedness must be practical, not theoretical***

Plans need to work under difficult, disrupted conditions, not just in normal circumstances. Communities need to test assumptions and plan for real-world breakdowns in communication, staffing, infrastructure, and access.

### ***Relationships are preparedness infrastructure***

Prior relationships among local governments, nonprofits, churches, regional partners, state agencies, and federal partners make response and recovery faster and more effective.

### ***Administrative readiness matters***

Financial records, procurement procedures, maintenance documentation, and funding knowledge are essential recovery tools. They may be less visible than emergency supplies or rescue operations, but they determine how quickly communities can access and manage recovery resources.



### ***Preparedness must include accessibility and equity***

Plans need to account for disability, language, age, income, geography, and overlapping vulnerabilities. Preparedness systems that only work for the easiest-to-reach residents will leave many people behind.

### ***Recovery and resilience should be connected***

Communities should use recovery as an opportunity to build stronger, more redundant, and more resilient systems rather than simply replacing what existed before.

## **Main Takeaway**

The breakout group emphasized that emergency preparedness is not only about supplies, plans, or formal emergency management systems. It is about building trusted relationships, accessible communications, administrative capacity, resilient infrastructure, and community-level readiness before disaster occurs. Hurricane Helene revealed major gaps, especially for small towns, rural areas, and vulnerable populations, but it also highlighted opportunities to strengthen regional coordination, faith and nonprofit partnerships, youth preparedness, and long-term resilience planning.

## Appendix F – Resilience Hubs

Facilitated by Leah Ferguson

Notes by Matt Hutchins

### *Introductions*

Diane Miller (Red Cross)

- Rolled out Disaster Health Program
- Live in Bat Cave- listening post-Helene about how to connect or volunteer

Sherry Johnson (FEMA)

- Assisted in grant with EPA
- In Yancey County currently helping them stand up hub resources

Chris Grubb (HCCOG)

- Wanting to learn more about resilience hubs

Bridget Herring (City of AVL)

- Currency in city role supporting hubs
- Seeking for hub efforts to be community-led

Michael Johnson (NC Association of County Commissioners)

- Interest in learning more

Pat Kapper (ADC/Mountain True)

- Working with communications in planning and design

JoAnne (Clemson University)

- Supporting landowners and creating a decision support tool

Jason Espie (Revive)

- Learning more

Kevin Madsen (Buncombe County Recovery Coordinator)

- Working on hubs as part of County Recovery Plan
- Looking at how the County can utilize facilities as part of hub network

Keith McDade (Warren Wilson College)

- Students working on resilience hubs



- Seeking to learn and collaborate

Jen Runkle (NCICS)

- Public health professional working on health impacts and community health centers as hubs and blueprint for post-disasters

[NAME?]

- Looking at preparedness and hubs in rural communities
- Seeking to equip as part of Footprint project

Granthan Hansen

- Interested in format of hubs and looking to be more official

[NAME?] (Rebuild Haywood)

- Borne out of Helene
- Interested in defining what is a hub? How to create and manage one?

Brittan Duncan (GroWNC)

- In High Country region, staff on subcommittee
- Looking to gather information about what it looks like with nonprofit vs government led hub

Alice (Community Health)

- Working in locations in Burke, Watauga, Wilkes counties
- Funding for 2 hubs, one in Wilson County, one in Burke County
- Supporting deaf and hard of hearing
- Invited High Country Community Helath to provide services and be part of Hub network in normal (blue sky) vs disruption (gray sky) state
- Have asked to bring services and take 15K sq feet of space.

Rachel Lee (Swannanoa Resilience Hub)

- Interested in ideas and what hub planning could look like for our program

Emily Tatus (Swannanoa Resilience Hub)

- Case manager

Leah Ferguson (Thrive AVL)

- Working with City and surrounding area on Resilience Hub planning

Matt Hutchins (Fernleaf)

- Working with Thrive and communities on Resilience Hub mapping and resilience planning



Leah: How do we define Resilience? What is a Hub?

- Reference to packet of information that provides some definitions
- Have found the example of a living bridge in India as an example of cultivation mentality

### **What is a Hub?**

- If we think about a quilt approach, everyone brings a resource they have and stitches them together
- How is something like this coordinated?
- Open to thoughts around the table
- Bridget: What comes up for me is community connectivity- how people partnered and what resources they bring.
  - We want to strengthen ourselves and the community for what comes next (it won't look the same as Helene)
- Social Infrastructure is key- this is the relational piece that is not always defined, it also doesn't always need to look the same for each community
- The Quilt analogy is great- a resilience hub may have multiple types of uses (for example, you can use a quilt for protecting or for moving furniture)
- Churches: each church has its community. How do we resource churches for the next disaster?
- Leah: With Mapping with the City of Asheville
  - Trying to map the social fabric
  - Community groups and skills that are actionable
  - Stories being told are key for understanding and documenting
  - Understanding the Core set of skills that are underneath or are underlying capacities that emerged in the disruption.
- There's a clear importance of having students and learners for the next generation to be involved.
- Buncombe County is activating around resilience hubs
  - COAD is a preparedness resource in response and early recovery phase.
  - Network of partnerships are needed that could also support brick and mortar
- It is important to acknowledge that established networks can sometimes be exclusive. So, it is important to identify who is NOT being represented and to consider the diversity of our communities.
- We may never have centers where everyone is comfortable going. So, it has been exciting to hear about networks and funding coming together to support inclusive thinking on places and needs.



- See the importance of landowners and connecting with them about who to contact- some don't have access to online materials or email, so there a need to be revealed/engaged in other ways
- Attention to isolated communities. When it comes to hubs, communicate the structure. Not every community has facilities, so how would the hub model work for them?
- Leah: Research has shown what helps rural communities. For example, what you don't want is to invest in building infrastructure and then do not feel authorized to use the space. There may be barriers to utilizing a space as well. This part could be fixable, but it may look like:
  - Equipping existing facilities
  - Being mindful about risks
  - Developing a maintenance plan
  - Developing social infrastructure around existing spaces to support people showing up. There are social crises happening all the time that hubs can support.

***What are we considering as potential disruptions? And what are/were some of the unmet needs?***

- Deaf and hard of hearing did not get the information they needed
- ADA compliance was an afterthought at times
- Medical needs and medicine needs were often not met.
- When communications are down it is about knowing how to reach people and accessing neighborhood knowledge
- As a case manager, the resource hub in Haywood Co, one determinant of health is vehicle access. Getting vehicles to those in need is challenging and cannot provide services to everyone. One good example of this is propane needs.
- Holding community transformation workshops could help address unmet needs
  - Identify what gives purpose and joy
  - People then show up during crisis
  - People identify challenges and form groups to address
  - This work is part of a deeper need to connect
- We recognize there are multiple stages of recovery and conditions for hubs (Steady, disruption, recovery)
- A lot of WNC communities have second homes. These people have money but sometimes have an outsized voice (that becomes louder than others)

***What are some of the key challenges?***

- How to design in a way that is sensitive to inclusivity
- Identifying what the principles are of a hub
  - WNC Hub Summit report may have some findings or recommendations



- Hubs resource planning/design/sustaining and being taken seriously as response infrastructure
- How hubs become built and sustained
- Having agreements and insurance and coordination ahead of time for an event
- For Public Assistance, it can be difficult but is starting to be more broadly defined
- A tiered approach for hubs can help meet federal standards

***What are some resources people have found useful?***

- Rural communities guide
- WNC Hub Summit report
- Slides from today's meeting as a resource
- CERT Training

## Appendix G – Registrants

Not every person listed below actually attended the event, and some people attended who may not have registered. There are 118 registered below, but an estimated 107 attended. If you attended and didn't register, and wish to be included in the list below, or receive future related communication and follow up, email [jason@revivestrategies.com](mailto:jason@revivestrategies.com).

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## Appendix H – Planning Team

The event was initiated and supported by the U.S. Environmental Protection Agency in partnership with several other Federal, State, and Regional Agencies, as well as non-profit and academic partners. The team below were invited to participate in a series of convening planning and preparation calls held in the months and weeks prior to April 17, 2026. Project consultants are identified in **green**. Not all of the planning team were able to attend, so their contact information is included below.

- Ashten Bailey, U.S. EPA - Region 4, Bailey.Ashten@epa.gov
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## Appendix I – Workshop Agenda

Friday April 17, 2026

Land-Of Sky Regional Council 339 New Leicester Highway #140,  
Asheville, NC 28806

*Doors, Registration, Bagels, Muffins, Juice and Coffee Open at 8:15 AM*

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| 9:00 AM - 9:05 AM   | Welcome and Overview                                                               |
| 9:05 AM - 9:40 AM   | Introductions - Everyone                                                           |
| 9:40 AM - 10:15 AM  | Plenary Context Setting Presentation                                               |
| 10:15 AM - 11:00 AM | Sharing Stories: Peer to Peer Exchange                                             |
| 11:00 AM - 11:15 AM | Break                                                                              |
| 11:15 AM - 11:45 AM | Plenary Presentation: Topics of Interest                                           |
| 11:45 AM - 12:45 PM | Topic Breakout Groups                                                              |
| 12:45 PM - 2:00 PM  | Eat in Lunch                                                                       |
| 2:00 PM - 3:30 PM   | Understanding the Funding Landscape and<br>Navigating Resources for Implementation |