COMMUNITY LIFELINES 2019 NCR WEBEOC CONFERENCE

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Community Lifelines Defined

A CONSTRUCT FOR OBJECTIVES-BASED STABILIZATION EFFORTS

A lifeline enables the continuous operation of **critical government and business functions and** is **essential to human health and safety or economic security**.



- Lifelines are the most fundamental services in the community that when stabilized enable all other aspects of society
- Lifelines exist during steady-state and are normally provided by sources organic to the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required.

Incorporating Community Lifelines into Response

FEMA developed the community lifelines construct to increase effectiveness in disaster operations and better position the Agency to respond to catastrophic incidents. The construct allows emergency managers to:

- Characterize the incident and identify the root causes of priority issue areas
- Distinguish the highest priorities and most complex issues from other incident information

https://www.fema.gov/media-library/assets/documents/177222

Community Lifelines – Aligning Response Efforts

UNDERSTANDING INTERDEPENDENCIES

What (Status): During an event reports indicate that Anytown Hospital is "down"

So What (Impact): It is the only Level 1 Trauma Center in your jurisdiction.

Now What (Actions): Determine the root cause of the issue and take unified action

Limiting Factors (Gap): Based on intel, what's the issue and how will the issue be handled in coordination with agencies/departments/ESFs?



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Community Lifeline Implementation

THE CONTEXT... "OLD" VS. "NEW" FRAMING

Community lifelines reframe incident information to provide decision-makers with impact statements and root causes. This construct maximizes the effectiveness of federally supported, state managed, and locally executed response.

- Incorporating the lifelines primarily impacts how incident information is framed, organized, and reported during response
- Emergency Support Functions (ESF), Core Capabilities, response operations, procedures, and key
 elements of doctrine remain fundamentally the same

Some changes may include:

- How we understand, prioritize, and communicate incident impacts
- The structure and format of decision-making support products (e.g., briefings, forms)
- Planning for incident impacts and stabilization both prior to and during incidents

Community Lifeline Construct

Example Components and Subcomponents: Energy Lifeline

- The graphic provides an example breakdown of the Energy Lifeline into its relevant components and subcomponents
- The subcomponents define each component and are subject to change depending on incident circumstances



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Community Lifeline Components



Multiple components and subcomponents establish the parameters of the lifeline; component-level assessment is required to determine the condition of each lifeline.

1. Safety and Security

- Law Enforcement/Security
- Fire Service
- Search and Rescue
- Government Service
- Community Safety

2. Food, Water, Shelter

- Food
- Water
- Shelter
- Agriculture

3. Health and Medical

- Medical Care
- Patient Movement
- Public Health
- Fatality Management
- Medical Supply Chain

4. Energy

- Power (Grid)
- Fuel

5. Communications

- Infrastructure
- Alerts, Warnings, Messages
- 911 and Dispatch
- Responder Communications
- Finance

6. Transportation

- Highway/Roadway Motor Vehicle
- Mass Transit
- Railway
- Aviation
- Maritime

7. Hazardous Material

- Facilities
- HAZMAT, Pollutants, Contaminants

ASSESSMENT

Status	"What?"
Impact	"So What?"
Actions	"Now What?"
Limiting Factors	"What's the Gap?"
ETA to Green	"When?"

Incident Stabilization

The lifeline construct is used to focus response actions on incident stabilization; thus the expected objective is to stabilize all lifelines

- **Stabilization** occurs when basic lifeline services are provided to survivors
 - Stabilization may occur either by re-establishing lifeline services in a community through emergency repairs, or through the employment of contingency response solutions
 - Employment and sustainment of contingency response solutions may be necessary to stabilize lifelines until temporary fixes to infrastructure are completed. Lifeline stabilization may require sustained resources and continuous evaluation
- A stabilization target—the desired end-state of response—for each lifeline is created during the deliberate planning process and modified on a perincident basis to match incident circumstances
- The target should be created collaboratively with key stakeholders

EXAMPLE

An incident destroys the cell towers in an area disrupting communications.

 Stabilization occurs when cell service is provided through contingency response solutions (e.g., Cell on Wheels) and reestablishment occurs when fixed cell towers are operational.

Analyzing Components to Determine Lifeline Condition

Lifeline components can be analyzed using six assessment categories that capture essential information for response decision-makers

Categories	Description	
Component	Identify the component.	
Status (What?)	Summarize the root cause(s) of disruption to lifelines services.	
Impacts (So What?)	Explain the disaster impacts to specific communities, disaster survivors, and response operations. Detail how the survivor experience or response operation will improve if this component is stabilized. Specify the impacted areas and population totals.	
Actions (Now What?)	Describe the actions that are being taken to stabilize and re-establish the disrupted services. Summarize the most critical actions being taken across the Whole Community.	
Limiting Factors (What's the Gap?)	Express issues that are preventing services from being stabilized or re-established. Such issues can stem from another lifeline/component, resource shortfall, management, policy, etc.	
Estimated Time to Status Change & Re-establishment Requirements (When?)	Provide current component condition or an estimated timeframe for when a change in condition is expected.	

Example Component Analysis



Transportation

Categories	Description
Component	Mass Transit 💭 Sub-component: Mass Transit
Status	Bus service is unavailable
Impacts	100,000 survivors have no access to Public Transportation nor emergency support services
Actions	U.S. Army Corps of Engineers assigned to supplement state and local authorities with route clearance and debris removal efforts
Limiting Factors	Service can't resume until the routes are cleared
Estimated Time to Status Change & Re-establishment Requirements	Service estimated to resume in a week

Colors Indicate Lifeline or Component Condition

Steady State: Blue

Steady-state operations, used for presentations and outreach material

Unknown: Grey

Indicates the extent of disruption and impacts to Lifeline services is unknown (Unknown)

Unstable: Red

Indicates Lifeline services disrupted and no solution identified (Unstable, no solution in progress)

Stabilizing: Yellow

 Indicates Lifeline services disrupted but solution in progress with estimated time to stabilization identified (Unstable, solution in progress)

Stable: Green

- Indicates Lifeline services are stabilized, re-established, or not impacted (Stable)
- Note: Green components may still be severely impacted

Assigning a Condition

- Assess lifeline conditions iteratively as incident circumstances evolve and over the course of response operations
 - A color designation represents a snapshot in time for that response operational period
- Stabilization targets will provide the baseline against which lifelines can be compared
- The flowchart shows an example of how responders may think through assigning lifelines a color



Example Condition Designations

Below are example analyses for the Water Infrastructure component of the Food, Water, Shelter lifeline and corresponding color determination for each.

Status	Example
Grey	Assessment teams have been unable to establish status of water infrastructure.
Red	Plan to provide water to survivors not yet established.
Yellow	Bottled water mission identified and resourced, but transportation issues restricting delivery.
Green	Bottled water mission supporting survivor needs until water service re-established.

Community Lifelines and Planning

- Deliberate Planning: Incorporate lifelines into deliberate planning products, including defined stabilization targets for each lifeline
- Crisis Action Planning: During an incident, deliberate stabilization targets are adjusted to the active response based on an analysis of lifeline impacts and stabilization projections
 - This analysis provides support to leadership decisions and prioritization of response activities for each operational period, including the development of strategies, operational priorities, and objectives



Lifelines enable crisis action planning efforts at all levels

Example: Food, Water & Shelter Lifeline may include two distinct Lines of Effort – Sheltering and Commodity Distribution

FEMA's Implementation of Community Lifelines

FEMA incorporates community lifelines into its planning and reporting products. This section provides an overview and examples of how the lifelines have been implemented to date.

Planning products include:

- All Hazards Plans
- Information Analysis Brief
- Incident Action Plan
- Incident Approach
- National/Regional Support Plan

Reporting products include:

- Senior Leadership Brief
- Daily Operations Brief
- SitReps
- SPOT Reports

Deliberate Planning and All-Hazards Plan Updates

- Deliberate Planning incorporates defined stabilization targets for each lifeline and the lines of effort to stabilize each lifeline
- FEMA is developing stabilization targets for lifelines to include in its update of the Regional All Hazards Plans



Daily Operations Briefing

Hurricane Dorian

Situation

Hurricane Dorian continues to move along the Southeast US coast and is expected to approach South Carolina today. Life-threatening storm surge and dangerous winds expected along portions of the coasts of GA, SC, and NC and portions of southeast VA and the southern Chesapeake Bay, regardless of the exact track of Dorian's center.

Watches/Warnings:

- <u>Storm Surge Warning:</u> Savannah River to Poquoson, VA; Pamlico and Albemarle Sounds, Neuse and Pamlico Rivers
- <u>Hurricane Warning:</u> Savannah River to the North Carolina/Virginia border; Pamlico and Albemarle Sounds
- <u>Tropical Storm Warning:</u> North Carolina/Virginia border to Chincoteague, VA; Chesapeake Bay from Smith Point southward
- <u>Tropical Storm Watch:</u> North Chincoteague, VA to Fenwick Island, DE; Chesapeake Bay from Smith Point to Drum Point; Tidal Potomac south of Cobb Island; Woods Hole to Sagamore Beach, MA; Nantucket and Martha's Vineyard, MA





Lifeline All lifelines remain GREEN Safety and Security

 Mandatory evacuations in effect in FL (1 county); SC (8 counties) and NC (6 counties)

Food, Water, Shelter

- FEMA Commodities have arrived at ISBs (NBEOC)
- Region IV: 113 (-26) shelters with 6.6k (-2.7k) occupants (FL: 32/1816; GA: 13/2,038; SC: 33/2015; NC: 35/792) (ESF-6 as of 6:00 a.m. EDT)
- 1 Mega shelter open in Durham, NC with 1.5k capacity (ESF-6 as of 4 Sept 11:00 a.m. EDT)

Energy

- SC: 190K reported without power (Eagle- I as of 7:30 a.m.EDT)
- Fuel industry partners affirm fuel supplies and distribution remain stable (NBEOC)

Transportation

- Airports: SC: Charleston International Airport, Florence Regional Airport, and regional/county airports closed; NC: Wilmington International Airport closed (FAA as of 6:00 a.m.)
- Ports: Canaveral and West Palm Beach re-opened with restrictions; GA: Savanah and Brunswick closed; SC: Charleston closed; NC: Wilmington and Morehead City closed (USCG Update as of 6:00 a.m.)

What About Recovery?

Example Recovery Outcomes by Recovery Support Function

Recovery Support Function	Recovery Outcome	
Community Planning and Capacity Building	Resilient recovery of SLTT communities	
Economic	Sustainable, diversified and resilient economy	
Health and Social Services	Sustainable and resilient health, education, and social services systems	
Housing	Adequate, resilient, and affordable housing	
Infrastructure Systems	Restored, modernized, hardened, and resilient systems	
Natural and Cultural Resources	Restored, preserved, risk-resistant, and resilient systems	

When stabilization of Community Lifelines are achieved, the **focus of the mission shifts** to achieving **Recovery Outcomes.** The **Outcome Driven Recovery** model drives an approach that emphasizes **long-term resilient solutions** across all lifelines and other aspects of a community.

Questions & Discussion

Please send Lifelines questions, comments, or feedback to: Lifelines@fema.dhs.gov

For FEMA WebEOC questions, send an email to: FEMA-WebEOC@fema.dhs.gov

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Safety and Security

COMPONENTS AND SUBCOMPONENTS

Law Enforcement/Security

Fire Service

- Law Enforcement

Police Stations

- Site Security
- Correctional Facilities

- Fire Stations
- Firefighting Resources

Search and Rescue

Local Search and Rescue

Government Service

- EOCs
- Essential Govt Functions
- Government Offices
- Schools
- Public Records
- Historic/Cultural Resources

Community Safety

- Flood Control
- Other Hazards
- Protective Actions



COMPONENTS AND SUBCOMPONENTS

Food

- Commercial food distribution
- Commercial food supply chain

Water

- Water supply systems
- Wastewater systems

Shelter

- Housing (e.g., homes, shelters)
- Commercial Facilities (e.g., hotels)

Agriculture

- Crop Production
- Animal Production

Health and Medical

COMPONENTS AND SUBCOMPONENTS

Medical Care

Hospitals

Health and Medical

- Nursing Facilities
- Dialysis & Burn Treatment
- Pharmacies
- Long-Term/Alternative Care Facilities
- VA Health System
- Veterinary Services

Patient Movement

Emergency Medical Services

Fatality Management

Mortuary and post-mortuary services

Public Health

- Health Surveillance
- Human Services
- Behavioral Health
- Vector Control
- Labs

Medical Supply Chain

- Blood/Blood Products
- Manufacturing
 - Pharmaceutical Device
 - Medical Gases
- Distribution
- Critical clinical research
- Sterilization
- Raw materials



Power Grid

- Generation Systems
- Transmission Systems
- Distribution Systems

Fuel

- Refineries/ Fuel processing
- Fuel Storage
- Pipelines
- Commercial distribution (e.g., gas stations)
- Public Safety Distribution

Communications

COMPONENTS AND SUBCOMPONENTS

Infrastructure

- Wireless
- Landlines
- Cable/Internet
- Radio
- Satellite
- Data Centers

Alerts, Warnings, and Messages

- Local Alert/Warning Ability
- Access to IPAWS (WEA, EAS, NWR)
- NAWAS Terminals

911 & Dispatch

Public Safety Answering Points

Responder Communications

- LMR Networks
- FirstNet

Finance

- Banking Services
- Electronic Payment Processing



COMPONENTS AND SUBCOMPONENTS

Highway/Roadway Motor Vehicle

- Roads
- Bridges

Mass Transit

- Bus
- Rail
- Ferry

Railway

- Freight
- Passenger

Aviation

- Commercial (e.g. cargo/passenger)
- General
- Military

Maritime

- Waterways
- Ports and Port Facilities



Hazardous Material

COMPONENTS AND SUBCOMPONENTS

Facilities

- Oil & HAZMAT Facilities (e.g. chemical, nuclear)
- Oil/HAZMAT/ Toxic Release from Facilities

HAZMAT, Pollutants, Contaminants

- Oil/ HAZMAT/ Toxic Release Incidents from non-fixed facilities
- Radiological or nuclear incidents