



Office of Emergency Communications:

Fiscal Year 2011

SAFECOM Guidance
on Emergency Communications Grants



Homeland
Security

A Message to Stakeholders

On behalf of the Office of Emergency Communications (OEC), I am pleased to present the *Fiscal Year 2011 SAFECOM Guidance*. Like its predecessors, this document provides guidance on eligible emergency communications activities and equipment standards. Unlike its predecessors, this year's *SAFECOM Guidance* is directed toward grantees, including State, local and tribal recipients. A new document has been developed and adopted by the Emergency Communications Preparedness Center (ECPC) entitled, *ECPC Recommendations for Federal Agencies: Financial Assistance for Emergency Communications*. The *ECPC Recommendations* document defines standards, terms and conditions for Federal agencies administering emergency communications grants. The intent is to promote consistency in policy across Federal grant programs, and to ensure compatibility among Federally-funded projects. The *ECPC Recommendations* document is directed toward Federal agencies administering emergency communications grants, and has incorporated many of the SAFECOM definitions, standards, terms and conditions into the document, which were shaped over the past several years by your valuable input.

As a result, you will see that the title of the *SAFECOM Guidance* has changed this year. The *FY 2011 SAFECOM Guidance on Emergency Communications Grants* continues to provide guidance on eligible emergency communications activities and equipment. As in previous years, OEC has incorporated State and local stakeholder input on a number of items, including recommendations on regional investments, and guidance on narrowband conversion and other allowable costs. Readers will note that the scope of the *SAFECOM Guidance* has expanded beyond the traditional land mobile radio realm, into data, video, and broadband technologies. This document will continue to evolve as new technologies emerge, and will support increased knowledge on the use of these new technologies.

I would like to thank the SAFECOM Executive Committee and Emergency Response Council, as well as Statewide Interoperability Coordinators, for their valuable input into the *SAFECOM Guidance*. I ask that you continue to contribute your input and expertise on emergency communications, and to encourage State, local, and tribal stakeholders, to use the *SAFECOM Guidance* when developing emergency communications investments.

Lastly, I encourage our State, local, and tribal partners to provide feedback on the *FY 2011 SAFECOM Guidance* so that we can continue to improve this important resource. Your input is appreciated and critical to our efforts to improve emergency communications nationwide. For questions, comments, or assistance in applying these recommended grant policies, please contact my office at oeq@hq.dhs.gov.

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I. Summary of Key Changes

The *SAFECOM Guidance on Emergency Communications Grants* has changed for FY 2011 in some key ways from previous years. The changes are summarized below.

Grantee Focus

In 2010, the Emergency Communications Preparedness Center (ECPC), an interagency body created to improve emergency communications and to promote information sharing among Federal agencies, charged its Grants Focus Group (GFG) with developing common grant guidance for Federal agencies administering emergency communications grants. The GFG developed the *ECPC Recommendations for Federal Agencies: Financial Assistance for Emergency Communications* which is intended to serve as common grant guidance for Federal agencies, and to ensure consistency in Federal grant policy. The GFG incorporated the policies and standards of the *SAFECOM Guidance* in the *ECPC Recommendations* document and shared these policies with Federal agencies administering emergency communications grants. Therefore, Federal agencies that previously used the *SAFECOM Guidance* to shape grant guidance, should use the *ECPC Recommendations* document, which is available upon request at ecpc@hq.dhs.gov.

As a result, the *FY 2011 SAFECOM Guidance* focuses primarily on guidance for grantees. The *SAFECOM Guidance* continues to include information on allowable costs, and standards, terms and conditions of emergency communications grants, as well as best practices to promote interoperability, but primarily addresses stakeholder rather than Federal agency needs.

Narrowband Mandate

In the *FY 2011 SAFECOM Guidance*, grantees are encouraged to allocate grant funds to plan and implement activities that will ensure compliance with the Federal Communications Commission (FCC) narrowband mandate by the January 1, 2013, deadline.

Emerging Technologies – Broadband Activities

With the increase in Federal funding for broadband and next-generation technologies available through the American Recovery and Reinvestment Act of 2009, stakeholders are turning to emerging technologies such as broadband, wireless data networks, Internet Protocol (IP)-based mobile communications devices, and location-based commercial services to meet interoperable and emergency communications challenges. As a result, the *FY 2011 SAFECOM Guidance* has added next-generation activities to existing cost categories (Planning, Training, Exercise, and Equipment), and new standards for broadband and next-generation technologies to assist States applying for Federal broadband funding and States that are updating Statewide Communication Interoperability Plans (SCIP) to include broadband planning and migration strategies.

Updates to Project 25

Updates have been made to the Project 25 (P25) standard, to provide basic information and additional resources for grantees on the suite of standards for digital radio communications.

Life Cycle Plan

Many Federal grants require grantees to submit a system life cycle plan with grant applications. Appendix A provides a sample life cycle plan for grantees.

II. Introduction

SAFECOM is a communications program of the Department of Homeland Security (DHS) that provides research, development, testing, evaluation, guidance, tools, and templates on communications-related issues. The DHS Office for Interoperability and Compatibility (OIC) conducts the research and testing of emergency communications equipment and processes. The DHS Office of Emergency Communications (OEC) supports the development and distribution of guidance, tools and templates for local, tribal, State, and Federal emergency response agencies.

OEC, in coordination with OIC, develops the annual *SAFECOM Guidance* which provides technical information and program guidance for applicants applying for Federal grant funding for emergency communications projects.

2.1 Purpose of the FY 2011 SAFECOM Guidance

The purpose of the *FY 2011 SAFECOM Guidance* is to provide guidance to grantees on:

- Emergency communications activities that can be funded through Federal grants
- Technical standards that facilitate interoperability
- Recommendations for planning, coordinating, and implementing emergency communications projects

The recommendations contained herein were developed not only to assist grantees in implementing emergency communications projects, but were designed to advance national emergency communication goals and objectives established in the National Emergency Communications Plan (NECP),¹ and to support common State, local, and tribal emergency communication needs defined by each State in its Statewide Communication Interoperability Plan (SCIP).

Grants funding emergency communications are administered by numerous Federal agencies, and are subject to various statutory and programmatic requirements. This Guidance provides general information on eligible activities, technical standards, and other terms and conditions that are common to most, but not all, Federal emergency communications grants. Not all of this guidance, however, will be uniformly applicable to all grant programs. As a result, grantees should read each grant carefully to ensure activities proposed are eligible under the program to which they are applying, and that all standards, terms and conditions required under each grant are met.

OEC welcomes input and feedback on how to make this document more useful to grantees. Questions or comments on this Guidance can be forwarded to OEC at oeec@hq.dhs.gov.

¹ NECP is available at: http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf.

2.2 How to Use this Document

Before allocating funds for emergency communications projects, grantees are encouraged to:

- Read the NECP to understand Federal emergency communication goals and priorities
- Read your State's SCIP² to understand its emergency communication goals and priorities
- Read the *SAFECOM Guidance* to understand standard terms and conditions of Federal grants funding emergency communications and SAFECOM recommendations
- Coordinate emergency communications projects with Statewide Interoperability Coordinators (SWIC)³ to ensure that projects align to needs identified in the SCIP and/or SCIP Implementation Report and complement current efforts to improve interoperability

Additional information on each of these resources is provided below.

The National Emergency Communications Plan (NECP)

The NECP is the national plan to improve emergency communications. The NECP provides an overarching strategy, goals and priorities designed to ensure that emergency responders can communicate across all disciplines as needed, on demand, and as authorized at all levels of government and across all disciplines. The NECP addresses mission critical emergency communications needs of emergency responders for land mobile radio (LMR) systems, and the need for basic operability and interoperability across all levels of government. The NECP is currently being updated, and adopts a broader perspective of emergency communications, including guidance on broadband and next-generation technologies, traditional and non-tactical response organizations (e.g., 911 call centers and citizen communications), and a strategy to move the Nation toward an integrated emergency communications environment.

The Federal government recognizes that public safety agencies must sustain mission-critical and legacy communication systems while integrating new technologies and migrating toward new national, statewide, and regional systems. The *FY 2011 SAFECOM Guidance* includes updated information for legacy LMR systems, and information on advanced technologies. Grantees are encouraged to read the NECP⁴ and NECP updates to understand national communication goals, and to ensure that investments support, and do not contradict, national goals and priorities.

The Statewide Communication Interoperability Plan (SCIP)

Many Federal grants funding emergency communications require grantees to align projects to needs identified in SCIPs and/or SCIP Implementation Reports. Every State and territory was required to develop and submit a SCIP to OEC by December 2008. Additionally, each State and territory is required to submit a report on the progress of the State in implementing its SCIP – the SCIP Implementation Report.⁵

² To find your SCIP, please contact your Statewide Interoperability Coordinator (SWIC) or SCIP Point of Contact.

³ To find your SWIC or SCIP Point of Contact, please email OEC at oecc@hq.dhs.gov.

⁴ The NECP can be found at: http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf.

⁵ See Pub. L. No. 110-53, Section 301.

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The SCIP Implementation Reports describe the current status⁶ of interoperable communications in each State and territory. The Reports include information on each State and territory's capabilities, interoperability gaps, and strategic initiatives and highlights progress in achieving the initiatives and strategic vision identified in the SCIP.

Statewide Interoperability Coordinators and SCIP Points of Contact

Grantees are encouraged to coordinate emergency communications improvement projects with SWICs and/or SCIP Points of Contact⁷ to ensure that projects align with needs identified in the SCIP, and that projects support (and do not contradict) current efforts to improve interoperability.

SAFECOM Guidance

The following sections provide additional guidance to grantees on allowable costs, technical standards, terms and conditions applicable to most Federal emergency communications grants, and recommendations for ensuring projects are coordinated and compatible with current statewide efforts, but may not be applicable to all programs. Grantees should consult the grant office for details on eligible costs, terms, and standards for each grant.

III. General Application Recommendations

Grants funding emergency communications are administered by numerous Federal agencies, and are subject to various statutory and programmatic requirements. Grantees are encouraged to read grant guidance carefully to ensure the application meets all grant requirements. Secondly, grantees are encouraged to read through the SAFECOM general application recommendations below to ensure that Federally-funded projects promote, and do not hinder, interoperability.

3.1 Understand Federal Grant Requirements

Applicants must understand the general terms and conditions of Federal grants before submitting an application. Grantees are encouraged to read the Federal Grant Guidance, Funding Opportunity Announcement, and Funding Application thoroughly to understand:

- Program goals
- Eligibility requirements
- Application requirements (e.g., due dates and submission requirements)
- Grant requirements (e.g., reporting, financial, matching)
- Allowable costs and restrictions on allowable costs
- Technical standards preferred, required, or allowed under each program

Grant requirements commonly applied to emergency communications grants can be found in Section VI. of this document.

⁶ Based on the SAFECOM Continuum, see: http://www.safecomprogram.gov/NR/rdonlyres/54F0C2DE-FA70-48DD-A56E-3A72A8F35066/0/Interoperability_Continuum_Brochure_2.pdf.

⁷ To find your SWIC or SCIP Point of Contact, please email OEC at oecc@hq.dhs.gov.

3.2 Coordinate with the SWIC

To understand the current emergency communications environment, and to ensure that projects support statewide plans to improve interoperability, applicants should coordinate emergency communications investments with the Statewide Interoperability Coordinator (SWIC), the statewide interoperability governing body (SIGB), and the appropriate stakeholders at State, regional⁸, local, and tribal levels of government. Grantees are encouraged to work with the SWIC and regional, local, and tribal representatives to ensure projects:

- Align to needs identified in Statewide Communication Interoperability Plans (SCIPs) and/or other communication plans (e.g., Tactical Interoperable Communications Plans [TICPs], Disaster Preparedness Plans) or to gaps identified in After Action Reports (AARs) from planned exercises or actual events
- Do not duplicate current efforts
- Are compatible with existing equipment and systems (where equipment is involved)
- Promote shared, standards-based systems (e.g., Project 25 compliant)
- Meet Federal narrowband requirements

3.3 Consider the FCC Narrowband Mandate

In December 2004, the Federal Communications Commission (FCC) mandated that all public safety licensees operating below 512 megahertz (MHz) move to 12.5 kilohertz (kHz) narrowband voice channels and highly efficient data channel operations by January 1, 2013.

To assist State, regional, local, and tribal levels of government in achieving this mandate, many grants that fund interoperable communications equipment (i.e., most DHS grants) allow grant funds to be used for narrowband-related activities, including:

- Development of narrowband plans
- Assessment of narrowband compliant assets and capabilities
- Training associated with narrowband transition
- Replacement of non-narrowband compliant equipment
- Acquiring/upgrading tower sites needed to comply with narrowband conversion⁹
- Reprogramming existing equipment to comply with narrowband conversion

Grantees are encouraged to allocate grant funds (where allowable) to plan and implement narrowbanding activities that will ensure compliance by the FCC-mandated deadline of January 1, 2013. Generally, Federal licensing fees are *not* allowable under most Federal grants. Grantees are encouraged not to delay on the implementation of this effort as non-compliant public safety agencies may not be able to communicate with systems operating on new narrowband channels; even if communications are possible, they may be degraded.

⁸ “Regional” for this document is defined as more than one jurisdiction (e.g., more than one State, county, local jurisdiction) including intra-State and inter-State, unless defined otherwise in grant guidance.

⁹ Some Federal grants do not allow construction or similar ground-disturbing activities. Consult the specific grant guidance and the grant office.

3.4 Consider Regional, Multi-Jurisdictional, Multi-Disciplinary Projects

Grant applicants are encouraged to coordinate proposals with State and regional partners to promote greater interoperability across jurisdictions and nationwide. Applicants should consider developing projects that:

- Improve emergency communications across jurisdictions (e.g., across States, counties)
- Enables communication across jurisdictions, between disciplines, and among all levels of government
- Expands coverage to unserved or underserved areas within or beyond a region
- Links disparate systems
- Connects local systems and responders to regional or statewide systems

Regional projects (intra-State and/or inter-State projects that include more than one jurisdiction) should promote wide area interoperability and not create new barriers between responders inside and outside of the region. For example, grant funding should not advance a “proprietary-based project” when an equivalent “open standards” solution exists.

3.5 Consider Cross-Border Communications

Interoperability is an operational requirement that often transcends political boundaries. Grantees located adjacent or near to international borders are encouraged to consider developing projects that improve communications along and across international borders. Grantees should promote solutions that improve not only intra-States communications, but also communications between international, Federal, State, local, and tribal public safety and border agencies. Grantees should coordinate with Federal, State, and international partners operating along the border to ensure that grant-funded activities support, and do not hinder, current efforts to improve interoperability, and should leverage existing resources and relationships to improve communications along and across the border.

Grantees should also work with SWICs to ensure that Federally-funded projects do not interfere with the 800 MHz rebanding effort occurring along the border.¹⁰

Additionally, grantees are reminded that Federal funding may not be allocated to international entities (unless authorized by law), and placement of Federally-funded equipment on international property may be subject to special terms and conditions.¹¹ Applicants should work closely with their grant officer to ensure that proposed activities are allowable under the grant.

¹⁰ For more information on the rebanding process, see Federal Communications Commission Frequently Asked Questions at: <http://www.fcc.gov/pshs/public-safety-spectrum/800-MHz/reconfiguration-faqs.html>.

¹¹ See your grants officer for more information on placement of equipment on international property or foreign land.

3.6 Consider Broadband and Emerging Technologies

National policy-makers are making the creations of a nationwide, interoperable network for first responders a key priority.¹² First responders and the FCC recognize the need for a common interoperability framework for public safety wireless broadband networks to ensure that networks are technologically compatible and interoperable. Grantees should consider investments in broadband planning and technologies¹³ in order to continue to move their jurisdiction toward greater interoperability nationwide.

IV. Eligible Activities

The following section details eligible emergency communications activities commonly funded by Federal grants, based on the four common cost categories: Planning, Training, Exercises, and Equipment.

Applicants seeking to improve interoperable emergency communications are encouraged to allocate grant funding to these activities; however, all activities listed here may not be eligible for funding under all grant programs. Applicants should read each grant guidance and related information carefully to ensure that activities proposed are eligible under the program.

4.1 Planning

Planning activities help to identify and prioritize needs, define capabilities, update preparedness strategies, refine communication plans, allocate resources where they are needed most, and deliver preparedness programs across multiple disciplines and levels of government. Grant recipients are strongly encouraged to use grant funding for planning, which may include:

- **Personnel to assist with planning.** Under some Federal grants, full- or part-time staff may be hired to support emergency communications planning activities, including:
 - Statewide Interoperability Coordinators (SWIC)
 - Project manager(s)
 - Emergency communication specialists (e.g., frequency planners, technical experts, radio communication technicians)
 - Regional, local, or tribal interoperability coordinator(s)

In general, the use of Federal grant funding to pay for staff regular time is considered personnel. Staff must perform activities that are associated with the grant and allowable under the program. For grants funding emergency communications, this may include:

¹² <http://www.broadband.gov/plan/>

¹³ The FCC has advised grantees to ensure that investments in wireless broadband networks are compliant with 3 GPP-Release 8 of the Long-Term Evolution (LTE) standard, and have required grantees to provide information on how the investment will achieve interoperability with other public safety networks, including a statement on whether the interface is compliant with 3 GPP-Release 8 of the LTE standard.

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- Establishing or updating interoperability plans
- Conducting stakeholder outreach
- Integrating interoperability plans at State and local levels
- Planning communications training and exercises
- Systems and equipment planning
- Implementing Statewide Communication Interoperability Plan (SCIP) initiatives/managing interoperability projects
- Tracking progress toward National Emergency Communication Plan (NECP) goals

Common restrictions on Federal grant funding for emergency communications personnel are provided on Section VI. of this document.

- **Hiring of certain full- or part-time staff and contractors or consultants.** Some Federal grants allow grantees to hire full- or part-time contractor staff or consultants to assist with planning activities that are directly related to the Federally-funded project, including: project manager(s), subject matter expert(s), regional/local interoperability coordinator(s), and technical experts.
- **Development and/or enhancement of interoperable emergency communications plans.** Grant funds may be used to develop and/or enhance interoperable communications plans and align plans to goals, objectives, and initiatives set forth in the NECP. Emergency communications plans include:
 - SCIPs and SCIP Implementation Reports
 - Tactical Interoperable Communications Plans (TICPs) or other regional interoperable emergency communications plans
 - Disaster emergency communications plans
 - Communications system life cycle planning, including migration planning
 - Plans for narrowband conversion
 - Broadband planning and migration
 - Plans related to the procurement of communications systems or equipment
 - Planning for back-up communications in the event that primary systems or equipment fail (contingency and strategic planning)
 - Planning for Training and Exercises
 - Plans to address findings in After Action Reports (AARs)
 - Plans to demonstrate or achieve NECP milestones or initiatives

Developing and updating emergency communications plans requires input from localities and public safety agencies. As a result, the following activities are often supported through Federal grants funding emergency communications:

- Conferences and workshops to receive input on plans
- Meeting expense related to planning
- Public education and outreach on planning
- Travel and supplies related to planning

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- **Establishment and/or enhancement of interoperability governing bodies.** Grant funds may be used to establish or enhance statewide, regional (multi-State, multi-urban area), or local interoperability governing bodies.¹⁴ Statewide bodies often lead activities associated with planning, implementing, and managing interoperable emergency communications initiatives. Common eligible activities include:
 - Developing partnership agreements (e.g., Memoranda of Understanding [MOUs])
 - Developing a Charter
 - Outreach to local entities to expand involvement
 - Meeting related expenses
 - Public education and outreach to increase participation in governing bodies
 - Supplies for governing body meetings
 - Travel to governing body meetings

- **Development and/or enhancement of interoperable emergency communications assessments and inventories.** Grantees are encouraged to allocate grant funding to planning activities, such as assessments of:
 - Technology capabilities, including assessments and inventory of infrastructure and equipment (e.g., Communications Asset Survey and Mapping tool [CASM], fleetmaps, frequency plans)
 - Standard operating procedures (SOPs)
 - Training and exercises
 - Narrowband compliance capabilities and narrowband-compliant assets
 - Broadband coverage
 - Gaps in coverage (including gaps associated with narrowband conversion)
 - Coordination of mutual aid channels
 - Development of cost maintenance models¹⁵ for equipment and usage

- **Development and enhancement of interoperable emergency communications protocols.** Funds may be used to enhance multi-jurisdictional and multi-disciplinary common planning and operational protocols, including the development or update of:
 - SOPs, including the elimination of coded substitutions (i.e., developing and implementing common language protocols)
 - Partnership agreements, MOUs, cross border agreements
 - Plans to integrate State and local SOPs, or develop mutual aid agreements
 - SOPs in response to specific disasters or emergencies
 - Field guides and templates for field guides, SOPs

¹⁴ The NECP established a national milestone that statewide interoperability governing bodies in all 56 States and territories should be established as recommended in the Statewide Interoperability Planning Guidebook.

¹⁵ For information on common maintenance costs for emergency communication projects, see Federal Emergency Management Agency Information Bulletin 337: <https://www.fema.gov/txt/government/grant/bulletins/info337.txt>.

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- **Planning for emerging technologies.** Grant funds may be used to plan for emerging technologies, such as broadband, wireless data networks, Internet Protocol (IP)-based mobile communications devices, and location-based services. This can include hardware, software, data, and operational policies and procedures supported by multi-purpose emergency service networks. Activities may include:
 - Broadband planning and broadband migration plans
 - Development of SOPs related to new technology implementations
 - Plans to comply with emerging technology network best practices
 - Development of SOPs for coordination with other stakeholders
 - Emerging technology systems contingency planning
 - Development of system migration plans or feasibility studies
- **Use of priority service programs.** Grant funds may be used to facilitate participation in a number of Federal priority service programs, including:
 - Telecommunications Service Program (TSP)
 - Government Emergency Telecommunications Service (GETS)
 - Wireless Priority Service (WPS)

4.2 Training

Recipients are encouraged to allocate Federal grant funds to support emergency communications and incident response training, and to include training in projects that include the development of new SOPs or the purchase of new equipment. Communications-specific training activities should be incorporated into statewide training and exercise plans, and reflected in SCIP Implementation Reports. Training projects should address a performance gap identified through SCIPs, TICPs, AARs, and/or other assessments. Interoperable emergency communications grant funds may be used for the training activities listed below.

- **Personnel Expenses.** Full or part-time staff may be hired to support training activities. This includes staff that will:
 - Assess training needs
 - Develop training curriculum
 - Train the trainers
 - Train emergency responders
 - Develop exercises to test training
 - Support training conferences

Common restrictions on Federal grant funding for emergency communications personnel are provided in Section VI. of this document.

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- **Overtime.** Some Federal grants permit the use of funds for overtime related to training. These expenses are limited to the additional costs that result from personnel working more than 40 hours per week as a direct result of their attendance at approved interoperable and emergency communications activities (i.e., approved emergency communications training).
- **Backfill-related Overtime.** Some Federal grants allow funds to be used for back-fill related overtime. These expenses are limited to costs of personnel who work overtime to perform the duties of other personnel who are temporarily assigned to grant-funded activities (e.g., to attend approved, grant-funded emergency communications training). These costs are calculated by subtracting the non-overtime compensation, including fringe benefits of the temporarily assigned personnel, from the total costs for backfilling the position. Grantees should ensure that grant funds can be used for overtime and should consult their grant officer to ensure that overtime costs are correctly calculated.
- **Hiring of certain full- or part-time contractors or consultants.** Hiring full- or part-time contractor staff or consultants to assist with training activities that are directly related to the grant-funded project (e.g., Communications Unit Leader [COML] trainers).
- **Development, delivery, attendance, and evaluation of training.** Grant funds may be used to plan, attend, and conduct communications-specific training workshops or conferences, to include costs related to planning, meeting space, and other meeting costs, facilitation costs, travel, and training development. Communications-specific training¹⁶ should focus on:
 - Use of established operational protocols (i.e., common language)
 - National Incident Management System (NIMS) Incident Command System (ICS)
 - Use of advanced technology, and interoperable communications equipment
 - Disaster preparedness training
 - Peer-to-peer training
 - Regional (multi-State, multi-urban area) training
 - Communications Unit Leader Training, Communications Unit Technician, or other ICS Communications Unit position training
 - Training associated with narrowband transition, and conversion to narrowband
 - Use of relevant advanced data capabilities (voice, video, data, text)
- **Expenses related to training.** Many Federal grants allow funds to be used for expenses related to training, including:
 - Training sessions, workshops, conferences and travel related to training
 - Meeting expenses related to training
 - Public education and outreach on training opportunities
 - Supplies related to training (e.g., signs, badges, and other materials)

¹⁶ DHS training catalogs are available at: https://www.firstrespondertraining.gov/odp_webforms/. The Federal-sponsored course catalog can be found at: https://www.firstrespondertraining.gov/webforms/pdfs/fed_catalog.pdf, and the State-sponsored course catalog at: https://www.firstrespondertraining.gov/webforms/pdfs/state_catalog.pdf.

4.3 Exercises

Exercises should be used to both demonstrate and validate skills learned in training and to identify training gaps and gaps in capabilities. To the extent possible, exercises should include participants from multiple jurisdictions and agencies such as emergency management, emergency medical services, law enforcement, interoperability coordinators, public health officials, hospital officials, and other disciplines, as appropriate.

In addition, grantees are encouraged to use Federal grant funding to demonstrate progress against NECP Goals,¹⁷ which may include the following activities:

- **For Goal 1:** In FY 2011, urban areas that completed Goal 1 validation are encouraged to use grant funds to address gaps and recommendations in NECP Goal 1 Improvement Plans.¹⁸
- **For Goal 2:** In FY 2011, States are encouraged to conduct exercises and/or develop incident AARs from planned events or real-world incidents to demonstrate compliance with NECP Goal 2. States are encouraged to use Federal grant funds to complete their Goal 2 capabilities and performance reports and to submit their reports with the SCIP Implementation Report. Grantees should use the results of Goal 2 assessments to improve capabilities.¹⁹
- **For Goal 3:** In FY 2011, States may also allocate Federal grant funding to prepare for a significant event²⁰, as indicated in Goal 3 of the NECP.

In addition to exercises related to NECP Goals, Federal funds may be used for the following interoperable emergency communication exercise activities:

- **Personnel Expenses.** Full or part-time staff may be hired to support exercises. This includes staff that will:
 - Assess needs
 - Plan and conduct exercises in compliance with NIMS and Homeland Security Exercise and Evaluation Program (HSEEP)
 - Plan and conduct NECP Goal 2 or 3 exercises
 - Lead After Action Conference and prepare AARs

Common restrictions on Federal grant funding for emergency communications personnel are provided in Section VI. of this document.

¹⁷ NECP Goals can be found at: http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf, p.7.

¹⁸ In FY 2010, OEC performed Goal 1 validation evaluations in 60 Urban Areas Security Initiatives (UASI) throughout the country. The communications infrastructure within each urban area had the capacity to support these large planned events.

¹⁹ In FY 2011, OEC will complete Goal 2 validations, which focused on response times in non-UASI jurisdictions.

²⁰ See National Planning Scenarios at: http://www.dhs.gov/xlibrary/assets/National_Preparedness_Guidelines.pdf, p. 31.

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- **Overtime.** Some Federal grants permit the use of funds for overtime related to training. These expenses are limited to the additional costs that result from personnel working more than 40 hours per week as a direct result of their attendance at approved, grant-funded interoperable and emergency communications activities (i.e., approved emergency communications exercise).
- **Backfill-related Overtime.** Some Federal grants allow funds to be use for back-fill related overtime. These expenses (if allowable) are limited to costs of personnel who work overtime to perform the duties of other personnel who are temporarily assigned to grant-funded activities (e.g., to attend approved, grant-funded emergency communications exercise). These costs are calculated by subtracting the non-overtime compensation, including fringe benefits of the temporarily assigned personnel, from the total costs for backfilling the position. Grantees should ensure that grant funds can be used for overtime and should consult their grant officer to ensure that overtime costs are calculated correctly.
- **Hiring of certain full or part-time contractors or consultants.** Hiring full or part-time contractor staff or consultants to assist with training activities that are directly related to the grant-funded project (e.g., emergency communications or disaster preparedness exercise).
- **Design, development, execution, and evaluation of exercises.** Grant funds may be used to design, develop, conduct, and evaluate interoperable emergency communications exercises, including tabletop and fully functional exercise formats. Exercise activities should focus on:
 - Using new or established operational protocols
 - Using interoperable emergency communications equipment
 - Designing and executing exercises of the new equipment purchased to facilitate the conversion process to narrowband, or serving as strategic technology reserve
 - Designing and executing regional (multi-State, multi-urban area) exercises
 - Designing and executing HSEEP compliance exercises
 - Designing and executing NIMS compliant training and exercises
 - Using emerging technology systems, equipment, or testing SOPs
 - Demonstrating response level communications or NECP Goals
- **Expenses related to exercises.** Many Federal grants allow funds to be used for expenses related to exercises, including:
 - Meeting expenses related to planning or conducting exercises
 - Public education and outreach related to exercises
 - Travel and supplies related to exercises

Additional Requirements for Exercise Activities

- **All Federally-funded exercises must be managed and executed in accordance with HSEEP.** The HSEEP Library provides guidance for exercise design, development, conduct, and evaluation of exercises, as well as sample exercise materials. HSEEP Volume V: Prevention Exercises provides recommendations for designing, developing, conducting, and evaluating prevention-focused exercises. The HSEEP Library can be found at: <https://hseep.dhs.gov>.
- **All Federally-funded exercises must be NIMS-compliant.** On February 28, 2003, the President issued Homeland Security Presidential Directive 5 (HSPD-5), Management of Domestic Incidents, which requires all Federal departments and agencies to adopt NIMS and to use it in their individual incident management programs and activities, including all preparedness grants. Grantees should review the NIMS requirements on the following site: <http://www.fema.gov/emergency/nims/index.shtm> and ensure that all Federally-funded training and exercise activities are NIMS-compliant.
- **Training and exercises should be coordinated with the SWIC.** Communications-specific exercise activities should be coordinated with the SWIC and/or SIGB, and should be incorporated in the SCIP or SCIP Implementation Report.

4.4 Equipment

Emergency response providers must upgrade and regularly maintain communications systems and capabilities to ensure effective operation. Given the substantial costs and complexities associated with system design, implementation, and equipment maintenance, applicants should develop system life cycle plans to plan for the long-term sustainability of communications systems. Many Federal grants require grantees to submit system life cycle plans for equipment purchased with grant funds.

Regional operable and interoperable solutions, including shared solutions, are strongly encouraged. Grant applicants are encouraged to coordinate with regional partners and submit applications that promote regional (multi-jurisdictional, cross-State, cross-border) collaboration and cost-effective measures. Interoperable emergency communications grant funds should be used to focus on the activities listed below.

- **Design, construction²¹, implementation, enhancement, replacement, and maintenance of emergency response communications systems and equipment.** Grant funds may be used to design, implement, enhance and maintain interoperable emergency communications systems. Equipment activities should focus on:

²¹ Not all Federal grants permit construction-related activities. Check the grant guidance or ask your grant officer if construction activities are allowed. For grants that support construction-related activities, see Environmental and Historic Preservation requirements that apply to select construction-related activities in this guidance.

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- Purchase of emergency communications equipment²²
 - Purchase of equipment for the 700 megahertz (MHz) public safety broadband wireless network (i.e., mobile, portable, infrastructure²³ equipment), that complies with the FCC Waiver Order²⁴ or any succeeding rules governing the 700 MHz public safety broadband wireless network
 - Development of communications system life cycle plans
 - Migration to approved open architecture and interoperable emerging technology systems
 - Leveraging existing and emerging technologies (e.g., multi-band/multi-mode capable radio) to expand and integrate disaster communications capabilities among emergency response providers
 - Project management costs associated with equipment and systems
 - Procurement of technical assistance services for management, implementation, and maintenance of communication systems and equipment
 - Reimbursement of cellular and satellite user fees when used for back-up emergency communications
- **Plan, procure, and deploy emerging technology systems.** Grant funds may be used to plan, procure, and deploy emerging technology systems, networks, telephony, and data sharing capabilities, based on open standards and systems. Activities should focus on:
 - Upgrading systems to take advantage of advanced data capabilities
 - Ensuring interface between emerging system and land mobile radios to achieve seamless digital, IP-enabled emergency communications system
 - **Conversion to narrowband equipment.** The FCC mandated that all non-Federal public safety licensees using 25 kilohertz (kHz) radio systems migrate to narrowband 12.5 kHz channels by January 1, 2013. To assist State, regional, local, and tribal levels of government in achieving this mandate, grant funds may be used for the activities listed below:
 - Replacing non-narrowband compliant equipment
 - Acquiring/upgrading additional tower sites needed to comply with narrowband conversion
 - Reprogramming existing equipment to comply with narrowband conversion

Additional Requirements for Equipment Purchases

Federal grant funds for equipment often carry additional requirements, which may include:

²² For a list of interoperable emergency communications equipment typically allowed under emergency communication grants, see the list of Interoperable Communications Equipment on the Federal Emergency Management Agency (FEMA) Authorized Equipment List (AEL) on the Responder Knowledge Base (RKB) website at <https://www.rkb.us/mel.cfm?subtypeid=549>.

²³ Grantees are advised to consult their grant officer regarding the purchase of equipment that may require construction-related (or ground-disturbing) activities.

²⁴ http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-79A1_Rcd.pdf.²⁵ Technical standards and requirements vary among Federal grant programs (especially grants funding research and testing). Applicants should review a program's grant guidance to ensure that specific standards, terms, and conditions under the grant are met.

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- **Compliance with Federal procurement requirements.** As a condition of funding, recipients agree to comply with Federal procurement requirements. Grantees are required to have written procurement policies in place, are encouraged to follow the same policies and procedures it uses for procurement from its non-Federal funds, and should include any clauses required by the Federal government. The following are key procurement tenets when using Federal funds:
 - Procurement transactions should be conducted to ensure open and free competition
 - Grantees/subgrantees should avoid non-competitive practices (e.g., contractors that developed the specifications for a project should be excluded from bidding)
 - Grantees/subgrantees may not supplant, or replace, non-Federal funds that are already budgeted or funded for a project

- **Development of communications system life cycle plans.** Emergency response providers must upgrade and regularly maintain communications systems and capabilities to ensure effective operation. System life cycle planning is needed to ensure long-term sustainability of communications systems and infrastructure. Grantees should develop a system life cycle plan for any communications system, and are often required to submit system life cycle plans for equipment purchased with Federal grant funds. Grant funds often support the development of system life cycle plans. See Appendix A for a sample system life cycle plan.

- **Compliance with SAFECOM technical standards.** Grantees must ensure that all grant-funded equipment comply with the SAFECOM technical standards in Section V. of this guidance, unless otherwise noted in a program's grant guidance.²⁵ Many Federal grants require grantees to explain and document how their procurements will comply with the applicable standards for land mobile radio systems and data-related information sharing systems, or provide compelling reasons for using non-standards-based solutions. Grantees should document all purchases and evidence of compliance with standards-based requirements.

- **Compliance with Federal Environmental and Historic Preservation (EHP) requirements.** Grantees must ensure that Federally-funded projects comply with relevant EHP laws. The installation of communications towers and other ground-disturbing activities, frequently require EHP review. Each agency (and sometimes, each program) has its own EHP compliance process. Grantees should discuss proposed construction-related activities with grant offices *before* beginning work to determine whether proposed activities are allowed, and to determine if proposed activities are subject to EHP review. To learn more about Federal EHP requirements, see the Council on Environmental Quality Regulations, 40 CFR Part 1500-1508, or the U.S. Environmental Protection Agency website at:
<http://www.epa.gov/compliance/resources/faqs/nepa/index.html>.

²⁵ Technical standards and requirements vary among Federal grant programs (especially grants funding research and testing). Applicants should review a program's grant guidance to ensure that specific standards, terms, and conditions under the grant are met.

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- **Leveraging existing systems and adopting new technologies.** Grantees are encouraged to migrate to approved open architecture and to leverage existing and emerging technologies to expand and integrate disaster communications capabilities.
- **Coordination with SWIC and with State and local partners.** Grantees are strongly encouraged to coordinate with the SWIC and with other State and local partners to ensure compatibility among existing and planned emergency communications systems and equipment, and consistency with the SCIP.
- **Cost Share.** Many Federal grants require recipients to provide a percentage of total costs allocated to equipment. Federal funds cannot be matched with other Federal funds, but can be matched through State or local cash and in-kind contributions. Match requirements are often waived for ancillary territories. Grantees should review cost share requirements for Federal grants funding emergency communications equipment.

V. Equipment Standards

When procuring equipment for communications systems, whether voice or data, a standards-based approach must be used to facilitate interoperability between jurisdictions and disciplines at all levels of government, and to ensure interoperability between Federally-funded investments. The applicable requirements for land mobile radio (LMR) systems, Voice over Internet Protocol (VoIP) systems, and data-related information sharing systems (including broadband applications) are described below.

5.1 Standards for Land Mobile Radio Systems (P25 Suite of Standards)

Grantees must ensure that digital voice systems and equipment purchased with Federal grant funding is compliant with the Project 25 (P25), unless otherwise noted in a program's grant guidance. The P25 suite of standards is published by the Telecommunications Industry Association (TIA).²⁶ TIA is a recognized American National Standards Institute (ANSI) standards development organization. The P25 standards provide a number of technical specifications for emergency communications equipment that are designed to ensure equipment is interoperable.

To date, TIA has published over 60 documents detailing the specifications, messages, procedures, and tests applicable to the 11 interfaces, functions, and features offered by P25. The P25 Statement of Requirements is published by the Project 25 Steering Committee on an annual basis.²⁷

²⁶ The 2010 P25 suite of standards is available at: http://www.tiaonline.org/standards/technology/project_25/.

²⁷ [http://ftp.tiaonline.org/TR-8/APIIC/P25%20UNS/Public/Current%20Approved%20Project%2025%20Statement%20of%20Requirements/P25%20SoR%20\(March%203.%202010\).pdf](http://ftp.tiaonline.org/TR-8/APIIC/P25%20UNS/Public/Current%20Approved%20Project%2025%20Statement%20of%20Requirements/P25%20SoR%20(March%203.%202010).pdf).

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Grantees can find the Document Suite Reference and additional information on P25 from the National Institute of Standards and Technology at <http://www.pscr.gov/outreach/p25dsr/p25dsr.php>.

For additional information on P25 information and resources, grantees can register (free of charge) for the Project 25 Technology Interest Group (PTIG) website at <http://www.project25.org/>.

Recommendation: Include P25 Standards in Statement of Requirements

Grantees should review the technical specifications detailed in the TIA documents to determine which standards are applicable to the proposed project. To gain a better understanding of technology standards and options, grantees may wish to develop and release a Request for Information (RFI). An RFI is a formal request for specific information about current technologies and services and their corresponding limitations and about different vendor approaches for delivering a solution or service.

SAFECOM recommends that agencies include all applicable standards and expectations for interoperability in the statement of requirements or bid for communication procurements funded through Federal grants. This will help develop a shared understanding between buyers and vendors for determining what certification or compliance with a standard means to the agency making the purchase. Grantees should avoid using product specifications developed by a specific vendor or targeted to a specific product in the requirements. This will limit the ability of other vendors to respond to the RFP and does not ensure the community will receive services and solutions addressing its unique needs.

Grantees may wish to review the SAFECOM website (<http://www.safecomprogram.gov>) which provides valuable resources for developing requirements for procurements.²⁸

For sample procurement language, see page 25 of the SAFECOM Guidelines for Developing Requests for Proposals at <http://www.safecomprogram.gov/NR/rdonlyres/6AC5602E-7D8B-4416-9416-45F8ED257079/0/GuidelinesforRFPDevelopmentCW62806.pdf>.

P25 Eligible Equipment

For assistance in determining eligible communications equipment purchases, grantees can access the *OIC Wireless Communications Grant Guidance Tool* provides web-based access to detailed information that will be helpful in selecting and procuring Project 25 equipment. The *OIC Tool* can be accessed at: <http://www.its.blrdoc.gov/resources/p25/OICGrantguidancetool.pdf>.

P25 and Encryption

To ensure encrypted interoperability, the P25 suite of standards references the use of Advanced Encryption Standard (AES) in the *Project 25 Block Encryption Protocol, ANSI/TIA-102.AAD*. Entities pursuing encrypted communications capabilities must be compliant with the P25 Block Encryption Protocol.

²⁸ See Enhancing Communications Interoperability: Guidelines for Developing Requests for Proposals at <http://www.safecomprogram.gov/NR/rdonlyres/6AC5602E-7D8B-4416-9416-45F8ED257079/0/GuidelinesforRFPDevelopmentCW62806.pdf>.

P25 Compliance

Applicants purchasing P25 equipment must demonstrate how their procurements will comply with these requirements. When purchasing Project 25 LMR equipment/systems, grantees will, at a minimum, ensure the vendor has participated in equipment testing consistent with the Project 25 Compliance Assessment Program (P25 CAP). Where such equipment is covered in the *Project 25 Compliance Assessment Program Requirements*²⁹ document, it must be tested in accordance with applicable standards and policies of the P25 CAP, and evidence of this testing must be documented through Supplier's Declarations of Compliance and Summary Test Reports that have been posted to <http://www.rkb.us>.

If documentation is not available through the P25 CAP, agencies must obtain documented evidence from the manufacturer that the equipment has been tested and passed all of the applicable, published, normative, P25 test procedures for performance, conformance, and interoperability.

P25 Waivers

Authorizing language for most emergency communication grants strongly encourage investment in standards-based (e.g., P25) equipment. Many agencies will not approve non standard-based equipment unless there are compelling reasons for using other solutions. Funding requests by agencies to replace or add radio equipment to an existing non-P25 system (such as procuring new portable radios for an existing analog system) will be considered if there is a compelling reason why such equipment should be purchased, and written justification of how the equipment will advance interoperability and how the purchase will support eventual migration to interoperable systems. Absent compelling reasons for using other solutions, agencies considering new radio or system acquisitions should invest in standards-based equipment and are expected to migrate to P25 compliant equipment.

Additionally, when P25 LMR equipment/systems are purchased with a non-standard, proprietary feature/capability, and a comparable P25 feature/capability is available, the equipment/systems must include the standards-based feature/capability.

Recommendation: Purchase Standards-Based and Advanced Technologies that Promote Interoperability. Grant applicants are encouraged to pursue current and next generation interoperability solutions, such as gateways, point-to-point software solutions, and backbone technologies that connect existing radio systems. These technologies may include Internet Protocol (IP) based solutions that should not require nor involve the acquisition of non-P25 systems or equipment. Regardless of the technology, grantees should ensure that projects promote (and do not hinder) interoperability, and deliver capabilities that approach the functional equivalent of a common standards-based shared system.

²⁹ <http://www.safecomprogram.gov/SAFECOM/currentprojects/project25cap/>.

5.2 Standards for Voice-over-Internet Protocol Systems

When purchasing bridging or gateway devices that have a VoIP capability to provide connectivity between LMR systems, those devices must at a minimum, implement either the Bridging Systems Interface (BSI)³⁰ specification or the P25 Inter Radio Frequency Sub-System Interface (ISSI) as a part of their VoIP capability.

5.3 Standards for Data-Related Information Sharing Systems

OASIS Emergency Data eXchange Language

Grant funded systems, developmental activities, or services related to emergency response information sharing should comply with the OASIS Emergency Data eXchange Language (EDXL) suite of data messaging standards.

Compliance should include the following OASIS EDXL standards:

- Common Alerting Protocol (CAP), version 1.1 or latest version
- Distribution Element (DE), version 1.0 or latest version
- Hospital AVailability Exchange (HAVE), version 1.0 or latest version
- Resource Messaging (RM) standards, version 1.0 or latest version

This guidance does not preclude funding of non-OASIS EDXL compliant systems when there are compelling reasons for using other solutions. Funding requests by agencies to use non-OASIS EDXL compliant systems will be considered if there is a compelling reason why such equipment should be purchased, and written justification of how the equipment will advance interoperability and how the purchase will support eventual migration to interoperable systems. Absent such compelling reasons, the OASIS EDXL standards are the preferred standards. For more information, see: <http://www.oasis-open.org>.

National Information Exchange Model

Grant funded systems supporting emergency response information sharing should also leverage the National Information Exchange Model (NIEM) for data component or element standards. NIEM is a collaborative partnership between DHS and the U.S. Department of Justice (DOJ) to enable streamlined information sharing among Federal, State, local, and tribal agencies, as well as with private sector entities. NIEM allows disparate systems to share, exchange, accept, and translate information in an efficient manner. Rather than seeking nationwide integration of all Federal, State, local, and tribal information systems, NIEM focuses on cross-domain information exchange potential across multiple levels of government, thereby allowing organizations and agencies to share information quickly and effectively without rebuilding systems.

All 50 States use NIEM in some capacity and at differing levels of maturity. NIEM is not a software program, a computer system, or a data repository but a framework made up of two key components:

³⁰ The BSI is a VoIP interface between bridging or gateway devices. More information is available at: <http://www.safecomprogram.gov/SAFECOM/currentprojects/voip/>.

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- A data dictionary of more than 7,000 terms that are commonly used in an information exchange.
- A repeatable, reusable process for developing information exchange requirements.

The resulting work product is an Information Exchange Package Documentation (IEPD), which is a set of artifacts that define a particular data exchange. For example, there is an IEPD that defines the information content and structure for an Amber Alert, a bulletin or message sent by law enforcement agencies to announce the suspected abduction of a child. IEPDs define the process by which data is exchanged and is currently used by all 50 States. Grantees are encouraged to leverage the NIEM website to develop a greater understanding of data exchange functions and processes.

More information on NIEM can be found at: www.niem.gov. In addition, NIEM has developed specific guidance for grantees which can be found at: <http://www.niem.gov/grants.php>.

NIMS Supporting Technology Evaluation Program

Grant funded systems, developmental activities, or services related to emergency response information sharing should also comply with the NIMS Supporting Technology Evaluation Program (STEP). Information on the NIMS STEP can be found at: <https://www.nimsstep.org>. The NIMS STEP provides objective evaluations of commercial software and hardware products, and reports on product conformity to standards and NIMS guidelines. Findings from evaluations may be accessed through the RKB website to assist grantees in making purchases. More information on the NIMS STEP can be found at: <https://www.nimsstep.org>.

5.4 Standards for Broadband Technologies

The Federal Communications Commission (FCC) has made creating a nationwide, interoperable network for first responders a key part of its national broadband plan. As a result, public safety agencies are beginning to invest in wireless broadband networks operating in the 700 megahertz (MHz) band. The FCC has recognized the need for a common interoperability framework for public safety broadband networks to ensure that networks are technologically compatible and interoperable, and has designated Long-Term Evolution (LTE) technology as the standard that should be used by public safety agencies developing networks in the 700 MHz band. Specifically, the FCC has designated “3GPP-Release 8 of LTE” as the required technological standard for public safety broadband networks operating in the 700 MHz band.

Grantees must ensure that investments in wireless broadband networks are compliant with 3 GPP-Release 8 of the LTE standard, as designated by the FCC. Grantees must ensure that investments will be interoperable with other public safety networks, including a statement on whether the interface to such other networks is compliant with 3GPP-Release 8 of the LTE standard. For additional information, please see FCC 10-79 at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-79A1_Rcd.pdf.

VI. Common Requirements and Restrictions on Federal Grant Funds

Grantees should be aware of common requirements and restrictions on Federal grant funding. Below are common requirements and restrictions that affect Federal grants funding emergency communications. In addition, grantees should read Federal grant guidance to ensure compliance with program requirements and consult the grants officer with any questions.

Commingling of Funds

Grantees must ensure that Federal funds are used for purposes that were proposed and approved, and must have financial systems in place to properly manage grant funds. In addition, grantees cannot commingle Federal sources of funding. The accounting systems of all grantees and subgrantees must ensure that Federal funds are not commingled with funds from other awards or Federal agencies. Each award must be accounted for separately.

Cost Sharing/Matching Funds

Grant funds may not be used to meet matching requirements of any other Federal award in the current or prior period. If matching funds are required under a grant, matching funds must be:

- Allowable under the program
- Associated with the Federally-funded investment
- Applied only to one Federal grant program
- Contributed from non-Federal sources
- Treated as part of the grant budget
- Documented the same way as Federal funds (in a formal accounting system)

Funding and Sustaining Personnel

In general, the use of Federal grant funding to pay for staff regular time is considered personnel. Staff must perform activities allowable under the grant. Most Federal grants require applicants to identify sustainable sources of funding and work to integrate new staff into the State and local budgets in future years to maintain these capabilities. Grantees should develop a plan to sustain grant-funded positions to ensure States maintain critical communications personnel, in the event that Federal funds are not available to support the position.

Supplanting

Grant funds cannot supplant (or replace) funds previously funded or budgeted for the same purpose. Most Federal grants funding emergency communications restrict grantees from hiring personnel for the purposes of fulfilling traditional public safety duties or to supplant traditional public safety positions and responsibilities.

Appendix A. Sample Life Cycle Plan

PHASE	NARRATIVE
Initiation	<i>Provide the name and contact information of the Project Manager for the project</i>
Planning	<i>Provide the detailed statement of work (including equipment purchased) and the project budget</i>
Design	<i>Provide a narrative including the intended impact on emergency communications and the affected stakeholders including a list of emergency response providers and localities involved</i>
Development and Test	<p><i>Provide a short summary of the hardware and software to be used in completing the project</i></p> <p><input type="checkbox"/> <i>In-House</i> ____ (please specify) _____</p> <p><input type="checkbox"/> <i>Vendor</i> _____</p>
Validation	<i>Discuss how the Project Manager will ensure that the project has met specified requirements and will achieve intended impact (e.g., testing, training, exercises)</i>
Operations and Maintenance	<i>Discuss how equipment and supporting entities will be maintained during and after the grant period of performance; Note a point-of-contact responsible for operations and maintenance</i>
Disposition	<i>Discuss the process for the proper disposition of equipment</i>