ESF 5 Information and Planning in Emergency Management

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Emergency Support Function #5 (ESF #5), Information and Planning, provides the information-management and planning support needed when an incident requires coordinated federal assistance. Its value is not that it commands every responder or controls every resource. Instead, ESF #5 helps leaders develop a common understanding of conditions, identify gaps, anticipate future requirements, organize planning products, and connect information across agencies and jurisdictions. During a complex emergency, this function can be as important as physical resources because decisions deteriorate quickly when agencies operate from conflicting facts or outdated assumptions.

FEMA's ESF #5 annex places the function within the National Response Framework and describes its role in multiagency planning and coordination. The National Incident Management System (NIMS) provides the broader nationwide approach through which government, nongovernmental organizations, and the private sector work together across incidents of different sizes and causes. ESF #5 supports that system but should not be confused with the Planning Section of the Incident Command System. ICS organizes incident-level command and management, whereas an Emergency Support Function organizes federal interagency support by mission area (FEMA, 2017, 2020) (Federal Emergency Management Agency, 2019; Federal Emergency Management Agency, 2025; Comfort & Ko, 2004).

Operational Picture

Situational awareness begins by identifying the questions decision-makers need answered. During a hurricane, wildfire, earthquake, cyber incident, or terrorist attack, planners may need to know which populations are affected, which roads are open, where hospitals are operating, whether communications are functioning, what hazards are spreading, and which resources are already committed. Collecting large amounts of data is not enough if the information does not answer operational questions.

ESF #5 therefore depends on defined information requirements. Sources can include emergency operations centers, incident command posts, weather services, infrastructure operators, public-health agencies, voluntary organizations, law enforcement, transportation agencies, remote sensing, field teams, and private-sector partners. Reports often arrive at different times and with different levels of reliability. The planning function must compare sources, identify contradictions, document

confidence, and update products as new evidence becomes available.

A shared operational picture reduces the risk that agencies act on incompatible assumptions. For example, a damaged bridge is not only a transportation problem. It may affect evacuation, ambulance travel, hospital staffing, fuel delivery, food distribution, and access to shelters. Information becomes operationally useful when analysts connect consequences across systems rather than presenting isolated facts.

Geospatial information is especially valuable because location often determines priority. Maps can display flood depth, wildfire movement, road closures, hospitals, utility outages, shelters, vulnerable populations, and resource locations. Yet a map is useful only when the data are current, the symbols are clear, the source is known, and the product answers a decision question. Sensitive operational information may also require controlled distribution.

Information should include uncertainty rather than hide it. Early reports during disasters are frequently incomplete or wrong. A responsible situation report may state that a figure is preliminary, that a road status is unconfirmed, or that an estimate is based on modeling rather than direct observation. Decision-makers can act under uncertainty, but only if they understand the quality of the information.

Accessibility and equity also affect situational awareness. Standard datasets may overlook people with disabilities, limited transportation, unstable housing, limited English proficiency, medical dependencies, rural isolation, or limited digital access. FEMA's ESF #5 guidance emphasizes appropriate communication for individuals with disabilities and others with access and functional needs. Local organizations can identify conditions that national systems do not capture quickly.

Planning Cycle

Planning converts information into coordinated action. At the incident level, ICS uses an operational planning cycle to establish objectives, assignments, communications, safety information, and resource needs for a defined operational period. Federal coordination uses related planning concepts at a different organizational level. ESF #5 helps coordination structures develop current plans while also looking beyond the immediate period.

Current planning focuses on what must be achieved next. Objectives should be specific enough to guide action and linked to life safety, incident stabilization, protection of property and the environment, and restoration of essential services. A plan produced too late has little operational value. During fast-moving emergencies, concise and timely direction can be more useful than a lengthy document completed after conditions have already changed.

Future planning looks several steps ahead. Planners examine how weather, infrastructure failure, shelter demand, hospital capacity, supply chains, fuel, debris, public information, or disease

transmission may evolve. Branch planning considers what should happen if conditions change, while sequel planning considers what should happen after the current plan succeeds. These methods reduce the chance that leadership is repeatedly surprised by foreseeable developments.

Resource information is part of planning but not the same as logistics. ESF #5 may help identify requirements, forecast future needs, and maintain awareness of what has been requested or assigned. Logistics functions are responsible for sourcing, moving, and supporting many of those resources. Keeping the distinction clear prevents planners from assuming that identifying a need is equivalent to filling it.

Planning also depends on documentation. Situation reports, maps, mission records, decisions, requests, assumptions, and operational-period products create continuity when shifts change or coordination moves from one location to another. Large incidents can last for weeks or months, so no single team can rely on memory.

Staffing must therefore be sustainable. Planning personnel need skills in analysis, writing, facilitation, mapping, data management, and interagency coordination. Long deployments require relief teams because fatigue can reduce judgment and increase error. Exercises should include missing information, conflicting reports, network failure, leadership changes, and other realistic complications rather than assuming that every system functions normally.

Coordination and Technology

ESF #5 works across multiple coordination structures, and disaster-management research similarly emphasizes the importance of interorganizational coordination across complex response networks (Kapucu, 2012). National-level support may involve the National Response Coordination Center, while regional coordination can involve FEMA’s regional structures and field coordination may occur through a Joint Field Office or other incident-specific arrangements. The exact organizational configuration varies, but the information function must remain continuous as responsibility shifts.

Federal planning should support rather than automatically replace state, tribal, territorial, and local authority. Incidents normally begin with local responsibility, and local partners often possess the most detailed knowledge of communities, infrastructure, and immediate needs. Tribal governments also have sovereign status that requires government-to-government engagement rather than treatment as ordinary stakeholders.

Technology can improve the speed of coordination through dashboards, mapping systems, resource tracking, document platforms, and interoperable communications. It can also create new failure points. Different organizations may use incompatible systems, networks may become overloaded, cyber incidents may disrupt access, and automated data feeds may contain errors. Effective information management therefore requires common terminology, agreed data standards, backup procedures, and the ability to operate when primary systems fail.

Cybersecurity is now inseparable from emergency information management. A compromised dashboard, false data feed, or stolen credential can distort the operational picture. Planners need access controls, verification procedures, secure sharing, and fallback systems. Paper forms, radio reports, offline maps, and direct liaison remain relevant because resilience requires more than one technical pathway.

Rumor and misinformation create another challenge. False reports can redirect responders, increase public fear, overload emergency numbers, or reduce trust. ESF #5 analysts can identify claims that affect operations and coordinate with public-information personnel, but internal analysis and public communication serve different purposes. ESF #15 and Joint Information System functions generally handle federal external affairs and public messaging. The operational picture may include sensitive or preliminary information that should not be released publicly without review.

Private-sector coordination is also essential because many critical services are owned or operated outside government. Telecommunications, transportation, fuel, food distribution, finance, hospitals, logistics companies, and utilities all influence community recovery. The National Response Framework's whole-community approach recognizes these relationships. Planning products are stronger when infrastructure owners contribute real operating information rather than being treated only as recipients of government instructions.

Recovery and Improvement

Information and planning continue after immediate life-safety operations stabilize. Recovery priorities may include temporary housing, utility restoration, healthcare access, debris management, schools, economic continuity, environmental damage, and infrastructure reconstruction. Response and recovery overlap, so transition planning should begin before response structures are dismantled.

Demobilization requires the same discipline. Resources should be released when they are no longer needed, but the decision must preserve enough capacity for unresolved missions. Plans should identify what work is complete, what responsibilities remain, who receives transferred information, and how equipment and personnel will return safely. Poor demobilization can create gaps just as easily as poor mobilization.

After-action review then converts experience into organizational learning. The purpose is not simply to list what went wrong. Review should compare expected performance with actual performance, identify strengths and gaps, examine causes, and assign corrective actions. Each improvement item needs an owner, deadline, and method of verification. Otherwise, the same problem may reappear in the next disaster.

Community feedback should be part of this process. Agency records can show response times and resource movements but may not reveal whether warnings were understandable, whether shelters were accessible, or whether particular neighborhoods were consistently missed. Including affected

communities helps distinguish operational success on paper from actual service outcomes.

ESF #5 should therefore be understood as the analytical and planning backbone of coordinated federal response rather than as a command function. Its central tasks are to create situational awareness, support current and future planning, identify requirements, maintain continuity across coordination structures, and support transition and learning. When information is verified, timely, accessible, and connected to decisions, planners help every other response function work more effectively.

References

Federal Emergency Management Agency. (2017). *National Incident Management System* (3rd ed.).

Federal Emergency Management Agency. (2019). *National Response Framework* (4th ed.).

Federal Emergency Management Agency. (2020). *Emergency Support Function #5—Information and Planning Annex*.

Federal Emergency Management Agency. (2025). *NIMS: Intelligence/Investigations Function Guidance*.

Kapucu, N. (2012). Disaster and emergency management systems in urban areas. *Cities, 29*, S41–S49.

Comfort, L. K., Ko, K., & Zagorecki, A. (2004). Coordination in rapidly evolving disaster response systems. *American Behavioral Scientist, 48*(3), 295–313.