Statewide Communications Interoperability Plan

State of Rhode Island and Providence Plantations

2014

Developed by the Rhode Island Emergency Management Agency
In Conjunction with the Interoperable Communications Committee

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RIEMA RHODE ISLAND
EMERGENCY MANAGEMENT AGENCY

Lincoln D. Chafee **Governor**
Jamia R. McDonald **Executive Director**

January 6, 2013

Jamia McDonald
Executive Director
Rhode Island Emergency Management Agency
645 New London Ave.
Cranston, Rhode Island 02920

Greetings,

I am pleased to present to you the 2014 State of Rhode Island Statewide Communication Interoperability Plan (SCIP). This is the state's second version; it represents the continued commitment to the public safety community. The 2014 SCIP marks the next step towards achieving the 2018 vision for interoperability communications at the local, tribal, regional, state, and federal level.

Rhode Island Emergency Management Agency (RIEMA) and the Interoperability Communication Committee (ICC) collaborated to refine and enhance the SCIP, ensuring it is in compliance with Rhode Island General Law. Since the 2008 SCIP the state has had three major events in the State, these events caused the focus of interoperability to shift to recovery efforts. As the State moves forward the revised SCIP provides for an annual report to be given to the Governor and the General Assembly on the progress of the plan.

In 2013, Rhode Island Emergency Management Agency and the Interoperability Communication Committee with additional local, regional, and state practitioners, representing the public safety community, drove the planning process, and played an integral role in the implementation of the initiatives contained in the 2014 SCIP. In 2014, we will continue to work with public safety organizations and state agencies to increase awareness and address interoperability challenges while implementing a clear pathway to achieve interoperability communications by 2018.

As we move forwards our goal of interoperability, we must dedicated and continue to improve our ability to communicate among disciplines and across jurisdictional boundaries. With help from the public safety practitioners statewide, we will work to achieve our 2018 vision and to continue to be a model for statewide interoperability

Sincerely,

Jamia R. McDonald
Executive Director
Rhode Island Emergency Management Agency

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1 Introduction

The State of Rhode Island and Providence Plantations State Wide Communication Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, multi-disciplinary state wide strategic plan to enhance and streamline interoperable and emergency communications. The SCIP is a critical mid-range (three to five years) strategic planning tool to help Rhode Island prioritize resources, strengthen governance, identify future investments, and address interoperability issues, community wide input, and community wide strategic planning.

Rhode Island's SCIP is based on an understanding of the current and mid-range interoperable and emergency communications environment. We have taken significant steps towards enhancing interoperable and emergency communications, however, more remains to be done in order to achieve the state's vision. It is also important to note that this work is part of a continuous cycle, as we will always need to adapt to evolving technologies, operational tactics, and changes in key individuals. In the next three to five years, we will encounter challenges relating to operability, interoperability, geographic, aging equipment/systems, new users, emerging technologies, changing project champions, and sustainable funding.

Achieving the goal of sustainable funding in this current fiscal budget climate is a priority, as State and federal grant funding is reduced. We must work to identify alternative funding sources to continue improving emergency communications operability and interoperability for both voice and data systems. Key priorities areas for sustainable funding are:

- To ensure that the Statewide Interoperability Coordinator (SWIC) has the resources necessary to continue to be a state leader for interoperable and emergency communications.

- To ensure full life cycle support of interoperable and emergency communications systems, while continuing maintenance, upgrades with incorporation of emerging technologies.

- To maintain current interoperable and emergency communications governance structures.

More information on a basic emergency communication system life cycle, cost planning, and budgeting is available in the U.S. Department of Homeland Security (DHS) Office of Emergency Communications (OEC) System Life Cycle Planning Guide.

1.1 The Statewide Planning Life Cycle

Successful planning for statewide interoperable communications initiatives can only be achieved through a stakeholder driven, multi-step approach, incorporating planning, implementation, and assessment. The statewide planning lifecycle model, illustrated in figure 1 depicts the points Rhode Island utilize for the successful implementation of our SCIP.

- **Point One**-**Execute Workshop**: An Annual SCIP workshop is conducted at the beginning of each calendar year, in order to gain input from Rhode Island Stakeholders on updates to initiatives and programs outlined in the SCIP.

- **Point Two**-**Strategic Planning**: Utilizing stakeholder guidance, compiled at the annual workshop, updates to communications initiatives and programs are incorporated into the SCIP. Once the revisions have been added, the plan is reviewed by the Interoperable Communication Committee (ICC) for additional recommendations.

- **Point Three**- **Monitor Success and Challenges**: In order to assess progress on our strategic goals and initiatives, we utilize a tracking metric, in an effort to identify successful strategies and identify challenges. This type of knowledge is gained through detail exercises and training that captures our successes and challenges.

- **Point Four** –**Review and Report Performance Measures**: At the end of each calendar year, Rhode Island Emergency Management will complete two reports, one to the General Assembly and the other to the Department of Homeland Security (DHS), Office of Emergency Communications (OEC), which we use at the annual workshop to assist in determine updates to the following year's SCIP.

Figure 1

2 Vision Statement and Mission Statement

The following is the Rhode Island's Vision and Mission statements as defined by the Rhode Island Emergency Management Agency (RIEMA) working in partnership with the Interoperable Communication Committee (ICC), for improving emergency communications operability, interoperability, and continuity of communications state wide.

Vision Statement: By 2018, agencies and their representatives at the local, regional, Tribal State, and Federal levels will be able to communicate using compatible systems, in real time, across all disciplines and jurisdictions, to respond more effectively during day to day operations and major emergency situations.

Mission Statement : In accordance with general Laws of Rhode Island, Chapter 30-15-2, the Rhode Island Emergency Management Agency (RIEMA), in alliance with the Interoperable Communications Committee (ICC), pursues and promotes interoperable policies and standards which will ensure effective, fail safe, communications during emergency situations.

Goals of the SCIP:

GOAL 1: Establish statewide, multi-spectrum communications interoperability as a high priority for all stake holders.

Goal 2: Institutionalize continuous process improvement functions across state and municipal agencies.

Goal 3: Create a communication architecture which interfaces disparate wireless communication systems, facilitates burgeoning technologies, and integrates relevant open standard platforms.

Goal 4: Utilize advanced communications technology to provide stake holders with the commensurate level of mission critical interoperability.

Goal 5: Optimize the use of funding sources to accomplish the goals of the SCIP. Conduct continuous forecasting to ensure fiscal resourcing meets cost demands of RISCON infrastructure improvement and perpetual maintenance.

G**oal 6:** Incorporate current best practices approaches to improving interoperability. Institutionalize continuous best practice improvement function across state and municipal agencies.

Goal 7: Create a Statewide communications infrastructure that provides interconnectivity for stakeholders.

Goal 8: Institutionalize use of interoperability training objectives during state and local exercises.

Goal 9: Develop National Incident Management System (NIMS) complaint communications training communications training plans, and SOP classes for statewide use that achieve Communications Unit Leader (COML) certification.

Goal 10: Organize a pool of technical professionals to assist user agencies with evaluation of public safety wireless communications projects.

The above Vision, Mission and Goals Statements aids in the focus and goals of interoperable planning apply unilaterally, such as:

- Benefits to the public
- Wise use of public funding
- Enhanced reliability and service
- Benefits to agencies
- Shared interoperable system
- Expert management and maintenance
- Benefit to First Responders
- Increased reliability and sustainability

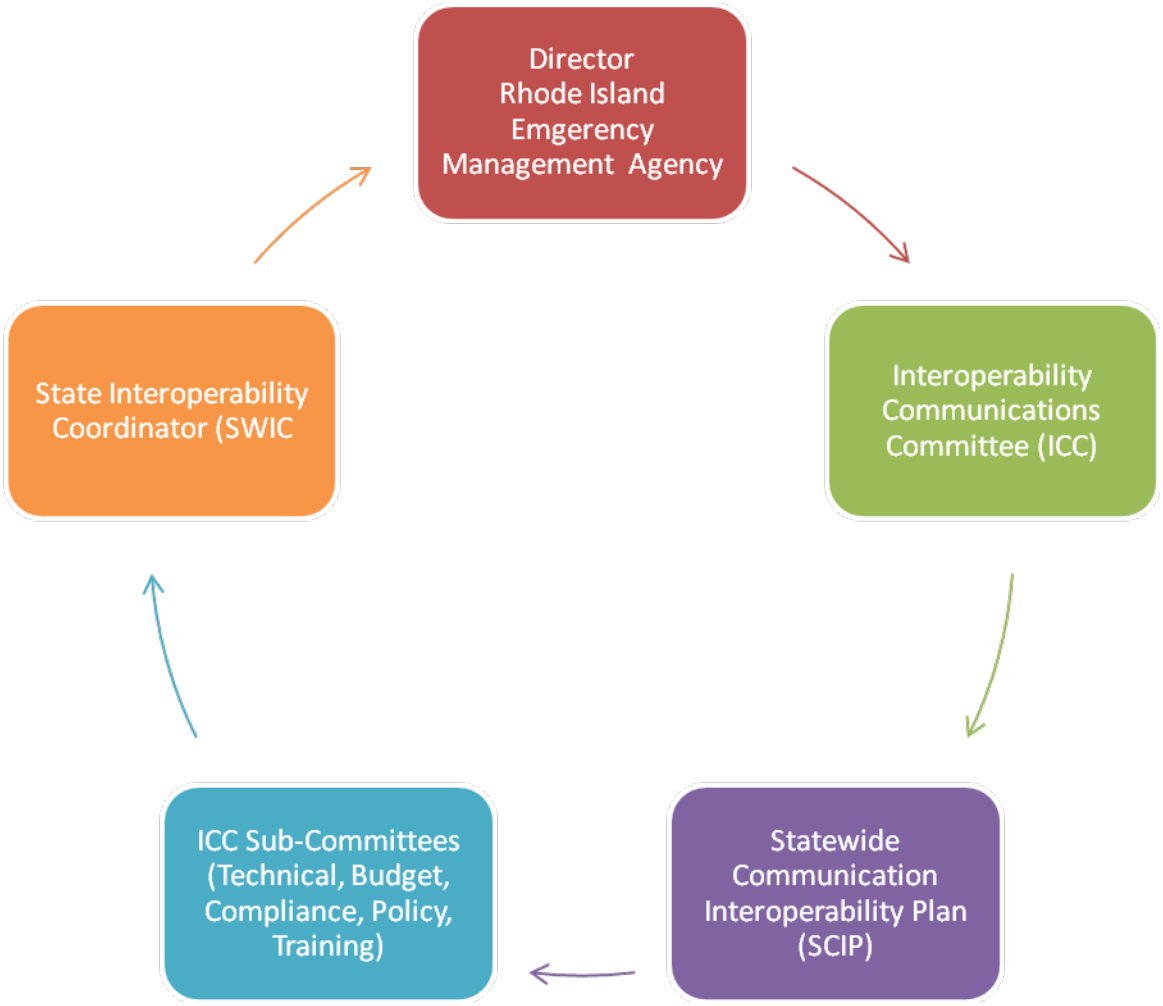
- Improved access to information
- Interoperability – sharing of information using common platform
- Frequency and Spectrum efficiency
- Ability to address current gaps
- Enhance mutual aid

3. Rhode Island's Interoperable and Emergency Communications Overview.

The State of Rhode Island is committed to continuing to work with all our partners, at every level of the First responder's community, as we move toward our 2018 interoperability goal. Among Rhode Island partners is SAFECOM, a Federal program managed by DHS. SAFECOM works with Federal partners to provide research, development, testing and evaluation, guidance, tools and templates on communications-related issues to local, tribal State, and Federal public safety agencies. Through this partnership, Rhode Island adopted the SAFECOM practitioner –driven approach to provide a forum for emergency responders to drive state wide planning.

Rhode Island's Interoperability Communication Committee (ICC) Governance structure ensures that the SCIP is stake holder driven. As reflected in Figure 2 there is one body made up of 22 representatives, which serve as basis from which all ideas, proposals, and guidance flow. The ICC receives input from members and all stake holders via the ICC sub-committees, which include Policy, Technical, Budget, Compliance, Training, and the State's Emergency Management Director.

Figure 2: The State of Rhode Island Interoperability Communications Governance



4. Purpose

The purpose of the Rhode Island SCIP is to:

- Provide strategic direction and alignment for responsible for interoperable communications at the State, regional, Tribal and local levels.
- Explain to leadership and elected officials the vision for interoperability and emergency communications in the State of Rhode Island in order to demonstrate the need for funding.

- Provide a road map to guide the State towards reaching the statewide interoperability strategic goals by 2018. The road map follows the interoperability Continuum and was developed by the stakeholders.

- Describe, for Rhode Island's General Assembly, the state of emergency communications in the State.

- Comply with applicable Rhode Island laws.

4.1 Grants Coordination and Policy Development

Compliance with the SCIP in mandatory in order to qualify for and receive State and Federal grant funding. The RIEMA Director, SWIC, and the ICC are designated authorities for reviewing the State of Rhode Island's interoperable communications grant funding applications. The review process assists in determining grant eligibility compliance and alignment with the SCIP.

To Comply:

1. Grant requests must support and or align with the 2014 SCIP.

2. Applicants must clearly define how the project improves interoperable communications on a multi-discipline and multi-jurisdictional basis and how the project addresses the seven courses of Interoperability.

3. Applicants must clearly define how the project promotes regional cooperation and addresses mutual aid.

4. Applicants must be National Incident Management System (NIMS) certified and compliant.

5. Equipment purchased must be on the Department of Homeland Security's Grants and Training Authorized Equipment List (AEL), or an exception letter must be on file and approved.

6. Equipment purchases will be monitored by the SWIC, RIEMA, and the ICC sub-committees in order to support a centralized oversight approach and ensure the solution goals identified in the 2014 SCIP are met and interoperability is achieved or maintained.

7. Subscriber radios purchased must be programmed with the mutual aid and the national interoperability channels within that radio's frequency band. Specifically, all State and National interoperability channels, including but not limited to 700 or 800 Megahertz (MHz), UCALL/UTAC, VCALL/VTAC, fire ground, Emergency Medical Services, and Law Enforcement channels must be programmed into all radios and must remain in analog mode during use.

8. When procuring equipment for communication system development and expansion, a standards-based approach will be used to begin migration to multi-jurisdictional and multi-disciplinary interoperability. Specifically, all new voice systems will be compatible with applicable Project 25 (P25) standards and the Rhode Island Statewide Communications Network (RISCON).

9. Jurisdictions operating below 512 MHz and not utilizing trunking must retain or have the capability to operate at least one primary Base and/or Repeater in the analog mode within their system. NOTE—Logic Trunked Radio (LTR) trunking does not qualify as trunking.

The development and execution of the SCIP assists Rhode Island with addressing the results of the National Emergency Communications Plan (NECP) Goals and the Federal government with fulfilling the Presidential Policy Directive (PPD) National Preparedness Goal for Operational Communications. In addition to the SCIP, an Annual Progress Report is submitted to OEC and the General Assembly, in order to highlight recent accomplishments and demonstrate progress toward achieving the goals and initiatives identified in the SCIP.

5. The Interoperability Continuum

The interoperability Continuum developed in coordination with SAFECOM, shown in Figure 3, serves as a framework to address technological and fiscal challenges and serves as a guide for Rhode Island, regions, and localities as we continue to improve emergency communications operability and interoperability. The interoperability Continuum is designed to assist emergency response agencies and policy makers with planning and implementing interoperability solutions for voice and data communications.

The Continuum identifies five critical success elements that must be addressed to achieve successful interoperable communications solutions;

- **Governance** – Collaborative decision making processes that support interoperability efforts to improve communication, coordination, and cooperation across disciplines and jurisdictions. Governance is the critical foundation of all of Rhode Island's efforts to address communications interoperable.

- **SOPs** – Policies, repetitive practices, and procedures that guide emergency responder interactions and the use of interoperable communications solutions.

- **Technology**- Systems and equipment that enable emergency responders to share voice and data information efficiently, reliably, and securely.

- **Training and Exercises**-Scenario-based practices used to enhance communications interoperability and familiarize the public safety community with equipment and procedures.

- **Usage** – Familiarity with interoperable communications technologies, systems, and operating procedures used by First responders it enhance interoperability.

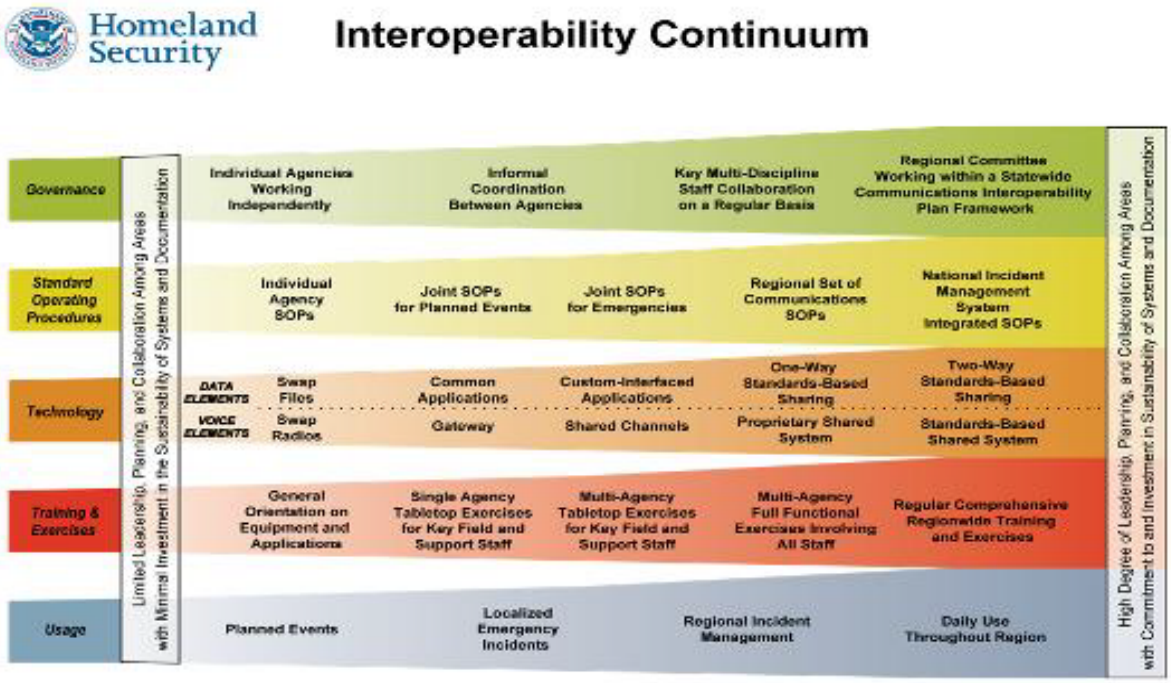


Figure 3, The interoperability Continuum

6. Strategic Goals

The following strategic goals represent Rhode Island's priorities for achieving the vision for interoperable and emergency communications.

- **Governance**
    - Refine the Rhode Island Interoperability Communication Committee (ICC) purpose and membership.
    - Refine the sub-committees of the ICC to ensure structure and process.
    - Implement process for ICC recommendations.

- **Standard Operating Procedures (SOPs)**
    - Implement a standard SOP template statewide through the SCIP for use in the Local Emergency Operations Plan (LEOP) process.
- **Technology**
    - Develop a roadmap /timeline of the current and planned voice data communications landscape.
    - Conduct vulnerability assessments of critical communications infrastructure and coverage gaps.
- **Training and Exercises**
    - Incorporation of comprehensive communications planning into exercises.
- **Usage**
    - Document the systematic use of equipment by emergency responders statewide.
- **Outreach and Information Sharing**
    - Develop an outreach and education plan to support education on initiatives, resources, and technologies.
- **Life Cycle**
    - Identify the problem, issues, need, and recommendation for sustainable funding of interoperable and emergency communications priorities.

Seven Courses to Interoperable Communications

Since the events of 9/11, the Station Night Club Fire, Flooding and Hurricane events of the last five years the State of Rhode Island has worked hard to increase interoperability capabilities. Significant investments have been made in new communication systems and equipment upgrades. However, it is clear that one common vision and pathway is needed to ensure that the State can meet the mandated 2018 interoperable vision.

Moving forward interoperability in the State of Rhode Island is, and will be, an ongoing process. The State's regional approach to improving interoperable communications, along with the specific initiatives outlined in the 2014 SCIP, will help address interoperability issues both in the short and long terms.

Course One: Rhode Island Statewide Communication Network (RISCON)

- RISCON offers the most cost effective method for bridging communication barriers by eliminating the incompatibility of exiting radio systems throughout the state. Since its inception in 2005 as a grass roots project has now grown to be the main means of inoperable communications used by more than 75% of the state's first responders. The state recognizes that RISCON has limitations but supports the system as the path to interoperability communications across the state.

Course Two: Communication Caches couple with Mobile Communication Trucks

- The state maintains and will continue to support a cache of radios along with two communication trucks which have been strategically important during major events and incidents in maintaining interoperability among different federal, state and local agencies.

Course Three: Planning, SOPs, Training and Exercises

- While the State has taken significant strides toward to inclusion of comprehensive planning, development of Standard Operating Procedures (SOPS), and training, more remains to be done. Continued attention needs to be given to these areas in order to ensure proper use of communications technology in which the state has invested. The technologies require plans that are efficient, comprehensive, and accessible. Training is needed to improve capabilities and maximize the State's resources. In addition the State agencies need to be exercised on a continue basis. Ensuring detail After Action Reports are provided to RIEMA to ensure equipment, training, policies and procedures are working to enhance First Responders capabilities.

Course Four: Broadband

- Public Safety Broadband provides opportunity for the future of interoperability communications in the State of Rhode Island. It may result in a secure path for RISCON, information sharing initiatives, Public Safety Answering Points (PSAP), and Next Generation 911 (NG911) integration. Broadband will not replace existing Land Mobile Radio (LMR) systems in the foreseeable future; the cost to implement broadband is extremely high. A cautious approach to this investment is needed. Therefore, a robust innovative business practices and requirements are being developed for Broadband initiatives prior to any implementation. In order to maintain pace with the fast moving Broadband legislation, representatives from Rhode Island Office of Digital Excellence with Rhode Island Broadband, and the Public Safety Infrastructure Group (PSIG), have been brought together to serve as the interim Broadband Governance Committee.

Course Five: Shared Interoperable Channels and Common Language Protocol

- To increase statewide interoperability, it is required that all radios are programmed with National and Statewide interoperability channels. These channels are published in the Rhode Island Emergency Management RISCON field guide. All State and National

interoperability channels, including, but limited to UHF, VHF, 700 and 800 MHz, UCALL/UTAC, VCALL/VTAC, 8CALL/8TAC, Fireground, EMS, and Law Enforcement channels must be programmed into all radios as applicable. The use of common language during all incidents is required.

Course Six: Information Sharing

- As communication and information sharing opportunities continue to expand (examples which include GIS, WEBEOC, data and voice communications, CAD, NG911, and video-streaming technologies), the State of Rhode Island has centered information sharing initiatives on a State wide strategy, ensuring coordination across all informational management plans and projects. Information sharing governance initiatives have been transferred to the Rhode Island Office of Digital Excellence, which works in partnership with the SWIC to build on the foundation presented in this document and ensure coordination between various stakeholder communities.

Course Seven: RISCON and Regional System Approach

- The RISCON regional system approach incorporates targeting investments in order to allow jurisdictions to partner together in a communications capabilities that maximize cooperative manner in an effort to create regional communications capabilities that maximize existing investments and expand communication footprints. This includes the interconnection of existing systems through technology programs, the sharing of mutually beneficial infrastructure, and the development or expansion of cooperative governance structures.

The partner stakeholders also worked to develop specific goals, initiatives and measures of success that help create the seven courses to Interoperability. With the support of RIEMA, and the ICC, the SWIC continues to work on implementing the initiatives in the SCIP, and to coordinate communication interoperability efforts between Federal, localities, regions and State agencies.

8. Strategic Goals and Initiatives

The strategic goals and initiatives section describes the statewide goals and initiatives for delivering the vision for interoperable and emergency communications. The goals and initiatives are grouped into seen areas of focus; Governance, SOPs, Technology, Training and Exercises, usage, outreach and Information Sharing, and Life Cycle funding.

8.1 Governance

The Director of Rhode Island Emergency Management Agency (RIEMA), SWIC, and the Interoperability Communication Committee (ICC) work closely with the State Agencies and organizations that are also committed to improving interoperable communications. This collaboration ensures that planning is coordinated across the State, in all disciplines and aspects of preparedness and response. To best align interoperability planning and data

collection efforts, senior leaders from these agencies and organizations meet regularly to identify priorities and areas for collaboration.

In addition the SWIC fosters a strong interoperability governance structure by sustaining and supporting RIEMA and the ICC which was created by State Law in 2009. This committee along with RIEMA work together at the regional, Tribal and state level to identify interoperability project priorities, how to best utilize available grant funds, and address other local level challenges that might benefit from a regional or State perspective. The representatives on the ICC serve to provide regional perspective and input into the statewide decision-making processes.

The ICC has four sub-committees (Technical, Budget and Capital, Compliance and Customer Service, Training and Education) these sub-committees support planning efforts and implementation of specific initiatives in the SCIP by conducting research and analysis in order to develop recommendations for consideration.

Each Subcommittee will discuss the following items:

- The Compliance and Customer Service Subcommittee, Policy Subcommittee and Technical Subcommittee work closely with the state stakeholders to address initiatives identified in the 2008 SCIP including, researching the validity of transferring locals onto the RISCON network, identifying measures for further build out the RISCON system, and the utilization of EMSTARS as a redundant system.

- The Policy Subcommittee works closely with the Training and Education Subcommittee, when needed, to review and provide guidance and input on strategies and planning documents. The policy Subcommittee is responsible for reviewing current policies and procedures and makes recommendations to the ICC. The ICC will continue to use the approach of operationalize the SCIP and continue moving the State along the Interoperability Continuum to achieve the 2018 deadline for interoperable communications The Training and Education Subcommittee will continue to create a training program that will be incorporated into the State's Police and Fire Academies ensuring interoperability is taught to the newest first responders.

- Create a standardized and established methodology for grants application review by RIEMA, ICC and peer review of all requests for interoperability communications.

- The ICC is an advisory committee which was established to provide governance for the RISCON system as a statewide communication network. The committee is compromised of representatives from each of the user groups. The committee is working to implement the RISCON user agreement throughout the state.

The ICC helps to define and implement the initiatives outlined in the SCIP. Members of the ICC draw upon their experience and knowledge of emergency responder needs and capabilities to provide strategic guidance and recommendations to the Director of Emergency

Management and ultimately the Governor. Refinement of the ICC's purpose and membership will facilitate execution of the goals and initiatives in the SCIP.

Table 1: outlines the State's goals and initiatives for governance. Planned completion timeframes are defined as: short-term=one year, Mid-term = 2-3 years, long term 3+ years.

Table 1: Governance Goals and Initiatives

Governance Goals and Initiatives			
Goals	**Initiatives**	**Owner**	**Planned Completion**
1. **Refine the ICC purpose and goals**	**1.1 Based on recommendations from RIEMA and the Governor's Office, identify challenges the ICC will focus on (e.g., technological, financial, political, etc.)**	**RIEMA/ICC**	**Short-term**
	1.2 Identify resources required based on challenges, workload , membership, and pace, etc.	**RIEMA/ICC**	**Short Term**
	1.3 Establish a process for evaluating issues brought to the committee's membership.	**RIEMA/ICC**	**Short Term**
	1.4 Establish By Laws for the Committee.	**ICC/RIEMA**	**Short Term**
2. Refine the ICC's purpose and representation/ structure process	**2.1 Recommend a structure or process for obtaining effective representation from other jurisdictions and disciplines within the State. Move from just 800 MHz focused.**	**ICC/RIEMA**	**MID-Term**
	2.2 Develop strategy for RISCON future.	**RIEMA/SWIC**	**MID-Term**
3. Implement guidance and structure to recommendations and strategy.	**3.1 ICC Accept strategy and implementation process.**	**ICC/SWIC**	**Short Term**
	3.2 Establish periodic review process to ensure that RIEMA and the ICC strategy is being followed.	**RIEMA/ICC**	**Mid-Term**

8.2 Standard Operating Procedures (SOPs)

Frameworks and processes for developing and managing Standard Operating Procedures (SOPs) statewide are identified in this portion of the SCIP. Rhode Island SOPs have advanced over the last year steadily moving along the Interoperability Continuum. The SOPs promote a uniformed standard across the state and support a robust response to incidents. Incorporating SOPs into annually updated Local Emergency Operations Plans (LEOPS) will facilitate the standardization of SOP utilization.

Standard Operating Procedures Goals and Initiatives			
Goals	**Initiatives**	**Owner**	**Planned Completion**
4. Implement a standard SOP template statewide through the ICC process.	**4.1 Gain acceptance from state agencies to use SOP template.**	**SWIC**	**Short-term**
	4.2 Develop the template SOPs, to include piloting the template in several localities.	**RIEMA/ICC**	**Short Term**
	4.3 Conduct outreach to spread awareness of available templates.	**ICC**	**Short Term**
	4.4 Analyze results of SOPs developed by localities to ensure sustainability of plans.	**ICC/RIEMA**	**Short Term**
	4.5 Develop other complementary products (e.g. inventories of SOPs, Preventive Maintenance Schedules (PMS) user equipment)	**RIEMA/ICC**	**Mid Term**
5. Address Radio Interoperability with different state agencies and local First Responders.	**5.1 Develop a recommendation for radio interoperability with the State Emergency Operations Center (EOC).**	**RIEMA/ICC**	**Short Term**
	5.2 Develop a recommendation for radio interoperability between schools and law enforcement agencies.	**RIEMA/ICC**	**Mid-Term**
	5.3 Develop standard Interoperability Communication plan that meets All Hazards Planning.	**RIEMA/ICC**	**Mid-Term**

8.3 Technology

To ensure user needs are met, this section of the SCIP outlines the State's plan to maintain and upgrade existing technology; the roadmap to identify, develop, and implement new and emerging technology solutions: and the approach to survey and disseminate information on current and future technology solutions. Key components of Rhode Island's technology strategy include:

- RISCON is an integral part of the state's strategy for establishing interoperable communications.
- The State's Strategic COMMS Program (Communication Trucks and Communication Caches) will be supported and sustain by the State.
- All Broadband initiatives will be based on robust regional requirements. Prior to any implementation, business and funding process must be fully developed.
- Information-sharing initiatives are centered on a developed statewide strategy to ensure coordination across all information management plans and projects.
- Shared Interoperability Channels and Common Language Protocol will focus on accurately assessing the State's exiting mutual aid radio assets, identifying gaps in coverage, and develop a plan to mitigate gaps and to ensure existing and future infrastructure can be connected through a communication link.

- The Regional System approach incorporates targeting investments in order to allow jurisdictions to partner together, in a cooperative manner, to create regional communications capabilities that maximize existing investments and expand communications footprints.

Table 3 Technology and Initiatives

Technology Goals and Initiatives			
Goals	**Initiatives**	**Owner**	**Planned Completion**
6. Develop a Timeline and roadmap for current voice and planned data communications landscape.	**6.1 Engage vendors to identify current, emerging technologies**	**RIEMA/ICC**	**MID-term**
	6.2 Engage users of systems to validate information collected from vendors.	**ICC**	**Short Term**

Technology Goals and Initiatives (continue)			
	6.3 Cross reference identification with Federal requirements (e.g. Radio Channel Labeling , First Responder, Network Authority [First NET])	**RIEMA/ICC**	**Short Term**
	6.4 Explore and document opportunities for coordination/partnerships among jurisdictions.	**RIEMA/ICC/ Localities**	**Short Term**
	6.5 Develop a statewide future state communication road map.	**RIEMA/SWIC**	**Mid-Term**
	6.6 Establish a process to store and refine the roadmap regularly.	**RIEMA/SWIC**	**Mid-Term**
	6.7 Link all systems to State Emergency Operations Center (SEOC)	**RIEMA/ICC**	**Short- Term**
7. Conduct vulnerability assessment of critical communications infrastructure	**7.1 Gather data collected in Threat and Hazard Identification and Risk Assessment. (THIRA)**	**RIEMA/SWIC**	**Short-Term**
	7.2 Leveraging efforts by DHS/FEMA, perform a data analysis to assess vulnerabilities in the communication system	**RIEMA/SWIC**	**Mid-Term**
	7.4 Develop a plan for providing a Statewide interoperability overlay for resources engaging in regional responses (a component of RISCON.)	**RIEMA/ICC**	**Mid-Term**

8.4 Training and Exercise

In an effort to ensure emergency responders are prepared for responding to real world events and remain familiar with interoperable and emergency communications equipment and procedures, a continued focus on training and exercises is needed. Our approach encompasses leveraging training plans throughout the state, in order to improve capabilities and maximize the State's resources. The training and exercise initiatives and tasks, outlined below, can be utilized to focus on making interoperability a key part of statewide exercises.

Each year the State of Rhode Island will conduct a State-Wide exercise know as RIEREX: the Rhode Island Emergency Response Exercise. RIEREX is a statewide exercise designed to prepare response agencies and local government representatives for their role in an emergency response. Beyond this state level exercise, the state's two Communications Trucks

and radio Cache will regularly participate in training and exercises to practice with their equipment.

Training is an ongoing challenge in the state as we work to create robust statewide communication training and a robust exercise program for interoperable communication initiatives. In addition the ICC is working with state partners to establish statewide communications training and exercise plans that will focus on interoperable communications among agencies and jurisdictions. Going forward, more emphasis should be placed on capitalizing on planned events to identify lessons learned and incorporating those lessons into incident response.

Training and Exercise Goals and Initiatives			
Goals	**Initiatives**	**Owner**	**Planned Completion**
8. Incorporate comprehensive communications planning "up-front" into exercises.	**8.1 Develop a policy on incorporating communications into plans, drills and exercises at all levels Federal, State and local.**	**RIEMA**	**Short-term**
	8.2 Implement the policy through the State's Training Academies (i.e. Police, Fire) and other State RISCON users training Centers.	**RIMA/ICC**	**Mid Term**
	8.3 Create a Standard evaluation check sheet for communication Interoperability during drills and exercises.	**RIEMA/ICC**	**Short Term**
	8.4 Develop case studies from real incidents combined with exercises and drill facilitators.	**RIEMA/ICC**	**Mid Term**

8.5 Usage

Plans, steps, and policies will be leverage to ensure responders adopt, utilize, and become familiar with interoperable and emergency communications technologies, systems, and operating procedures in an effort to guarantee the establishment and maintenance of interoperability in case of an incident. In an effort to ensure the utilization of RISCON equipment on day to day basics and in the event of an emergency situation, regional roll calls have been implemented incorporating local Public Answering Points (PSAP) personnel and the Rhode Island State Police.

On an annual basis, the State of Rhode Island will hold a First Responders Community Conference on interoperability which provides an opportunity for the public safety community to promote and evaluate different interoperability solutions. Additionally, Rhode Island's Communications Trucks and radio Caches are on hand to demonstrate technology capabilities

and provide educational opportunities for how to request and use the trucks and caches during an incident. The conference incorporates a specific interoperability track to provide attendees with an opportunity to discuss policy issues ranging from patching of radio systems, policy, training and discussions regarding the Statewide Communications Interoperability Plan (SCIP).

Table 5: Usage Goals and Initiatives

Usage Goals and Initiatives			
Goals	**Initiatives**	**Owner**	**Planned Completion**
9. Document the systematic use of equipment by emergency responders statewide.	**9.1 Determine what equipment and resources will be required to be used regularly.**	**RIEMA**	**Short-term**
	9.2 I Develop a schedule for testing/use of equipment...	**RIMA**	**Short Term**
	9.3 Determine the feasibility for requiring documentation for executing the schedule.	**RIEMA/ICC**	**Mid Term**
	9.4 Define measures to demonstrate the impact of monitoring systematic use of equipment and resources.	**RIEMA/ICC**	**Mid Term**
	9.5 Take changes from conference and incorporate into SCIP.	**RIEMA/ICC**	**Short-Term**

8.6 Outreach and Information Sharing

Outreach and Information Sharing strategies are fundamental facets for building a statewide coalition of individuals and emergency response organizations to support the SCIP vision and promote common emergency communication initiatives. Outreach efforts bring interoperability information to the State's public safety community, elected officials, stakeholders such as private sector and non-profit partners.

Table: Outreach and Information Sharing Goals and Initiatives

Outreach and Information Sharing Goals and Initiatives			
Goals	**Initiatives**	**Owner**	**Planned Completion**
10. Develop an outreach plan and education plan to support education on initiatives, resources, and technologies.	**10.1 Define topics for outreach and education link them to requirements and user needs.**	**RIEMA/ICC**	**Mid-term**

Outreach and Information Sharing Goals and Initiatives (continue)			
	10.2 Develop outreach and education plans to include identifying existing channels that can be leverage for engagement.	**RIMA**	**Short Term**
	10.3 Determine funding stream for executing plans.	**RIEMA/ICC**	**Mid Term**
	10.4 Develop informational plan with General Assembly, Governor's Office and various State agencies.	**RIEMA/ICC**	**Mid Term**

8.7 Life Cycle Funding

The State of Rhode Island plan to fund existing and future interoperable and emergency communications priorities are outlined in this section. With an overall investment of $ 72 million, a national economy that is struggling, and with the elimination or significant reduction in programs supported by DHS during the current economic downturn, identifying ongoing funding to support the statewide interoperability efforts will continue to be a priority.

In 2013, the SWIC will continue to work with the State and Federal agencies to provide grant funds for interoperability projects and maintenance. These grants will help support local planning projects and governance structures that bind them, equipment purchases and upgrades, training and exercises, as well as support for the communication trucks and radio caches. This type of funding will only be awarded to jurisdictions that can demonstrate they are meeting or exceeding the measurements and compliance requirements listed above.

A cautious and prudent approach to the use of public money is critical. With the development of the State interoperability course and the seven courses to Interoperability, coordinated funding requests will ensure a strong return on the State's interoperability investments.

Table 7: Life Cycle Funding Goals and Initiatives

Usage Goals and Initiatives			
Goals	**Initiatives**	**Owner**	**Planned Completion**
11. Identify the problem, issue need, and recommendation for sustainable funding of interoperable and emergency communication priorities.	**11.1 Develop a series of decision briefs that incorporate problem analyses associated with life cycle funding.**	**SWIC**	**Short-term**

Usage Goals and Initiatives (continue)			
	11.2 Analyze funding requirements and funding justifications.	**RIEMA/ICC**	**Mid Term**
	11.3 Establish an understanding of revenue generating models for potential consideration.	**RIEMA/ICC**	**Mid Term**
	11.4 Identify and execute on low or no cost solutions.	**RIEMA/ICC**	**Mid Term**
	11.5 Continue to research broadband funding.	**RIEMA/ICC**	**Mid-Term**

9. Implementation

9.1 Action Plan

In order to execute the initiatives outlined in this year's SCIP, the processes that will be utilized have to be clearly defined and managed. The Action Plan process will begin with the development of a project plan, in the form of an Integrated Master Schedule. This plan will be shared with the members of the ICC, which includes the owners of the initiatives. The SCIP will also be sent to members of the ICC for review and finalization.

9.2 Measures of Success

Measure of Success will be utilized to monitor progress and are indicative of Rhode Island's accomplishments that will lead the State along our path towards achieving the vision for interoperable and emergency communications.

	Measures of Success				
ID	**Strategic Goals Supported**	**Baseline**	**Data Collected**	**Target**	**Owner or Source**
1	**Refine the ICC purpose and membership. Establish focused Sub-committees**	**Membership established by State Law**	**Policy Recommendations.**	**Written Policy recommendation 100%**	**RIEMA/ICC SWIC**
2	**Complete revision of SCIP**	**SCIP 2008 outdated and does not reflect current state.**	**Begin data collection on strategic changes to SCIP 2013.**	**100% of SCIP revised. Data collection points to be determine.**	**RIEMA/ICC**
3	**Implement a standard SOP template Statewide through the LEOP process.**	**Do not have SOP component in LEOP**	**Percentage of localities that submitted LEOPs with communications SOP.**	**100%**	**Locality Emergency Managers/ RIEMA.**
4	**Implement a standard Radio Communication Training Program in State and Local Police and Fire Academies.**	**No standard program training currently established.**	**Evaluate proficiency of new users on the job and during exercise drills.**	**Evaluation sheet to be developed.**	**RIEMA/ ICC Sub-committee on training.**

	Measures of Success (continue)				
5	**Develop an overview and timeline of current and planned voice and data communications landscape.**	**Lack of knowledge about current state of system life cycles.**	**Information provided by users, vendors. etc. to develop a overview/timeline**	**100% completion of overview/timeline**	**RIEMA/SWIC**
6	**Address Radio Interoperability with different state agencies and local First Responders.**	**Local First Responders inability to communicate using two different radio types (UHF, VHF, 800 MHz).**	**Leverage technology, communication plan and detail assessments after major incidents and drills.**	**100% completion**	**RIEMA/ICC Sub-committee Policy**
7	**Develop a plan for radio interoperability with the State Emergency Operations Center (EOC).**	**Develop standard Interoperability Communication plan that meets All Hazards.**	**Review of after action reports for all incidents involving SEOC.**	**100% Completion**	**RIEMA/SWIC**
8	**Conduct vulnerability assessments of critical communications infrastructure.**	**Incomplete current assessment of communication infrastructure.**	**Jurisdictions, State agencies, THIRA, etc. provide inputs for data base collection.**	**100% completion of threat assessment and data base tracking of critical infrastructure.**	**RIEMA/SWIC**
9.	**Incorporate comprehensive communications planning into exercises with detail communication evaluations.**	**Communications is not integrated into exercises and plans.**	**Percentage of exercises that include a communication component. (Homeland Security Exercise and Evaluation Program.)**	**100%**	**RIEMA/SWIC ICC Training Sub-committee of the ICC.**
10	**Document the systematic use of equipment by emergency responders statewide.**	**Lack of knowledge dealing with the level of use of equipment. (e.g., VHF,UHF,800MHz)**	**Percentage of roll call participation.**	**100%**	**RIEMA/ICC Technical Sub-committee**
11	**Develop an outreach and education plan on initiatives, resources, and technologies that support education.**	**Currently no outreach or education plan has been constructed.**	**Identification of stakeholders and delivery of corresponding communications**	**100%**	**RIEMA/SWIC**
12	**Identify problems, issues, needs, and recommendations for sustainable funding of interoperable and emergency communications priorities.**	**Lack comprehensive understanding of funding needs and solutions.**	**Recommendations to obtain funding needs and solutions.**	**Delivery of recommendations to decision makers.**	**RIEMA/ICC**

9.3 Strategic Plan Review

The goals, initiatives, and measures of success are used to populate three annual reports compiled by RIEMA, ICC and the SWIC:

- OECs SCIP implementation Report (Annual Report)
- Governor and General Assembly Report
- Region 19 Regional Emergency Communications Coordination Working Group Annual Report.

Rhode Island Emergency Management, ICC and the SWIC will annual review the SCIP and incorporate changes to the state's strategy for interoperable communications. The development of the project mentioned in section 9.1 will facilitate the identification of changes to next year's SCIP. Each year, the SCIP will serve as the lynchpin for planning efforts that will take place following each year in order to demonstrate an evolution of the State's strategy.

10. THE STATE OF RHODE ISLAND INFORMATION SHARING PLAN

As part of the SCIP the State of Rhode Island's Information Sharing plan is designed to create the capability to enable agencies to seamlessly share information at the federal, state and local levels. To achieve that goal, Rhode Island Emergency Management Agency (RIEMA) in partnership with the Interoperability Communications Committee(ICC) working with other state agencies including Division of Information Technology and the Office of Digital Excellence are working in partnership with local agencies across the State to identify a series of priority actions that will be implemented over coming years.

The first series of actions are defined below as a framework to follow as we move forward. These actions, which follow along, the lanes of Interoperability Continuum, were developed through the previously identified process and designed to lay the critical stepping stones that the plan will build upon as we move forward.

Governance Actions and Metrics

1. Provide a working definition of information gathering that includes beginning to establish a common vocabulary.
2. Define legal framework for Information Sharing
3. Develop and support a regionally based governance structure to work with the Statewide Interoperability Coordinator (SWIC) to facilitate and coordinate information sharing at the local, regional and state level. This may include, but not limited to using existing resources and structures including the Local Emergency Mangers as a resource.
4. Established and maintain a technical assistance team to work with the SWIC to provide support to local, regional and state agencies in information sharing activities.

5. Working to support the regional representatives to establish regionally based policies and procedures, technical advice, and technical support.
6. Educate the local, regional and state executive leadership on benefits of information sharing through regional meetings, regular webinars and participation in conferences.
7. Begin to build a statewide "knowledge repository" that catalogues best practices, model agreements and technical information. This will include identifying, evaluating and publicizing current information sharing initiatives to demonstrate what is already working and gaps in existing activities.
8. Review existing legislation and make recommendations to modify or create new legislation to enable and incentivize information sharing.
9. Develop standardized governance templates such as Memoranda of Understanding that will be used as models for intrastate agreements.

Standard Operating Procedures Actions and Metrics

1. Provide guidance for creating information sharing Standard Operating Procedure (SOPs) that can input into other existing SOPs (such as Mutual Aid agreements etc.) This may be in the form of a template to ensure comprehensive and consistence format and content that can be adapted for local, regional and state use.
2. Identify and standardize existing SOPs to ensure interoperability across the state based on a scenario based approach.
3. Establish processes to regularly review and update SOP's to ensure they met the most current needs and requirements.

Technology Actions and Metrics

1. Conduct a "current state" inventory to determine what information sharing technology is being currently deployed across the state to provide a baseline for future improvements as well as providing examples of best practices.
2. Develop a future state definition of technology supporting information sharing. This should include identification of the gaps between the current state and the future state.
3. Establish standards for use in the next 1-5 years that include standardizing data and file formats and an overarching architectural framework that will facilitate information sharing.
4. Evaluate near and mid-term technology trends that can facilitate information sharing. This may include, but not be limited to, evaluating the role of the cloud, emerging Computer Aided Dispatch technologies, mobile technologies and Next Generation 911.

Training and Exercises Actions and Metrics

1. Provide education and training on information sharing best practices through workshops, seminars, webinars and conferences. This should include national and statewide best practices and models.

2. Review existing training and exercise activities to determine the best means of inserting a focus on information sharing.
3. Obtain support for realistic training from executives at the local, regional and state levels by incentivizing information sharing activates.
4. Work with local, regional and state leaders to ensure that training across disciplinary and cross jurisdiction.
5. Improving the training lifecycle to ensure that the training is realistic and that lessons learned from exercises are inserted into ongoing training and SOP's.
6. Examine new ways to provide "on demand" training including using e-training platforms and looking at the use of synthetic training to include the use of simulation and other technologies being developed across the state. Pilot the use of these tools to demonstrate their effectiveness.

Usage- Actions and Metrics

1. Encourage information sharing through education and increasing awareness of the benefits as well as reducing concerns through emphasis of the establishment or clear policies and procedures.
2. Identify and recommend changes to existing policies that inhibit information sharing.
3. Develop a plan to promote model information sharing practices through webinars and other means.
4. Develop a plan to incentivize good information sharing practices.

Summary

The actions laid outlined in this plan are the first phase in a multi-year effort to achieve the goal of seamless information sharing across the State of Rhode Island. RIEMA in partnership with the Interoperability Communication Committee (ICC) and other state agencies and jurisdictions across the state is dedicated to carrying out the actions outlined in this plan. Progress on this project will be reported on an annual basis in the legislatively mandated SCIP implementation report.

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Statewide Communications Interoperability Plan

Appendix A

Glossary- Definitions and Acronyms

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Glossary- Definitions and Acronyms

Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:		Glossary
Approved by:		Sub-Section:		Definitions and Acronyms
Revised:				

1. Purpose or Objective

To clarify some of the terms, acronyms, and abbreviations used throughout this manual.

2. Definitions (in alphabetical order)

The following definitions are provided to aid with understanding of the terms used throughout this manual, and denote to the way in which those terms are used within the context of this manual.

Alias – A common alphanumeric name used to identify a radio, talkgroup, site, etc. rather than referencing the assigned 6 digit ID number

Analog- Analog systems may communicate a single condition.

Channel – A pair of frequencies, transmit and receive, that are used for a single communications path

Channel Bank – A device that combines multiple data and/or audio inputs into TDMA format so that it can be transmitted over a T1 circuit and shared between transmitter sites

Codeplug – The firmware that holds the unique personality for a system, device, or radio unit, and can be reprogrammed to change operational parameters as needed.

Control Station – A fixed radio unit normally found at a desk or common work area indoors or directly connected to a console or other fixed transmitting location.

Console – A fixed radio operator position with multiple radio resources and features that can access any subset of talkgroups and/or conventional channels

Consolette – A mobile radio mounted into a case and converted for desk-top use

Conventional – non-trunked radio communication, either through a repeater system or radio-to-radio

Direct – Radio-to-radio transmission and reception on a single frequency

Duplex channel systems - Transmit and receive on different discrete channels. The systems equipment cannot communicate without some infrastructure such as a repeater, base station or Talk-Through Base. Most common in the US is a repeater configuration where a base station is configured to simultaneously re-transmit the audio received from mobile units. This makes the mobiles, or hand-helds, able to communicate amongst one another anywhere within reception range of the base station or repeater. Typically the base or repeater station has a high antenna and high power, which allows much greater range, compared with a ground vehicle or hand-held transceiver.

Duplex systems can be divided into two types. The term *half-duplex* refers to systems where use of a push-to-talk switch is required to communicate. *Full duplex* refers to systems like mobile telephones with a capability to simultaneously receive and transmit. Repeaters are by nature full duplex, most mobiles and almost all handhelds are half duplex.

- Advantage: duplex channels usually allow repeater operation which extends range (in most cases due to increased transmit power and improved aerial location / height) - especially where hand-held radios are in use.
- Disadvantage: If a radio cannot reach the repeater, it cannot communicate.

Eligible Agency – A local unit of government, emergency medical service provider, or special purpose government agency

Encryption – The intentional scrambling or coding of a radio signal to prevent unauthorized reception of secure communications, which requires all transmitting and receiving radios to contain the same code or 'key' with which to communicate with each other.

Fail-soft – A fallback means of radio communications if a site or radio system cannot perform normal trunking operations

Fleetmap – The master spreadsheet plan of the talkgroups, zones, Fail-soft assignments, alias information and other pertinent system and radio programming

Gateway Device – A dispatch console, ACU-1000, or other audio device capable of electrically connecting any number of separate radio conversations to each other, also referred to as a 'radio patch'.

Infrastructure – All of the fixed electrical and mechanical equipment, towers and building structures, transmitters, controllers, antennas, microwave and ancillary equipment that comprise the operational backbone of the radio system

Interconnect – Also telephone interconnect, a radio option which provides mobile and portable radios the capability to connect to and place calls on an outside telephone network

Interoperability – The capability to communicate with units from other systems, other frequency bands, and other agencies as required with existing equipment

Logging – the act of recording radio conversations for replay as required

RISCON – Rhode Island Statewide Communications Network.

Mobile Radio – A vehicular mounted radio with an external power source and antenna

Microwave – A point-to-point, directed radio energy beam on which multiple radio signals or data streams are delivered between remote locations

Mission Critical - Those operations that is reliant upon a functioning two-way radio communications system which unavailability, degradation, delay or failure, partial or complete, would significantly impact and/or impair the successful delivery of vital services or missions

Multi-select - Electrically connecting two or more radio channels or talkgroups so that a dispatcher can monitor and communicate to those separate resources without users on those resources being able to communicate with each other

P25 – a suite of standards for digital radio communications for use by federal, state/province and local public safety agencies in North America to enable them to communicate with other agencies and mutual aid response teams in emergencies.

Patch – Electrically connecting two or more radio channels or talkgroups so that those users of those separate resources are able to communicate with each other

Pre-qualification – a review by ICC to determine if a specific request is valid and has enough merit to be considered fully by the committee, such as an agency requesting more data capacity, or a private company requesting system access

Portable Radio – A lightweight, completely self contained radio unit usually worn on the user's belt or other similar fashion

Public Safety – An agency, department, or individual directly involved with the health, safety, and/or security of the public including, but not limited to police, fire, emergency management, and medical personnel and responders

Public Service - An agency, department, or individual involved with providing non-emergency type services to the public including, but not limited to utilities, transportation, education, and other governmental services not critical to public safety

Radio User – The person or unit to which a radio is assigned and aliased

Rebanding – The term given to the process of reconfiguring and retuning public-safety 800MHz radio systems to mitigate harmful interference from the Nextel system, due to the close proximity of the 800MHz frequencies used in those systems

Repeater – a type of radio station in which subsequently retransmits any signal received on a different frequency

Subscriber – an individual radio of any type assigned and aliased on the system

Simplex channel systems - use a single channel for transmit and receive. Simplex systems are often legacy systems that have existed since the 1930s. The architecture allows old radios to work with new ones in a single network. In the case of all ships worldwide or all aircraft worldwide, the large number of

radios installed, (the *installed base*,) can take decades to upgrade. Simplex systems often use *open architectures* that allow any radio meeting basic standards to be compatible with the entire system.

- Advantage: as the simplest system configuration, there is reliability since only two radios are needed to establish communication between them, without any other infrastructure.
- Disadvantages: The simplex configuration offers communication over the shortest range or distance because mobile units must be in effective range of each other. The available channel bandwidth limits the number of simultaneous conversations, since "dead" air time cannot be easily used for additional communication.

Simulcast – A type of trunking radio communications in which voice/data to be transmitted is sent to multiple sites and is transmitted simultaneously to provide wide area coverage

Site – The physical location of an antenna tower, equipment shelter and radio system infrastructure equipment that is electronically linked via microwave radio to the master and other satellite sites.

Storm Plan – A system function to re-group talkgroups for special situations, such as disasters, or crowd control

System Access – The ability to utilize the radio system for radio communication is divided in two categories: limited and full participation. Limited participation is normally defined as utilizing the system only for the purposes of interoperability with RISCON agencies, and/or for purposes of mutual aid.

Talkaround – A conventional mode of single frequency, point-to-point, radio-to-radio communications, also referred to sometimes as 'direct' mode

Technical Committee – A sub-committee of ICC that reviews and makes recommendations on all issues of a technical nature that affects operations of the radio system that comes before ICC.

Trunked/Trunking – The automatic and dynamic sharing of a number of communications channels between large numbers of radio users

Tactical Interoperable Communications Plan [TCIP] – was developed to promote quick and easily accessible mutual aid type communications between agencies within an area defined by the plan itself

Talkgroup – A unique trunked radio system resource normally representing or dedicated to a specific user agency or function, on which radio communications are conducted, similar in operation to a conventional radio channel. Talkgroups can contain an unlimited number of radio units.

Uninterruptible Power Source – a battery back-up device that provides emergency power to connected equipment by supplying power from a separate source when utility power is not available.

Zone – An area in the radio template containing positions for 16 individual talkgroups or conventional radio channels that is normally labeled by an acronym that closely represents the owner agency, as defined in Appendix 3.

3. Acronyms and Abbreviations

The following is provided to aid with understanding of the acronyms and abbreviations used throughout this manual, and denote to the way in which those terms are used within the context of this manual.

8CALL90 – International CALLing channel on 800 MHz

8TAC91-94 – International Tactical channel(s)

APCO – Association of Public-Safety Communications Officials

ATAC – AstroTac Comparator

AVL – Automatic Vehicle Location/Locator

CEB – Console Electronics Bank

CTCSS – Constant Tone Controlled Squelch Circuit, also called PL for Private Line

DIU – Digital Interface Unit

EME – Electro-magnetic energy or emission

EMS – Emergency Medical Service

ICR – Fall Back in Cabinet Repeat

FAA – Federal Aviation Administration

FCC – Federal Communications Commission

HR – Human Resources

ID – Identification number or

IP – Internet Protocol

MHz - Megahertz

ICC – Interoperable Communications Committee

RIEMA – Rhode Island Emergency Management

MTUG – Motorola Trunked Users Group

NPSPAC – National Public-Safety Planning Advisory Committee

OJT – On-the-job Training

PCIA – Personal Communications Industry Association

PE – Professional Engineer

PL – See CTCSS

PSAP – Public-Safety Answering Point

PSWN – Public-Safety Wireless Network Program

PTT – Press-to-talk

RF – Radio Frequency

RSS – Radio Service Software

TC – Technical Committee

TDMA - Time Division Multiplex Addressing

TICP – Tactical Interoperable Communications Plan

UCALL – UHF Calling channel

UHF – Ultra-High Frequency

UTAC41-43 – UHF Tactical channel(s)

VCALL10 – VHF Calling channel

VHF – Very-High Frequency

VTAC11-14 – VHF Tactical channel(s)

Statewide Communications Interoperability Plan

Attachment 1

Statewide Interoperability Plan (SCIP) 2008

Statewide Communications Interoperability Plan

State of Rhode Island and Providence Plantations

Developed by the Rhode Island Emergency Management Agency
In Conjunction with the Communications Working Group

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Record of Change

Change No.	Date	Description	Change Date	Signature

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Executive Overview

The United States Office for Interoperability and Compatibility's (OIC) SAFECOM and Disaster Management (DM) programs published a set of criteria for statewide interoperability plans in the Recommended Federal Grant Guidance for Emergency Response Communications and Interoperability Grants for Fiscal Year 2007. These criteria were developed in support of Section 1.C.5 of the 2006 Homeland Security Grant Program (HSGP), which states that "by the end of 2007, each state must develop and adopt a statewide communications interoperability plan."

In compliance with the federal mandate; and in an effort to improve public safety communications systems, processes and infrastructures in Rhode Island the State has developed a Statewide Communications Interoperability Plan (SCIP) under the overall jurisdiction of the Rhode Island Emergency Management Agency (RIEMA). RIEMA via Executive Director Robert J. Warren is the State Administrative Agency (SAA) responsible for applying for and administering the Homeland Security Grant Program (HSGP) and more specifically the Public Safety Interoperability Communications (PSIC) Grant.

Traditionally, jurisdictions and agencies have built stand alone systems to meet their individual needs. This stove piped environment has left Rhode Island without sufficient regional or statewide interoperability, which as a result of events related to September 11, 2001, has become critical. The challenge was defining objectives and actions to realize these concepts, while striving to identify existing best practices and projects that could be leveraged toward achieving the identified goals.

This document discusses recommendations to enhance Rhode Island's capabilities to provide statewide service and coordinated, interoperable, real-time voice and data communications to facilitate the sharing of emergency services information across jurisdictions and agencies. This will enhance performance for major events, task force communications, and routine day-to-day coordination.

Furthermore, while summarizing the current state of interoperability, the SCIP also provides a roadmap to complete tasks required for the implementation of a statewide public safety communications system that will work, and continue to work, in natural and manmade disasters such as seen on 9/11, Hurricanes Katrina and Rita, and closer to home the Station Nightclub Fire.

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Attachments

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1 Introduction

In recent years, Public Safety voice and data communications has undergone numerous intensive advancements since its inception nearly 80 years ago. These changes continue today for many reasons, but primarily due to the events of September 11th and more locally, the Station Nightclub Fire. These events have changed the ways that first responders in the state of Rhode Island work with each other. With the guidance of the Department of Homeland Security, Office of Emergency Communication (OEC) and SAFECOM and the availability of federal grants, operable and interoperable communications system upgrades and replacement have improved to a level never seen in public safety. Other key reasons include:

1. First responders and public safety radio planners are busy improving their mission-critical networks and facilities to meet the communications and interoperability demands that man-made and natural threats often bring about.
2. Political squabbling and turf battles have significantly diminished as officials seek to work cooperatively to develop jurisdictional and regional communications and operational solutions
3. Established spectrum regulatory impediments are now being dismantled to allow new spectrum to be released by the FCC for public safety voice and high speed data
4. Communication budgets are being supplemented with Federal Homeland Security dollars and other grants.
5. Public Safety industry standards creating a new generation of advanced wireless technology that create new capabilities while allowing legacy systems to be placed in reserve and redundancy roles.
6. The convergence of voice, video, and high speed data has been greatly advanced by the use of the Internet Protocol [IP], which is escalating these changes increasing speed. In just a very few short years the IP protocol has emerged as an important factor unheard of in communication systems.

In view of the vast industry transformation discussed above, this document briefly reviews the steps taken by Rhode Island public safety officials in its quest to improve radio communications. A decade of planning and unprecedented cooperation of state officials and first responders at the “grass roots” level has yielded great success that could not have been predicted. The current state of Rhode Island public safety communications has evolved very fast over a very short time period. However, this success should not lead us into a false sense of “arriving there”. There is certainly much work to do and to complete the work already started. This document, while summarizing the current state, also provides a roadmap to complete tasks required in implementing a statewide public safety communications system that will work, and continue to work, in natural and manmade disasters such as seen on 9/11, Hurricanes Katrina and Rita, and closer to home the Station Nightclub Fire.

2 Background

RIEMA has identified interoperable communications as one of the strategic efforts in the statewide strategy to improve preparedness. The SCIP has been designed in coordination with the State Homeland Security Strategy Goal 07 which states “Improve and enhance the statewide emergency responder communications network and communications related infrastructure.” More specifically, Objective 7.3 states “develop a statewide communications network that enables interoperability.”

It has also followed the UASI Homeland Security Strategy Goal 04 about interoperable communications. The UASI Strategy was written to correspond with the State Homeland Security Strategy and ensure the goals and objectives aligned with one another. All three objectives under the UASI Strategy are pertinent in the SCIP. Objective 4.1 states “Strengthen the interoperable communications capabilities of the State of Rhode Island and the Providence UASI Region.” Objective 4.2 states “To provide the necessary training to personnel operating within the Statewide Interoperable Radio System.” Lastly, Objective 4.3 states “Develop and establish plans for the governance of the Statewide Interoperable Radio System.”

Many of the attractive features of interoperable planning apply unilaterally, such as:

- Benefits to the public
- Wise use of public funding
- Enhanced reliability and service
- Benefits to agencies
- Shared interoperable system
- Expert management and maintenance
- Benefit to First Responders
- Increased reliability and sustainability
- Improved access to information
- Interoperability – sharing of information using common platform
- Frequency and Spectrum efficiency
- Ability to address current gaps
- Enhance mutual aid

The effort to create a statewide interoperable radio system in Rhode Island began in 1996 as a result of a communication study[1] that reported on the feasibility of merging existing “fractured” radio systems at the state level to a common frequency band utilizing advanced-technology architectures. It examined the management theory on consolidation; discussed what technology is being provided; and, showed how a shared or consolidated system could work. The analysis was an opportunity for state radio planners to learn from the experiences of others - what has worked, what has not worked, and why.

This study was based on a core group of state agencies consisting of the Department of Transportation (RIDOT), the Rhode Island Public Transit Authority (RIPTA), the Rhode Island

[1] *“The Rhode Island Communications Integration Analysis”,* 1996 by RCC Consultants, Inc. Statewide radio system consolidation of four state agencies.

State Police (RISP), and the Rhode Island Department of Environmental Management (RIDEM).

While the goal was to migrate these agencies to a single network, funding was not available for all agencies to participate. However, the subsequent years saw RIPTA obtaining funding to build its own 800 MHz statewide trunked radio system; RIDOT upgrading its 800 MHz trunked system technology platform to the next generation; and, the RISP upgrading their statewide VHF radio communications.

In 2003, a subsequent report[2] expanded the concept of a statewide radio network that could potentially provide radio communications not only for all public safety and public service agencies at the state level, but for municipal law enforcement, fire, and EMS departments in each of the states thirty-nine cities and towns.

The report was written after a post-September 11 exercise which highlighted obvious communication shortfalls among public-safety agencies in Rhode Island. The tragic fire at The Station Nightclub in West Warwick, RI in 2003 further revealed the lack of critical communications interoperability capabilities among local communities and State agencies.

Development of RITERN

To begin addressing these significant communications deficiencies, Rhode Island's Lieutenant Governor and Adjutant General, through the Rhode Island Emergency Management Advisory Council established a sub-committee, the Communications Working Group (CWG). The CWG proceeded to analyze the state's emergency communications needs, and took as its primary challenge the development of a comprehensive plan for a statewide interoperable radio voice and data network for the State's first responders. The CWG is comprised of stakeholders from various state agencies and law enforcement, fire and EMS departments representing the State's thirty-nine cities and towns. (See Attachment 1.3 for a complete list of the CWG)

Although the CWG's mandate was to plan for a statewide radio network, its initial task was to immediately address the State's interoperability difficulties for alert and warning. This resulted in the implementation of the Rhode Island Tactical Emergency Radio Network (RITERN). RITERN is a point to multi-point subsystem that operates on the RIDOT trunked radio network linking approximately 100 locations. Although RITERN proved to be a viable means of providing immediate but limited interoperability capability, it was initially considered a short-term and interim solution to Rhode Island's overall interoperable communications strategy. However, it has become an important parallel system linking all 24-hour dispatch centers in the state ensuring seamless alert and warning communications with dispatchers while allowing the distinct build out of an APCO-25 compliant digital 800 MHz system.

Evolution of RISCON

Through various efforts, the initial RITERN concept has evolved under the aegis of the CWG and has allowed for the build out by three distinct local government entities and other 800 MHz efforts. These projects are all objectives to the ultimate goal of the state's public safety radio planners:

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[2] *"Statewide Radio Communications Network",* September, 2003 by RCC Consultants, Inc.

Integrate all networks into a single statewide radio system platform to provide interoperability through common radio architecture for all participating state and municipal public safety agencies.

This new system has been named the **R**hode **I**sland **S**tatewide **CO**mmunications **N**etwork (RISCON). The three projects that were linked to create RISCON are:

Washington County Interoperable Communications Project
In 2003, Governor Donald L. Carcieri chose the Narragansett Police Department to head a multi-jurisdictional effort to improve radio communications among first responders in Washington County and surrounding areas in southern Rhode Island. The 800 MHz system created by this project is comprised of 11 sites on 10-channels. The new system is completed and is being populated with users. It provides reliable in-street portable coverage and a high degree of in-building coverage.

Town of North Providence/Providence County/Northern Rhode Island
The second statewide expansion covers Providence County and reaches into the in the northern part of Rhode Island. This project began planning in 2004 under the leadership of the North Providence Police Department. The northern region system has received funding to implement an initial four (4) site, 10-channel trunked radio network for northern Rhode Island. The system will initially provide mobile radio coverage for Providence County.

City of Providence
In 2006, the City of Providence received funding to implement its own 800 MHz trunked radio network that is currently in the build-out stages. This network will be the platform for its public safety communications and other municipal departments in the future. A high degree of in-building coverage in the downtown area of Providence will be achieved when the system becomes operational by mid-2008.

Current Status of RISCON
Currently, there are 12 sites in the Washington County system and three in the North Providence system, with three in construction stage and four in the site assessment stage. Also, there are 1400 current users of the RISCON system. While the system is currently providing a high degree of reliable coverage, additional users spread throughout the state will require more communication sites be added to the network.

Other Systems in Operation
There are several other 800 MHz trunked radio systems currently in service in Rhode Island:

RI Department of Transportation
RIDOT currently operates a statewide 800 MHz trunked radio network providing mobile-only coverage. The system is a Motorola SmartNet 800 MHz analog trunked simulcast network utilizing 2-sites for approximately 500 users. This system provides limited mobile radio coverage statewide. This was the original network selected in 2004 to host RITERN.

RIDOT has been the longest user of trunked radio technology in Rhode Island. As a result, all of their mobile radio models are no longer sold by the manufacturer. In a short time, they may not be supported for parts or components. RIDOT is preparing to migrate to RISCON by purchasing replacement radios that are capable of working on their system as well as on

RISCON. It is anticipated that all radios in the RIDOT fleet will be replaced within the next three years. This will provide RIDOT with enhanced coverage performance as compared to their existing network which has numerous radio dead spots throughout the state. The existing infrastructure will be maintained to support RITERN and provide a link to RISCON.

RI Public Transit Authority
RIPTA currently operates a statewide 800 MHz trunked radio network providing mobile-only coverage. The system is a Motorola SmartNet 800 MHz analog trunked simulcast network utilizing 7-sites for approximately 400 users. This system provides reliable mobile coverage statewide.

RI Department of Corrections
The Rhode Island Department of Corrections (RIDOC) currently utilizes an analog based 800 MHz radio system. The system has ten (10) Uniden repeaters, running in a modified trunking system. In this system, each of the ten strategic units is allowed to have its own home channel. With this system, 1200 users are provided with repeater service for their analog radios. The FCC vendor is ready to transition to the 700 MHz band. Nextel is waiting for the current license holders to transition off of the assigned frequencies, before supplying the vendor with the appropriate 700 MHz equipment.

RIDOC is directed down the path of supporting its legacy analog system. The high volume of radio calls, the frequent occurrence of inter-facility communication and the expense of transitioning to the digital 800/700 MHz system are cost prohibitive at the present time. The 900 uniformed staff would have to be transitioned nearly simultaneously, with administrators and non-uniformed staff not far behind. Additionally, at this time RIDOC is unable to provide maintenance support for this system and associated subscriber units.

Rhode Island Department of Health/Hospitals
Rhode Island DOH has worked with healthcare and emergency management partners throughout the state to link hospitals and healthcare to the RITERN/RISCON systems. Currently, all licensed healthcare facilities in the state have been provided with a radio and training. In addition, the federally licensed Veterans Administration Hospital and the Naval Ambulatory Care Center, which serves as the Federal Coordinating Center (FCC) under the National Disaster Medical System in times of disaster has been provided with a radio linking them to the system.

Additional Interoperable Initiatives
RISCON has not been the only interoperable solution brought forth in recent years. Others include:

Nextel Hospital Communications System
The Interagency Nextel Hospital Communications Network is a means of dependable two-way radio communications between the following entities:

- Two units in each of the licensed hospitals
- Narragansett Indian Health Center
- RI Airport Corporation
- Newport Naval Ambulatory Care Clinic
- The 39 cities and towns

- RI Emergency Management Agency (RIEMA)
- RI Department of Health (HEALTH)
- The five (5) Regional Dispatch Centers

The Primary objective of the Interagency Nextel Hospital Communications Network is to provide a mechanism of redundant communication between and among all hospitals throughout the state, regional dispatch centers, state agencies, MCI trailers, RI State Airport, and other responding agencies/supporting units in the event of a disaster or emergency requiring coordinated hospital communications and response. The Secondary objective is to provide day-to-day communications capabilities to the hospitals and regional communications centers for daily hospital EMS diversion status updates and notifications of operational status at each hospital facility.

Hospital Emergency Administrative Radio (HEAR)
The Hospital Emergency Administrative Radio is a means of dependable two-way radio communications between the following entities:

- One in each of the licensed hospitals
- Emergency Medical Services ambulances
- RI Department of Health (HEALTH)
- RI Emergency Management Agency (RIEMA)
- The five (5) Regional Dispatch Centers

In the State of Rhode Island, a number of facilities are equipped with HEAR systems and are connected by a common VHF radio frequency (155.340 MHz – used for Rescue to Hospital operations and/or 155.280 MHz – used for Inter-Hospital operations). Many Emergency Medical Units in Rhode Island are equipped to activate (DTMF dialing) each or all of the hospital receivers, using the 155.280 MHz frequency. In general, HEAR communications are utilized during natural disasters or other wide-scale emergencies when point-to-point communications are available.

Hospital Capacity System (HCS)
In addition to HEAR, hospitals within the State are equipped with the Hospital Capacity System. HCS is an internet browser based diversion and capacity reporting system that identifies what facilities can most effectively serve the incident. In addition, the Regional Dispatch Centers are equipped with the HCS to help assist with the dispatch of medical personnel.

HCS is the solid foundation of core capability upon which new features are expected to be added such as the Event Calendar and Patient Tracking System. HCS is a secure, robust and scalable system, accessible in a role-based manner by many simultaneous users from locations throughout the State.

Satellite Phone System
The satellite phone system serves as a means of dependable two-way duplex satellite voice and data communications between the following entities:

- One in each of the licensed hospitals
- One in each sentinel lab (14 total)
- One in the State Laboratory

- RI Department of Health (HEALTH)
- RI Emergency Management Agency (RIEMA)
- The five (5) Regional Dispatch Centers
- The RI Blood Center

The Global Star satellite communications system is an additional tier of redundant communications. The system links multiple agencies and responders through standard analog telephone-style voice communications transmitted over low earth orbiting satellites in the Global Star network. HEALTH has developed protocols and plans and intends to continue ongoing system support.

Amateur Radio Systems
Amateur (Ham) Radio is a long standing, dependable and proven asset in emergency communications since the dawn of radio communications. Amateur radio can be deployed as a back-up system or tasked to particular assets. Here in Rhode Island, amateur radio is linked closely with our volunteer and auxiliary programs. A large portion of the communications between our volunteer and auxiliary teams is provided by a trained amateur radio teams such as ARES or SATERN. For example, Rhode Island evacuation shelters are staffed primarily by trained volunteer teams. Shelter communications are handled by trained amateur radio operators.

Leveraging Existing Infrastructure
In conjunction with the RISCON Project, the state is also examining the recycling of decommission systems to use as a redundancy option. These discussions are in the preliminary phases of development.

Linkages to Out-of-State Networks
NAWAS- National Weather Service Alerting System

FNARS- A HF system primarily used by FEMA for inter and intra-state communications between FEMA Headquarters, FEMA regions and the states during national and/or regional emergencies, particularly when land line systems are impaired or restricted. An FNARS HF transmitter/receiver, a 1000 Watt Collins radio, was installed by FEMA in the State EOC.

ITAC/ICALL- Used in Rhode Island as a network redundancy as well as inter-state interoperability with Connecticut and Massachusetts, our two neighboring states. This system is both repeater based and simplex direct.

Link to the Federal Assets

Coast Guard
Currently, both Coast Guard Stations within Rhode Island have equipment and network access enabling them to operate on the RISCON system. Our limited use of the system has allowed our afloat assets to communicate directly, responder to responder, with state Law Enforcement and EMS assets on shore. This functionality has aided greatly in the coordination of near shore searches, arrangement of emergency medical treatment, and execution of major marine events.

In general the use of the RISCON system has increased the efficiency of response assets by connecting responding units on a common working frequency to manage on scene efforts. As additional Coast Guard assets working within Narragansett Bay come online, this technology will only become more valuable as an interagency coordination tool.

Transportation Security Administration

The Transportation Security Administration (TSA) is regularly engaged within Rhode Island's Public Safety Response system through its close coordination with the Rhode Island State Police in the protection of the lone state airport, T.F. Green. Additionally, T.F. Green Airport runs a single multi-agency dispatch center. Furthermore, the RISP will provide TSA the necessary communications to interoperate with any Rhode Island Public Safety agency, as needed.

Other Federal Agencies

Other federal agencies will be linked with the RISCON network through the use of the Strategic Technological Reserve (STR). Rhode Island plans to use part of the monies required by the PSIC grant for the STR to purchase portable radios for distribution at major incidents and events. Use of this cache, will allow us to distribute a radio to federal assets to achieve interoperability with them.

Link to Disparate Systems

RIEMA maintains a Mobile Command Center (MCC) that provides a capability to link disparate systems on-scene through a number of technologies including IP, RF and telecom gateways. This is further discussed in Section 4.5.

Governance and Driving Force Behind Communications Planning

In Rhode Island, the Rhode Island Emergency Management Agency (RIEMA) has been designated as the lead agency for coordination and planning for disasters and emergencies of significance requiring a statewide response by RI General Law 30-15. The strength of Rhode Island's preparedness efforts rests in the ability of the government, public, and private sectors to organize and plan through multiple committees and workgroups all focused on the primary goal of preparing Rhode Island for the worst, most probable disaster. At the core of Rhode Island's preparedness program is the Emergency Management Advisory Council (EMAC). Chartered by statute, this group advises the Governor on preparedness activities within the state. (See Attachment 1.1 for organizational structure of EMAC)

The EMAC created a Domestic Preparedness Subcommittee (See Attachment 1.2 for organizational structure of DPS) in 1999, whose mission focus is the creation of strategies for preparedness and the development of working groups to implement those strategies. This subcommittee includes members from all state agencies, tribal, public safety, private sector, and workgroups focused on specific projects and activities. These committees established the strategies and goals for preparedness and response in Rhode Island.

As previously discussed, the DPS also created the Communications Working Group to begin addressing significant communications challenges identified within the state. The CWG, in tandem with RIEMA, has worked to address statewide interoperability and communications issues consolidating disparate system, facilitating agency cooperation, and providing voice in policy discussions.

2.1 State Overview

Rhode Island has a population of 1,076,189 (2005 Census Estimate), with more than two-thirds of this population living within the State's 21 coastal communities. The metropolitan nature of the State is indicated by the fact that 33 of the State's 39 municipalities are included within four Metropolitan Statistical Areas (MSA's) identified by the U. S. Bureau of the Census. R.I. is the second most densely populated state. The population is defined as 86% Urban and 14% Rural.

The smallest of the 50 United States, Rhode Island was the 13th state accepted into the original colonies in 1790. While Rhode Island may have the longest official name of any of the states: "State of Rhode Island and Providence Plantations," it is only 37 miles wide and 48 miles long. Encompassing about 1,545 square miles, it is notable that its shoreline on Narragansett Bay in the Atlantic Ocean is over 400 miles long. Indeed, one of Rhode Island's nicknames is "The Ocean State." Rhode Island is bordered by Massachusetts to the north and east and by Connecticut to the south and west. Rhode Island is one of the most densely populated and heavily industrialized for its size. Rhode Island is divided geographically into five (5) counties in which exist thirty-nine (39) independent cities and towns. There is not any unincorporated land in Rhode Island. The capital city of Providence, with a population of over 176,800, is the largest city. It is located at the head of the Narragansett Bay with the Providence River running into the bay through the center of the city.

Rhode Island has a moist continental climate, with four distinct seasons. Its weather is tempered by sea winds, particularly in the Seaboard Lowland, which has a more moderate climate than the rest of New England. The average annual temperature is about 50° F (10° C) in various parts of the state At Providence the average January temperature is 28.6° F (-1.9° C), and the average July temperature is 72.2° F (22.3° C). The average annual precipitation (rain and melted snow) there is 42.7 inches (108 centimeters), including 39.2 inches (100 centimeters) of snowfall. Moisture is evenly distributed throughout the year. The climate of Block Island is somewhat more moderate than that of Providence, both in winter and in summer, with much less snowfall. In the northern upland region the growing season ranges from 100 to 125 days. Near the coast it ranges from 175 to 200 days. Rhode Island's weather often changes suddenly because the state is located near the meeting place of many storm tracks. The worst storms were a great gale in 1815, the 1938 hurricane, and a severe blizzard in 1978.

An essential feature of Rhode Island is Narragansett Bay, an estuary which extends inland more than 28 miles from the open sea. Narragansett Bay is 120.5 square miles in area. Contained within the State whose basic dimensions are 37 by 48 miles, Rhode Island has a total of approximately 384 miles of tidal shoreline, along Narragansett Bay, and framing the islands within the bay. There are 35 islands within its territorial waters.

In addition to 420 miles of coastline, the State contains over 350 freshwater lakes and ponds, 26 inland salt ponds, and 330 miles of major rivers and tributary streams. The four major river drainage basins in the State are those of the Blackstone, Pawtuxet, and Pawcatuck Rivers and Narragansett Bay. Some 510 dam sites dot Rhode Island’s rivers. 18 are considered high hazard with another 51listed as a significant hazard. Of the remaining existing dams, 78 meet criteria for intermediate hydro-power practicability.

Rhode Island lies in two distinct sections of the New England province: the northwestern third of the State consists of hilly upland, and the remainder is in the seaboard lowland section which includes much of the eastern part of the state and a low-lying strip bordering the west shore of Narragansett Bay. Land surface altitudes in the state range from sea level to 812 feet above sea level at Jerimoth Hill, the highest point, located in the town of Foster in the northwestern part of the state.

The State contains 6,415 total miles of certified public roadway, including 71 miles of interstate highway (49.8 urban and 21.4 rural). Interstate 95, a major artery, extends just 43.3 miles from the Southwestern border with Connecticut to the Northern-most border with Massachusetts. In 2005, there were 1,102,207 registered motor vehicles (including 28,137 motorcycles) and 707,617 licensed drivers in Rhode Island. The State of Rhode Island has l,l92 miles of State maintained roads which include I-95, I-195, and I-295. Other major State routes are 1, 2, 3, 4, 6, 44, 102, and 138.

Bus services throughout the state, on the municipal level, are supplied by the Rhode Island Public Transit Authority (RIPTA). Additionally, interstate bussing is provided by companies such as Bonanza and Peter Pan Bus Lines. Rail service for passengers is provided by AMTRAK; freight rail service is provided to various parts of the State. Daily flights are available from T.F. Green Airport in Warwick utilizing all major airlines. There are also a number of State owned and private commuter airports in R.I. The Port of Providence, which serves Rhode Island, has wharves and docks for accommodating medium and deep-draft vessels. Quonset Point in North Kingstown has a port which also accepts deep-draft vessels. Numerous ferries and passenger ships also utilize Narragansett Bay.

Electric and gas utility service within Rhode Island is distributed as follows: Electric power is readily available in each of Rhode Island's thirty-nine cities and towns. The major utility in the State is National Grid. Rhode Island electric utilities are part of the New England regional power grid, a cooperative system which insures dependability of service. There are two other companies that distribute electric power on a regional basis, Pascoag Utility and Block Island Power. The primary company that distributes gas through mains in the State is National Grid Gas.

Public Safety Background

Rhode Island, like many states, operates under a constitution and has divided government into three branches: executive, legislative and judicial. Rhode Island differs slightly from other states at the county level. While there are five counties, there is no actual county government. The thirty-nine (39) cities and towns of Rhode Island maintain a centralized government within each community focused on providing governmental services, emergency management, public works and public safety including police, fire and emergency medical services at the local level throughout the state.

The small size of the state and lack of county structure has allowed Rhode Island to develop and centralize many state operations such as the Department of Health. Rhode Island maintains a single Department of Health without any de-centralized operations. The primary mission of the Rhode Island Department of Health is to prevent disease and to protect and promote the health and safety of the people of Rhode Island.

In terms of its health care delivery system, Rhode Island has fourteen (14) licensed hospitals with 3703 licensed beds. Included in this total are ten (10) general acute care facilities, one (1) regional obstetrical facility, two (2) psychiatric facilities and one (1) long term care facility managed by the state. Rhode Island also has one (1) licensed rehabilitation center hospital. Outpatient clinics are operated by all of the short stay hospitals. Distinct (i.e., separately licensed) outpatient facilities include two (2) freestanding emergency care facilities, three (3) general ambulatory surgery facilities, four (4) specialty ambulatory surgery facilities, and thirty-six (36) "organized ambulatory care facilities." In addition, the federal government maintains the Providence Veterans Administration Medical Center and an ambulatory care facility at the Newport Naval Station in Rhode Island.

The statewide EMS system includes 88 licensed EMS service providers with approximately 2000 licensed basic Emergency Medical Technicians (EMT-B's) and over 2082 EMT-Cardiacs/Paramedics. The state EMS system includes 370 licensed ambulance vehicles (public and private). The state accesses aero-medical services from nearby Connecticut and Massachusetts. EMS is largely based in the municipal fire service with a statewide mutual aid/assistance agreement. The Incident Command System (ICS) is utilized to provide a common organizational structure and standardized operating procedures.

The Rhode Island Fire Service consists of 73 fire departments responsible for providing service to the 39 cities and towns that form the communities of the State of Rhode Island. These 73 fire departments include fulltime career staffing in our larger populated cities and towns; combination personnel of fulltime career and call firefighter staffing in our medium size communities; and all volunteer staffing in our smaller communities. These 73 fire departments are charged with providing fire protection, emergency medical services response, hazardous materials response and response to all-hazards events in each community that they protect. All of these departments provide their services in combination with local law enforcement, local emergency management agency personnel and local public works departments. Further, each fire service organization works closely with the Rhode Island Emergency Management Agency in planning for all-hazard response to significant local community events and more significant statewide emergency events.

A handful of communities provide emergency medical services response through a joint effort between the local fire departments and a third service municipal emergency medical services response group. However, no community in Rhode Island employs private emergency medical services providers for 9-1-1 calls. Most private emergency medical services providers in Rhode Island perform inter-facility transfers between hospitals, nursing facilities, and specialty medical centers. Private emergency medical services providers only assist local communities during large scale responses as a mutual aid resource.

In order to provide an effective response to day-to-day events that may over-tax a local community, or to respond to a regional or statewide larger scale event, the Rhode Island Fire Service developed the Southern New England Mutual Aid Response Plan. The Rhode Island Association of Fire Chief's Inc. established this plan with the consent and approval of local governments, for the purpose of updating, expanding and controlling mutual aid in the State of Rhode Island, and to act as a common entity for exploring and improving other areas of management, operation and effectiveness of the Fire/Emergency Medical Service. This plan will assist the over burdened dispatcher of unnecessary radio transmissions, and telephone calls, for the required mutual-aid. The Southern New England Fire Emergency Assistance Plan

is a step by the area fire departments, through their Chief Officers, to address these problems and their common cost effective solution.

Its basic aim is to have four Regional Control Centers to control all mutual-aid in those regions of the State of Rhode Island. The community with a major incident or multiple incidents will not have to coordinate their own mutual aid at a time when radio traffic, telephone calls, pager notifications, and other alarm dispatching, are at the highest levels.

Mutual aid is needed for the following categories:

- Major fire in progress
- Relocation to vacant station
- Single company to another incident.
- Balance of full assignment to another incident.
- Special apparatus to incident scene.
- Directional coverage on highway.
- Automatic aid - initial assignment
- Mass Casualty Incident
- HAZMAT / WMD Incident

The expanded mutual aid agreements placed in effect by the Chief of Departments can only be as effective as the communications between communities and the four Regional Control Centers (See Map 2.7 for More Information):

- Metro Control – Primary: Cranston, Alternate: Providence, 2nd Alternate: Warwick
- East Bay Control – Primary: Portsmouth, Alternate: Newport
- Southern Control – Primary: Exeter, Alternate: Westerly
- Northern Control – Primary: Smithfield, Alternate: North Smithfield

Furthermore, this mutual aid agreement also works off the Inter-city Fire Radio Network, abbreviated and referred to in this document as "INTERCITY", which was established in 1962 to provide an integrated communications network for the fire departments of the State of Rhode Island and surrounding communities.

The system operates on a frequency of 154.28 MHz, and consists of base stations in the fire alarm office of each participating fire department, including the 911 office, and other state agencies. Most mobile apparatus and portable radio equipment also has this capability.

When a major incident occurs in the Intercity Control Center's own community, and a determination has been made to pass control to the alternate fire alarm office, a request must be made to the alternate control center requesting same.

These Four Control Centers serve as the Mutual Aid Intercity Statewide Coordinating Centers from which other communities receive response instructions for relocation's during mutual aid operations. These Control Centers can also communicate with the State 911 office, R.I. Department of Transportation, T.F. Green Airport Crash Rescue, State Emergency Management Agency Headquarters at the Emergency Operation Center, and with each other as resource requests warrant.

It is the responsibility of each participating fire department to install and license its base station and mobile units and to comply fully with Federal Communication Commission (FCC) rules in the use and maintenance of such equipment.

Finally, our fire department community response is supplemented by assistance from the State of Rhode Island Division of Forest Environment which assists with wildland firefighting and we also rely upon the State of Rhode Island Department of Environmental Management Office of Emergency Response to provide oil spill, hazardous materials and WMD/Biological incident response. Also as a partner to WMD/Biological incident response is the Rhode Department of Health. As partners to our communities' all hazard response to incidents are the Rhode Island Emergency Management Agency and the Rhode Island State Police.

The Rhode Island Police Response System consists of 2486 sworn police officers from 38 municipal departments, one tribal police department, and the State Police. Currently, the Town of Exeter does not maintain a sworn police department and is patrolled by the RISP. No municipal police department has jurisdiction outside their municipal borders except where memorandums of understanding have been signed as stated in RI General Law 45-42-2. However, RI General Law 45-42-1 does provide for emergency powers to be provided to police officers working outside of their jurisdiction, if so requested.

Rhode Island's program for preparedness and response is organized under the overall authority of Governor Donald L. Carcieri. By statute, the Emergency Management Advisory Council, which provides advice on emergency preparedness related, is co-chaired by Lieutenant Governor Elizabeth H. Roberts and the state's Adjutant General MG Robert Bray. The lead agency for disaster preparedness in the state is the Rhode Island Emergency Management Agency headed by General Bray and the lead agency for health preparedness is the Rhode Island Department of Health headed by David R. Gifford, M.D. M.P.H. Under this ongoing leadership, public safety officials in Rhode Island have been training, planning, and exercising for responding to a terrorist attack or manmade disaster.

Hazard Analysis

While natural disasters affect Rhode Island sparingly the follow hazards have been identified:

- Hurricane/Tropical Storm
- Winter Storm
- Flood
- Urban Fire
- Earthquake
- Tornado
- Drought
- Dam failure
- Wildfire

The potential risk of these hazards are continuously addressed and reassessed every three years through the State of Rhode Island's Hazard Mitigation program.

Additionally, the State of Rhode Island has identified multiple critical infrastructure sites within our borders. As is the case with natural hazards, the risks associated with these sites are

constantly being addressed and reassessed. The information about the exact locations of these sites is maintained in a list by RIEMA and has purposely been excluded from this plan for security reasons. Should information about those sites be required, a written request should be forwarded to RIEMA at 645 New London Avenue, Cranston, RI 02920.

Reoccurring Events of High Importance

Rhode Island also plays host to many annual events of some magnitude. The Annual Fourth of July Celebration, established in 1785, is the oldest continuous celebration of its kind in the United States drawing over 100,000 people each year. In keeping with that long standing tradition of honoring our nation's independence, the Bristol Fourth of July Committee establishes its mission a means by which we can carry out mandate to have a patriotic observance in Bristol, Rhode Island that can best exemplify our National Heritage.

Furthermore, other events of note include the National Guard Open House and Air Show, Washington County Fair, Newport Jazz and Boat Festivals, and Waterfire-Providence. Additionally there are many conferences, concerts, and sporting events that draw very large crowds at various venues including McCoy Stadium and the Dunkin Donuts Center.

The population within the state also fluctuates with the seasons. The peak population of Rhode Island increases during the summer because of tourists who congregate along the southern most shorelines. During the winter months, the state population increases with the influx of students who attend the numerous institutions of higher education.

2.1.1 NIMS/Multi-Agency Coordination System (MACS)

State Response

The State of Rhode Island has adopted the use of a Multi-Agency Coordination System (MAC) for use during both day-to-day operations and in times of activation. The MAC is a system which maintains an open communication line among all of the stakeholders on both the state and local level. Our MAC partners include our local Emergency Managers, State Department of Public Health, E-911, Regional response teams, Local Police and Fire Departments and any other department and/or agency as required.

The functions of the MAC include: The support of incident management both in the SEOC and at the on scene level through the Incident/Unified Commander, facilitate logistics and resources and track both, coordinate interagency and intergovernmental issues regarding incident management and coordinate incident related information to the public through the use of a Joint Information Center (JIC) or any other functions deemed necessary by the policy group and/or Incident/Unified Commander.

Although at times higher-level assistance may be available, it is the responsibility of each department or agency head in the State of Rhode Island to provide for a comprehensive emergency management program to meet the emergency needs of its citizens or any other person within the State who has been affected by an emergency or major disaster. State government has the primary responsibility for emergency management activities.

The Governor of the State is ultimately responsible for protecting lives and property in an emergency or disaster situation. By law (RI Gen. 30-15-7), the Governor has the authority to direct operations within the State in the event of a disaster. To minimize the loss of life, reduce

property damage and to restore property during the recovery phase, will require close cooperation and coordination with RIEMA.

The initial response in an emergency will be, to the maximum extent possible, accomplished by the State of Rhode Island utilizing its own resources. An Emergency Operations Center (EOC) has been established to provide a central location where senior decision makers can gather to provide a coordinated response. The State will respond to all emergencies using the Incident Command System. The State EOC is located in the Rhode Island Emergency Management Agency, at the Command Readiness Center, 645 New London Avenue, Cranston R.I.02920-3003. When assistance is required, it will be requested by the execution of mutual aid agreements with other agencies, the American Red Cross, the Salvation Army, or other volunteer groups. If assistance beyond the State of Rhode Island's capabilities is required, RIEMA will coordinate requests to the Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) for a presidential declaration of an emergency or major disaster to secure supplemental federal financial and technical assistance.

The Rhode Island Emergency Management Agency will function under the National Incident Management System (NIMS) and, when activated the State Emergency Operations Center will utilize ICS. This was mandated by Executive Order 4-10 on December 9, 2004, signed by Governor Donald Carcieri. (See following for full text: http://www.governor.ri.gov/documents/executiveorders/2004/04-10_Designation_of_National_Incident_Management_System_1.pdf)

To facilitate effective operations, the EOP adopts a functional approach that groups the types of assistance to be provided into 18 Emergency Support Functions (ESF). Each ESF is headed by a lead or primary agency or organization, which has been selected based on its authorities, resources, and capabilities in that functional area. The primary agency appoints an Emergency Coordination Officer to manage that function in the State Emergency Operations Center. ESF 1 through 18 in the Appendix section contains emergency management functional assignments. These functions will parallel regular day-to-day duties as closely as possible. Available material resources and personnel will be employed to the fullest extent possible before seeking outside assistance.

Depending upon the severity and magnitude of the emergency, it may be necessary to suspend some routine state activities. During and shortly after an occurrence, a determination to divert resources into response and short-term recovery activities will be made.

The special needs of the handicapped and elderly must be met by State officials and emergency personnel. The Departments of Human Services and Elderly Affairs maintain current listings of special needs housing and nursing homes in Rhode Island. The Rhode Island Emergency Management Agency maintains a voluntary statewide list of persons with disabilities and the elderly who would need assistance during any type of evacuation.

Additionally, emergency information both in materials and instruction must be disseminated for any groups of citizens whose primary language is not English.

EOC Activation Levels

The magnitude of the emergency will dictate RIEMA's Response Level. Response Levels are used to describe the type of event, extent of coordination or assistance needed, and degree of

participation from the jurisdiction departments. Response Levels are closely tied to Emergency Response/Activation levels issued by the Governor and EMA Staff.

The EOC will be opened at the following levels as appropriate to the requirements of the incident:

- Level 1- Monitoring
- Level 2- Partial Activation
    - Limited ESF response, only those required will report
- Level 3- Full Activation
    - All ESFs report

Local/Regional Response

Although there are five counties within the State, there is no actual county government. Rhode Island has 39 municipalities, ranging in size from 1.21 to 59.54 square miles of land area. Although there are five counties, there is no actual county government. Rhode Island's communities range from revitalized urban areas to attractive suburban towns. The northwest, southwest, and southeast corners of the state feature more rural settings. Rhode Island is especially well known for its historic and seaside communities, and there are a number of bay and offshore islands that offer residential and recreational opportunities.

Due to the lack of county government and the vast diversity of the individual municipalities, both the make-up and response capabilities of first responders (Police, Fire, and EMS) greatly vary. Attachment 1.5 gives an overview of the individual agencies within the state. Furthermore there have been various mutual aid relationships established to supplement the capabilities of the various cities and towns.
(See Attachment 1.5 for a list of all response agencies within the state of RI)

2.1.2 Regions/Jurisdiction

For the purposes of this plan, the State of Rhode Island will not be broken down into regions and will be treated as one jurisdiction due to its geographic size. However, it is important to note that throughout this plan, regional delineations may be made when talking about Fire Department Mutual Aid and/or the RISCON system. While important within the State, it is outside the scope of this plan.

2.1.3 UASI Areas/TIC Plans

The State of Rhode Island contains one city designated under the Urban Area Security Initiative, its capital, Providence. The UASI Region is made up of 9 communities within the metropolitan area of the City of Providence. (See Attachment 1.4 for a list and Map 2.6 for more information) The UASI Region is also comprised of the same communities that are included within the Greater Providence Metropolitan Medical Response System (GP-MMRS) and the Providence Metropolitan Region Tactical Interoperability Communications Plan (TIC-P) working group. Therefore for the purposes of this plan, the USAI Region and GP-MMRS may be used interchangeably.

There are approximately 1422 firefighters, 1375 police officers and 11 emergency managers who cooperatively work together in an effort to fulfill the four phases of comprehensive

emergency management in the USAI Region. It is the intent of the region to provide aggressive cooperative training to enhance the preparedness, response and recovery capabilities of the region's public safety personnel.

To this end, a TIC Plan has been developed for the UASI Region with the purpose to document what interoperable communications resources are available within the Providence Metropolitan Area, who controls each resource, and what rules of use or operational procedures exist for the activation and deactivation of each resource. This plan was adopted on June 6, 2006 and exercised on October 1, 2006.

The exercise was considered a success, but also offered areas in which improvement was needed such as the use of radio caches and better use of command channels. The full text of both the After Action Report and the DHS Scorecard can be requested by contacting the Providence Emergency Management Agency at 401-228-8000.

Furthermore, the Providence Emergency Management Agency is the primary agency responsible for both the MMRS and the TICP. The primary point of contact (POC) that can be reached for questions is:

Name: Leo D. Messier
Title: Director of Providence Emergency Management
Address: 591 Charles St.
Providence, Rhode Island 02904
Phone: (401) 228-8000
E-Mail: lmessier@providenceri.com

2.2 Participating Agencies and Points of Contact

Statewide Communications Interoperability Planning has taken advantage of Rhode Island's diminutive size. As seen in Attachment 1.3, the Communications Working Group, which has the primary responsibility for Statewide Communications planning, is a comprehensive group involving local, state, and federal agencies as well as non-profit and private organizations. Throughout the planning process, RIEMA staff spearheaded the planning effort while working closely with the CWG by hosting planning meetings and smaller sessions. Those agencies involved provided valuable information on both the philosophy and direction of interoperability planning. Furthermore, RIEMA staff members along with select CWG members, conducted follow up interview to help address identified gaps.

In addition to utilizing the Communications Working Group, the two POCs listed in Section 2.3 actively sought the input from the various stakeholder groups. Personal interviews and briefings were conducted with the following:

- Rhode Island Association of Fire Chiefs- An association made up of all Fire Chiefs within the State regardless of paid or volunteer status
- Rhode Island Police Chief's Association- An association representing all 38 Police Chiefs within the State and the State Police
- Local Emergency Management Director's Association- An association of all emergency management directors within the state
- Narragansett Indian Tribe- The only tribal body within the state
- League of Cities and Towns- A non-partisan membership association of local governments in Rhode Island that represent the interests of municipal officials
- Amateur Radio Emergency Service of RI (ARES-RI)- An organization that offers important communications capabilities in times of disasters
- RI Citizens Corps Council- An advisory council representing emergency volunteers throughout the state
- Hospital Association of Rhode Island (HARI)- A statewide trade organization that assists hospitals in effectively serving the health care needs of Rhode Island
- Hospital Preparedness Planning Committee- Represents all hospitals and healthcare organizations in the development a comprehensive all-hazards preparedness planning strategy
- Rhode Island National Guard
- United States Coast Guard

The whole planning effort, with various meeting, interviews, and individual sessions, was extremely beneficial because it allowed all involved agencies to take a step back view all available systems and provide a clear direction for future statewide interoperability. Additionally, statewide planners had the opportunity to interact with various agencies furthering relationships as well as fostering new ones.

2.3 Statewide Plan Point of Contact

Currently, the State of Rhode Island does not have a full-time interoperability coordinator. However, there have been three positions created in the state FY08 budget to handle statewide interoperable communication. Once these are filled one of those individuals will become the full time statewide interoperability coordinator. For the time being, the points of contact/interoperability coordinators are as follows:

Primary POC:
Thomas Kilday
Homeland Security Program Manager
Rhode Island Emergency Management Agency
645 New London Avenue
Cranston, RI 02920
401-462-7107
tom.kilday@us.army.mil

Alternate POC:
Jeff Stevens
Regional Planner
Rhode Island Emergency Management Agency
645 New London Avenue
Cranston, RI 02920
401-462-0922
Jeffrey.stevens6@us.army.mil

Additionally, the POCs listed are also the contacts for any questions regarding this plan.

2.4 Scope and Timeframe

Scope

The following document will limit itself to addressing only radio voice and data communications within the public safety arena. Understandably as a living document, new technologies and solutions will arise, but due to the already large scope it must be limited. Furthermore, it was decided that while commercial options such as cell phones and VOIP are often very useful during incidents and events, they will be excluded from this plan because they are outside the control of the state and operability cannot be assured.

The planning group has chosen RISCON to serve at the platform for the statewide radio system. RITERN will continue to play an important and critical role as a hailing channel for dispatchers while being maintained on the DOT network as a redundant system. Furthermore, other RF systems will be maintained to serve in various roles from primary to redundant system. Rhode Island will strive to maintain and achieve interoperability between all systems though the integration of SOPs and planning initiatives designed to create cohesion among disparate systems and agencies. Only though continued effective planning can Rhode Island achieve true interoperability.

The architecture selected for the RISCON radio system is an advanced state-of-the-art communications systems for public safety – the chosen technology is 800 MHz digital trunked radio. The system is based on the public safety digital standard known as Project-25. Trunked radio was developed in the late 1970s for public safety under an industry-first voluntary standard known as APCO (Association of Public-Safety Communications Officials) Project-16. APCO Project-16 standardized system and user functions desired by public safety officials.

Since then, however, technologies have enabled communication systems to achieve a higher level of radio spectrum efficiency. Narrower channels, digital transmission, and wide-area networking techniques increase efficiency as well as the number of users that can be supported by a single channel. Wide area coverage is achieved by advanced transmitter simulcasting methods utilizing GPS. These elements are the core of the trunked radio network for RISCON.

Timeframe

While much of the groundwork has been laid there are still things that must be achieved. RISCON's infrastructure is not yet complete. While coverage is currently provided to approximately 75% of the state, this must be expanded to include at least 97% mobile coverage and 95% portable coverage. Completion of the currently planned infrastructure is slated for July 2009.

Another challenge is public safety buy-in to the system. As with any new system there is often some hesitance especially before the system is fully built out. Currently there are only 1400 users on the system but much interest is now being shown. Those in areas with full coverage are regularly using the system for interoperability when working with other jurisdictions. Utilizing PSIC funds, subscriber units will be provided to every front line municipal police and

fire unit, EMS service providers, as well as other pertinent agencies such as colleges and university and regional teams. This should be completed by March 2009.

Funding has also been an obstacle. While the RISCON system has taken advantage of multiple federal grants in a very coordinated manner, the cost of the technology has proven a roadblock to some agencies. These roadblocks are being addressed by aggressively identifying different sources of funding. As mentioned above, the PSIC grant will enable the State to more than double the users on the system, while also providing a subscriber unit to every front line fire/EMS apparatus and police cruiser within the state. While this has long been a goal of the RISCON system, PSIC funding has allowed for a huge step forward in the completion of the system.

3 Methodology

The Communications Working Group is the lead working group for development and continued review of communications related plans and action items. RIEMA will remain the lead organization in coordinated planning efforts as designated under the EMAC and Domestic Preparedness Subcommittee. This organization allows for all layers of government and private sector interests to be addressed.

The planning effort was coordinated through multiple meetings and briefings as mentioned above in Section 2.2. In addition to these meetings and briefings, RIEMA conducted multiple SCIP/PSIC planning meetings inviting all levels of government (local, state, federal, tribal), all public safety agencies (police, fire, EMS, emergency management), hospitals, all VOAD organizations (such as the Red Cross and Salvation Army) and Citizen Corps Organizations. Furthermore, the POCs listed in Section 2.3 conducted field level interviews with stakeholder groups and appropriate subject matter experts to incorporate planning solutions across the public safety continuum. This allowed planners to incorporate and build upon current best practices, while identifying areas that need improvement. This inclusive planning effort also created a vehicle to consider PSIC grant requests in coordination with plan development. Thus, allowing the State of Rhode Island to target identified needs.

The overall planning process allowed for the inclusion of current local, regional, and statewide communications plans. Additionally, the Providence TICP was incorporated in this planning effort though coordination with the City of Providence Communications Department and the involvement of TICP planners in SCIP planning.

4 Current Statewide Assessment

Currently within the state of Rhode Island interoperability is achieved through one of the following means:

- Police/Fire Intercity Channels (VHF)
- RISCON (800 MHz Digital)
- RITERN (800 MHz Analog)
- Nextel Hospital Communications
- HEAR (VHF)
- Satellite Phones
- Landline Telephone
- Cellular Telephone
- Face-to-Face Communication
- Amateur Radio
- EMSTARS (VHF Encrypted)
- WebEOC
- Hospital Capacity System (HCS)
- IPICS
- Gateways

The widely fragmented means of communications provides no assurances that the right information gets to the right person quickly. Therefore the CWG was created to address these issues. The CWG under the authority of the Emergency Management Advisory Council, through the Domestic Preparedness Subcommittee, has provided a roadmap for communications interoperability throughout the State of Rhode Island. RISCON has been chosen as the primary network.

Over 1400 subscriber units have been purchased for local, state and tribal agencies. Also, both Coast Guard Stations within Rhode Island have equipment and network access enabling them to operate on the RISCON network.

The strength of this system is that the CWG has been able to provide a unified direction to statewide radio planning that has political will behind it. Previously the development of communications initiatives were stove piped in nature and little cooperation was seen. Under the leadership of the EMAC and CWG, local, state, tribal and federal partners have been brought together and created an environment of cooperation that guides communications efforts in a coordinated matter towards the goal of statewide interoperability. Also, the inclusive nature of the CWG has given the group the ability to leverage existing systems (such as the RISP Microwave system) to enhance communication statewide.

Lastly, and perhaps most importantly, the statewide planning effort for interoperability, under the auspices of the CWG, has created a culture of cooperation among all levels of government

and the private sector. Individuals, on both the personal and agency level, have been forthright with their weaknesses and allowed the whole group to address their issues.

However, as with any statewide project, there are areas that are still in need of improvement. First and foremost, the governance structure of the planning effort is vague. While the EMAC has statutory authority, the DPS and CWG do not. Thus, some of the mutual decisions arrived upon by the group do not necessarily translate to compliance by agencies and departments across the state.

Also, the RISCON project has primarily been initiated on the local level, community by community. With the assistance of grant funding, the brunt of the associated costs and administrative duties has fallen on them. This situation is somewhat prohibitive because it deters other communities from buying into the system for various reasons and does not currently allow for state control of the statewide system.

State funding support has been another challenge to the RISCON project. Rhode Island is currently running one of a few states running a deficit and plans are going forward to cut state jobs across the board. Therefore, the current funding for support of the statewide communications system has been delayed. The three positions and available maintenance monies have not yet been released.

Statewide Interoperability Challenges

Communications Interoperability

Law Enforcement: In Rhode Island, law enforcement communications are conducted on VHF High-band [155MHz] and UHF [450MHz]. Most departments utilize VHF frequencies; however, the larger cities such as Providence use UHF, thus creating a communication gap. For an example, State Troopers cannot use the radios in their vehicles to communicate with a Providence police vehicle and must rely on their dispatcher for verbal relay.

Fire and EMS Services: In similar fashion, approximately 75% of the fire departments utilize VHF and approximately 25% are using UHF frequencies. There are a couple of departments still using VHF low-band channels [30 – 50 MHz]. This is an obstacle to some departments in conducting mutual aid communications. If sharing the same frequency band, there exist some inherent level of interoperability among fire personnel from the use of fire ground channels although communication on these channels often gets congested.

Insufficient Operating Channels

Unfortunately, Rhode Island public safety and public service agencies currently operate in every public safety voice band allocated by the FCC. This includes VHF low and high-bands, UHF, and 800 MHz frequencies. Many of the agencies are currently operating near, and in some cases exceeding, the capacity of their existing communications systems. Radio spectrum allocated for public safety has been fully assigned in most urban areas of Rhode Island; simply, there are no or little additional bandspace available. Nearly all police and fire interviewed cited channel congestion on the Inter-City Police and Inter-City Fire radio channels as a major problem. Under current conditions, only one channel is available statewide for each of the services to coordinate emergency response activity. During periods of peak activity and especially during incidents requiring the coordination of multiple jurisdictions, a single channel

cannot adequately support the interoperability requirements of both public safety services. In addition to being a potential communications bottleneck, the use of a single channel for coordinating activity involving several departments will render the channel unavailable for long periods. This causes confusion among the agencies that results in lost or delayed messages, or getting them confused with those intended for another department. Existing dispatch channels need to be clear and as a result cannot be relied on for mutual aid operations. Because of lack of operating spectrum, and in some cases poor signal coverage, many state agencies have turned increasingly to private communication providers, such as Nextel for two-way radio and cellular telephone usage. These services alone, however, are insufficient to fully address Rhode Island communication problems.

Inadequate Coverage
Radio coverage has been identified as a problem in many areas of the state, especially for hand-held portables. This problem varies system by system because some departments' coverage design requirements are for mobile radio only coverage, while others are for hand-held portable radio coverage. In addition, propagation reliability specification may differ; some agencies require 90% coverage availability, while others require 95% availability. Many users indicated that coverage is poor in the northwest and southwest regions of the state where the terrain is hilly. Other radio users have also expressed problems with in-building portable coverage. In-building portable coverage concerns are predominantly experienced by radio users operating in urban areas and are typically considered a critical problem, especially for the fire services.

It is important to clarify the meaning of coverage area availability. This number is a statistical result based on the reliability of the signal level predicted by computer models that could be field verified by measurement. That is, it is a measure of signal propagation reliability. For 95% reliability, it indicates that a portable or mobile radio will receive a signal that is above a specified design level 95% of the time at 95% of locations.

Duplication of Technology-Based Wide Area Communications Systems
Not including the RISCON system, there are three [3] major regional 800 MHz trunking systems in Rhode Island that support State agencies. These are RIDOT, RIPTA, and RIDOC. These systems provide redundant overlapping coverage throughout the state. The two main systems, RIDOT and RIPTA, have trunked systems provided by Motorola that are compatible. The RIDOC trunked system, provided by Uniden, employs a different communications architecture that is not compatible with Motorola trunked systems. These two system manufacturers support disparate technologies that prohibit direct communications between each system. Additionally, RISCON is not compatible with either system. Rhode Island is hoping that disparate proprietary technology challenges are address in future FCC and DHS OEC regulatory initiatives.

Microwave Radio Network
The State Police microwave network is the predominant wireless backbone supporting State land-mobile radio infrastructure. It is a 6GHz DS-3 digital network comprised of 11-hops. It is configured in a ring arrangement and provides reliable point-to-point communications interconnecting key radio sites and state buildings. The network's primary function is for support of land-mobile radio for multiple state agencies. The ring has capacity for 672 voice and low speed data circuits or up to 27 DS-1 circuits, while the spur hops are 12 DS-1 circuits.

There are two 960MHz links providing fractional DS-1 service to two sites. The network currently transports RISCON, RISP, DEM, and RIPTA radio and data circuits.

There are currently monies slated in the Rhode Island State FY08 Capital Budget to upgrade and expand the capacity of this system creating a robust RF backbone for the radio systems identified in this plan.

Communications Site Resources
Rhode Island has valuable communication site resources that serve many of the State's radio systems. These sites have been upgraded in recent years. Some towers are new, others have been modified. Many sites have new communication shelters and all are equipped with uninterruptible power supplies [UPS] and emergency power generators. These sites represent an enormous investment by the State and municipal partners in land and infrastructure, and many sites could be used for build-out of a new system or leased to commercial providers of communication services.

Mobile Data Communications
The current wireless data network, which is utilized by most Rhode Island Law Enforcement agencies, utilizes a variety of laptop computers, and operates on the Verizon Wireless 1XRTT/CDMA Network. The 1XRTT/CDMA Network is the core data service provided by Verizon Wireless, in Rhode Island, and provides virtually seamless statewide coverage. Because of the large volumes of data being processed, the State Police have linked the RILETS Network to the Verizon Wireless 1XRTT/CDMA Network, via a T-1 wireline connection.

This system is an important augmentation to the Rhode Island Law Enforcement Teletype System (RILETS), which is the state's criminal justice information system, and its network segment, which operates on a wired statewide Frame Relay T-1 data network provided by Verizon.

This system provides all RI Law Enforcement entities with a myriad of criminal justice information and applications at the desktop and at the wireless data terminals in vehicles.

However, while Law Enforcement mobile data communications are closely administered by the Rhode Island State Police, fire and EMS mobile data communications are not currently being tracked. RIEMA plans to identify mobile data systems outside of the RILETS system during the CASM inventory.

Other Interoperable Concerns

Rebanding
On August 6, 2004, the Federal Communications Commission issued a report and order that modified its rules governing the 800 MHz band (FCC 04-168). The purpose of the order was to reconfigure the 800 MHz band to minimize harmful interference to public safety radio communications systems in the band. This is hereby referred to as "Reconfiguration."

Subsequent orders on December 22, 2004, and October 5, 2005 delegated authority and created an "Order" for Nextel to pay incumbents an amount to effect a Reconfiguration of their respective frequencies. The process also guarantees "comparable facilities" which simply

stated is a seamless transition from old to new frequencies with no compromise in coverage and transparent to the end-user.

Until the RISP fills the communications positions included in the FY2008 budget, the incumbent licensee for RISCON frequencies is the Town of Narragansett. Negotiations to create a Frequency Reconfiguration Agreement (FRA) began preliminarily on or about November 8, 2006 and continued with a sense of urgency through the holiday season and through the winter of 2007. Respectful but contentious stumbling blocks were overcome and on March 29, 2007 a confirmation was received from the 800 MHz Transition Administrator confirming an agreement. The FRA agreement is memorialized by reference #DL8910428183.

The FRA creates a timeline and a scope of work to reband or reconfigure our existing channels to a pre-determined frequencies that are within the dedicated public safety range in the lower end of the 800 MHz range and contiguous with the 700 MHz channels.

A meeting between regional licensees, FCC, and the Sprint/Nextel representatives was called for October 18, 2007 at The Colonnade Hotel at 120 Huntington Street, Boston, MA. A representative of the Town of Narragansett was sent as licensee for RISCON. As compared with other licensees who are at various stages of negotiation or litigation for an FRA, RISCON is positioned well ahead of the curve. The FRA has been executed and RISCON is therefore recognized as "ready" to begin rebanding once the channels are cleared by Sprint/Nextel. Sprint/Nextel reported that they are making significant progress with channel clearing and we have been placed on a tentative schedule to commence rebanding in March 2008. It is important to recognize that RISCON and the Town of Narragansett as the incumbent licensee stands ready to begin the work and are at the mercy of frequency availability.

A second critical component of rebanding beyond the FRA is a contract with a vendor to perform the technical tasks of reconfiguration. Concurrent with the negotiations for the FRA, the Town of Narragansett worked tirelessly to finalize terms of a contract between RISCON as the incumbent and Motorola as the vendor to complete the work at the FRA terms. This proposal was submitted by Motorola on or about December 13, 2006. Months of negotiation led to an executed contract signed by the vendor on March 30, 2007 and subsequently ratified by the Honorable Town Council then signed by the Town Manager Mr. Jeffry Ceasrine on April 10, 2007.

700 MHz Regional Planning

Currently the State of Rhode Island is working to address the inclusion of 700 MHz in our Public Safety communications. We have appointed Thomas Crotty, RISP Radio Communications Director, the administrator of the spectrum. Also, Mr. Crotty is working with other Region 19 members to identify the inclusion of the 700 MHz spectrum in our statewide communications system.

Other Radio Planning

The State of Rhode Island is a participant in National Public Safety Planning Advisory Committee (NPSPAC) and Region 19 planning efforts. We are participants in the ITAC and ICALL network and maintain repeaters in 17 locations. Further information on our repeaters can be accessed through Rhode Island Emergency Management Agency or Region 19 upon request.

Additionally we maintain the following channels for statewide interoperability:

Table 4-1 Existing Statewide or Regional Interoperability Channels

Channels	*TX Frequency*	*RX Frequency*	*Statewide/Regional*
Police Intercity	158.97 MHz	158.97 MHz	Statewide
Fire Intercity	154.28 MHz	154.28 MHz	Statewide
RISPERN	155.19 MHz	155.19 MHz	Statewide
RITERN	800 MHz Analog Trunked		Statewide
State USAR	458.175 MHz	453.175 MHz	Statewide
National Search and Rescue	155.16 MHz	155.16 MHz	Statewide
HEAR (Hospital to Rescue)	155.34 MHz	155.34 MHz	Statewide
HEAR (Hospital to Hospital)	155.28 MHz	155.28 MHz	Statewide
State HAZMAT and DECON	458.3 MHz	453.3 MHz	Statewide
Yawgoo Valley Search and Rescue	457.275 MHz	452.275 MHz	Regional

4.1 Governance Structure

The success of any project is always dependent upon inter-personal communications; the willingness to break down political barriers; and, readiness to solve complex issues. These are the attributes that establishes the framework for a strong governance structure. The participants of the RI Communications Working Group (CWG) share a common vision in developing a statewide voice and data network for its first responders. First responders depend on their radio communications to support both routine and emergency operations. They provide law enforcement, fire protection, medical emergency response, natural and man-made disaster response detention, transport, and other public safety services to the citizens of Rhode Island. For the personnel providing these services, immediate access to information is crucial to their ability to protect life and property. For those responders in the field, voice radio communications is not only the primary link, but often the only link to information and life safety resources. Radio communications is literally a lifeline, linking first responders to assistance, back-up, and other resources.

An internally developed communication system requires a strong organizational governance and management structure to support the implementation and the overall long-term support and maintenance of the network. A formal State organization with system ownership and management responsibilities is necessary to provide the level of service to the end users. Furthermore, there needs to be a governance organization that employs the following basic framework:

- Based on user needs - not organization
- Administrating network standards and policy
- System planning
- Network prioritization
- Site, infrastructure & subscriber ownership
- Funding
- Monitoring of capital and recurring cost
- Cost allocation for the participating department and agencies, if required

The system management and maintenance of such a complex statewide network accommodating many independent agencies and departments requires a single entity to manage and oversee the system on a daily basis. The system management entity should be highly respected among its peer agencies to provide the leadership to maintain a reliable network, as well as the ability to resolve potential user conflicts. The CWG has established the following three components of governance:

System Ownership
The CWG has established that the RISCON system ownership responsibility should fall under the jurisdiction of the Rhode Island State Police. This would include system ownership in total or in part, depending on the control of certain responsibilities. For example, the City of Providence would maintain ownership, management and maintenance control of their portion of the network but would have Memorandum of Agreement [MOA] identifying their responsibilities and limitations.

System Management
The CWG has established that the RISCON system management responsibility should fall under the jurisdiction of the Rhode Island State Police. As the Systems Manager, the RISP would have direct responsibility and accountability for daily operations, which would include planning, budgeting, staffing, administration and infrastructure maintenance. Other RISP oversight may include fiduciary responsibilities and system planning.

System Administration
The CWG, serving as the RISCON Advisory Group for the RISP, will have responsibility for setting system standards, establishing Standard Operating Procedures (SOP), developing MOUs, be the entry point for new agencies or departments desiring to become a system user, serve as a mediator for dispute resolution of a participating agencies or departments, and assist in cost allocation.

Governance Authority
Currently, the Communications Working Group does not have legislative authority over statewide communications interoperability. However, they do maintain advisory authority through the DPS which falls under the Emergency Management Advisory Council. There are efforts underway to grant full system authority to the RISP with the advice and consent of the CWG. The RISP will provide infrastructure and technical support, infrastructure maintenance, and frequency management, while the CWG will be responsible primarily for policy development.

Role in PSIC Grant Administration
RIEMA, as the SAA, will administer the PSIC grants as stated in the grant guidance. RIEMA will seek guidance from the CWG to ensure that the SCIP is aligned with the Investment Justification. The CWG has played an integral role in both SCIP planning and PSIC IJ development to ensure that a comprehensive approach is taken. This current role will be taken on by the CWG, during their bi-weekly meetings, as it pertains to all statewide radio planning.

4.2 Technology

The State of Rhode Island uses multiple means of radio communications within its borders including VHF, UHF, 800 MHz, Amateur Radio, etc. (Attachment 2.9 provides a visual synopsis of most current systems) Due to the ever changing lifecycle of equipment, there is no current complete list of communication equipment. However, the State does maintain and can provide a list of all frequencies in use within the state. Additionally, a statewide inventory of communications equipment and verification of frequencies has been started. The Rhode Island Emergency Management Agency has assigned a communications officer to begin to conduct a statewide communications audit and implementation of the CASM tool. The current project timeline calls for completion by August 2008.

Also, there is presently a state-wide microwave system operated and maintained by the Rhode Island State Police (RISP). This system is shared by several agencies including:

- Rhode Island State Police
- Rhode Island DEM Environmental Police
- Rhode Island Dept. of Transportation
- Rhode Island Public Transit Authority

This system is the base for the ongoing expansion of the entire state-wide 800 MHz radio system. The entire system is linked via micro wave or T-1 transmission lines. The system covers the entire land area of the state for VHF coverage. The system is already in use by the communities that have 800MHz systems up and running.

Communications Maintenance
System maintenance for disparate radio infrastructure currently in place across the state is the responsibility of the individual entity that owns the system. Systems across the state will remain, for the foreseeable future, under the control of the individual departments that own them. They will be interconnected with the RISCON system on an as needed basis through the use of gateways.

RISCON Maintenance
However, the RISCON system requires a different approach when considering maintenance. Advance-technology trunked radio networks are complex and require more sophisticated maintenance than currently encountered with conventional systems. Radio systems are not merely stand-alone repeaters and base stations, but integrated networks with multiple points of connectivity. Many of the system components are software-defined. System maintenance will need to be performed by an organization that has both the expert technical knowledge to support current technology, as well as the ability to be trained to support emerging technologies in a cost effective manner.

The RI State Police headquarters has been designated to serve as the system monitoring point for RISCON. System monitoring and network management equipment is currently being installed. The monitoring function is high level; where system failures will be reported directly to Motorola for resolution.

The system is at this time being maintained by local Motorola technical staff [Field Service Organization (FSO)] and monitored by its Customer Support Center (CSC) located in Schaumberg, IL. The CSC comprises a Call Center, a Network Monitoring Organization (NMO), and a Technical Support Organization (TSO). Additional support is provided by the Infrastructure Distribution Organization (IDO), which consists of the Parts Depot and Service Repair Depot Facility. Motorola is responsible for full maintenance during the warranty period.

However, this maintenance solution is counter to the current RISCON philosophy of providing a statewide radio network that is not reliant on commercial means of upkeep. Therefore, as previously mentioned, three positions have been created with the RISP to administer and maintain the RISCON system. These positions are funded out of the state's FY08 budget.

While overall system maintenance will be the responsibility of the RISP, individual subscriber units will still need to be maintained by the agencies that own them.

4.3 Standard Operating Procedures

As previously mentioned the RISCON project has been a bottom-up interoperability project. As the three pilot sites (Washington County, North Providence, and Providence) have gone online they have been beholden to their individual departmental SOPs. However with the RISCON system being adopted as a statewide interoperable solution, new NIMS-compliant SOPs governing system use need to be formulated. While this has currently been identified as a gap, the following timeline has been developed to address this issue:

- November 2007- January 2008- Identify and collect all public safety radio use SOPs
- January 2008- March 2008- Draft statewide NIMS-compliant SOP based on best practices identified from current SOPs
- March 2008- April 2008- Provide all public safety agencies within the state with draft SOP for review and comment
- April 2008-May 2008- Finalize and promulgate statewide SOPs

The CWG has been tasked to develop these SOPs and as previously mentioned, the SOPs will only govern the use of the RISCON system. Departments will still need to maintain their own individual use policies.

4.4 Training and Exercise Plan

As previously mentioned, RISCON is at present covering approximately 75 % of the State of Rhode Island. As the system has developed and expanded, agencies have begun to use RISCON as both a primary communications and interoperable communications solution. Training is a critical function so that users are able to understand the talk groups and functionality of their radios, as well as how a digital trunked system works.

In 2005, a group associated with RISCON traveled to Motorola in Schaumburg, IL, to receive training on the system and subscriber units. A second group traveled to Motorola in 2006, for the same purpose. A training program, formulated with the guidance of Motorola field trainers was produced and has been used since that time.

At present, as agencies join RISCON, training is offered. Training is conducted at the agency, with flexible schedules to accommodate all members and ensure that everyone is trained. Training includes an overview of RISCON, how digital trunking works, orientation with the talk groups that are specific to the agency, as well as the standardized talk groups for each county and statewide bank. Training includes an overview of both the portable and mobile radios and their functionality. Training for police, fire and EMS are conducted with a team approach, to include one trainer from law enforcement and one from fire/EMS so that cross-disciplinary training is achieved.

However, with the influx of subscriber units and the rapid expansion of the RISCON network, this is no longer a viable option. Therefore the CWG has decided to develop a train the trainer program. This program will draw from the training currently provided on the RISCON system. A timeline of completion is currently being developed.

The exercise of communications capabilities has also been identified as a priority in Rhode Island's HSEEP program. Once state-wide SOPs and training programs have been developed, RIEMA will conduct a statewide communications exercise to test capabilities and indentify gaps. A timeline for this project will be created once all PSIC-funded equipment, statewide SOPs, and statewide training is in place.

4.5 Usage

RISCON is currently used as the primary means of communications for a handful of municipal departments and state agencies. Furthermore, RISCON radios can be provided to response agencies in a short amount of time through a contract with Motorola. However, RISCON is not the only method used to achieve interoperability.

In incidents that either involves multi-agencies responding to one jurisdiction or incidents affecting multiple adjoining jurisdictions the use of Mobile Command Centers (MCC) are a viable option for achieving interoperability and command and control coordination. The state currently has a list of NIMS (National Incident Management System) resource typed MCCs with various capabilities (See Attachment 1.6 for a list). The Rhode Island Emergency Management Agency (RIEMA) operates a Type 1 MCC for deployment throughout the state. The RIEMA MCC has an onboard radio gateway for the purpose of RF interoperability. The ACU-1000 has the capability to program in radio frequencies onsite to achieve interoperability among responding jurisdictions. Furthermore, RIEMA has also pre-programmed frequencies for all public safety agencies within its borders including local and state agencies as well as the state regional teams and is equipped with multiple RISCON radios.

Besides having RF interoperability communications, the RIEMA MCC has onboard Wireless Internet through Satellite communications. The MCC can also deploy Tac-Packs (mobile satellite communications) to provide an additional level of communications from the MCC to local jurisdictions in the event of total RF infrastructure failure.

In addition to the RIEMA MCC, some local communities are equipped with MCCs and gateway devices. Other than the RIEMA Type I MCC, the City of Woonsocket operates the only other Type I MCC. The Woonsocket MCC can provide similar capabilities and can also be deployed throughout the state using the Southern New England Fire Emergency Assistance Plan which governs mutual aide for the fire service.

Besides the two Type I MCCs in the state, there are 4 other gateway devices attached to mobile units. The town of Bristol operates a Type II MCC with a gateway as well as the Town of Cumberland and East Greenwich which operate Type III MCCs. The last remaining state asset that operates a gateway device is the 13th Civil Support Team (CST) operated by the Rhode Island National Guard (RING). The 13th CST can be directed for use throughout the state to support any mission of significant importance.

Currently, the use of MCCs provides a level of interoperability needed for the management of incidents and events that involve multiple agencies on local, state, and/or federal level. One recent example was the Tall Ships event mentioned above that required the coordination of multiple federal, state, and local agencies over the duration of the event. During the event the state utilized both of its Type I MCCs and the activation of the 13th CST. The RIEMA MCC used as the Unified Command Post for the entire incident, while the Woonsocket MCC was utilized for the coordination of regional teams (Haz-Mat and DECON) which were positioned at various locations throughout the city. During the event the 800 MHz system was used and pre-programmed for the event. The 800 MHz system provided interoperability at the command level

for every participating agency, federal, state and local. Additionally, Newport Police utilized the RIEMA MCC as the unified command platform to communicate to local dispatch to coordinate it's on the ground assets such as traffic over its regular VHF channels. All together, communications among various agencies and on the ground assets using 800 MHz and standard VHF frequencies for agencies that have not transitioned to 800 primary worked well though the use of deployed MCCs and gateway devices. An after action review of the event is available through RIEMA by request.

Incidents and events requiring the use of MCCs in the unified command structure vary year to year. Events that happen yearly such as the Bristol 4th of July Parade, the oldest continuous parade in the country, require the need of pre-event planning and coordination between neighboring towns. Any incident that occurs which exceeds the resources of the municipality where the incident occurred can request assistance from other cities and towns through the use of statewide mutual aid compact with governs assistance for Fire and EMS. Additionally, regional HAZMAT, DECON, and MCI teams can also be utilized in the same fire mutual aid system. Typically in the state law enforcement mutual aid exists with bordering communities, but does not currently exist throughout the state.

Beyond the mutual aid system in place, a municipality can request assistance from the state through RIEMA. Once a request is received, state assets can be deployed such as the Disaster Medical Assistance Team (DMAT) and Urban Search and Rescue Team (USAR) to the municipality. If state resources are exhausted then federal assistance can be requested and coordinated through RIEMA. Incidents occur frequently that require the use of the statewide mutual aid system for fire and EMS. Larger incidents such as a mass casualty incident like the Station Nightclub Fire happen with less frequency. For all incidents and events interoperability is essential for effective coordination. In most cases were responsibility is shared among different agencies Unified Command is used and therefore interoperability is the method used and practiced for incident management.

5 Strategy

Rhode Island state and local public safety radio planners have long sought to create a statewide radio network to enhance communications in emergency situations. In addition to serving as a public safety network, this system could be used as a backup to other emergency networks used to connect relevant entities such as state emergency management systems, hospitals, laboratories, schools, E-911, dispatch centers, government administration departments and other potential "first responders." The state envisions the network to be robust enough to handle day-to-day communications among core state agencies in addition to the emergency traffic generated from other relevant state and local public safety organizations.

There are four core Rhode Island state agencies, each of which historically had its own statewide radio network:

- Department of Transportation (RIDOT)
- Rhode Island Public Transit Authority (RIPTA)
- Rhode Island State Police (RISP)
- Department of Environmental Management (RIDEM)

An effort coordinated by the Rhode Island Emergency Management Advisory Council, and funded with federal bioterrorism and homeland security grants, addressed and evaluated the existing planning provisions set forth for disaster preparedness within the state. This council is chaired by the Lieutenant Governor and is composed of elected officials, state department directors, private industry utility providers, media representatives, and members of the general public. The strategy of the Council is designed to integrate with the State's overall homeland security strategy as established by the Rhode Island Emergency Management Agency (RIEMA), the State Administrative Agency for State Homeland Security Grant Programs.

The Communications Work Group (CWG)
The Council created a committee called the Communications Working Group (CWG) when a post-September 11 weapons of mass destruction exercise revealed major emergency communications interoperability shortfalls. The CWG was tasked with creating a systems development plan for a shared land mobile radio (LMR) system for state and local first responders. The CWG requested assistance from the Public Safety Wireless Network (PSWN) Program3 to develop a broad based strategy and provide technical support to equip the state with the necessary tools to successfully pursue a shared, statewide LMR system that would be available to all state and local first responders.

Three recommendations resulted from the PSWN analysis:

[3] The PSWN initiative has now been merged with the SAFECOM program of the Department of Homeland Security.

- PSWN would assist the CWG with the drafting of a Request for Proposals (RFP) to solicit a wireless planning consultant to analyze relevant public safety organizations. The assistance would ensure that interoperability was a primary consideration and a prerequisite in the systems development process;
- PSWN would assist the CWG in developing and refining the various elements of a strategy for planning and implementing a shared, statewide system;
- PSWN would assist the CWG in reviewing the existing commercial vendor capabilities and developing recommendations to mitigate any potential interference that may result from the implementation of the new public safety communications system.

The RCC Consultants Statewide Communications Network Study - 2003

The State sought the services of a qualified public safety communications-engineering consultant to perform a system needs analysis and to provide the best options for the design of a statewide network as a result of the PSWN analysis. Said consultant, RCC Consultants, Inc., assessed the current state and local public safety, EMS and health radio systems as well as gave recommendations for future expansion plans.

The major findings of the RCC Consultants study were as follows:

- Radio planners in the state indicated that there were many diverse systems in use. This contributes to three [3] major communications problems: [1] lack of functional interoperability; [2] insufficient operating channels; and, [3] the need for improved signal coverage;
- Interoperability problems exist at all levels: on-scene and agency to agency communications; this is primarily due to insufficient or crowded channels and dissimilar frequency bands;
- There are over 7,000 subscribers [mobile and hand-held portables] in service statewide;
- A leased radio service from Nextel is widely used, with more than 2,000 public safety units statewide;
- Emergency medical services (EMS) utilize cellular telephones for hospital communications; the Department of Health (HEALTH) is currently recommissioning the HEAR [Hospital Emergency Administrative Radio] dedicated VHF radio system for ambulance to hospital communications;
- 75% of law enforcement and fire services use VHF channels, approximately 25% use UHF frequencies;
- All agencies report the need for enhanced signal coverage, especially for hand-held portables and inside of buildings;
- The law enforcement mobile data network CDPD backbone, leased from Verizon, will be discontinued in 2005 – there are currently over 750 users statewide.

Communications interoperability is defined in three ways:

- Day-to-day – routine public safety operations requiring backup from a neighboring department or a vehicle chase that crosses towns;
- Mutual-aid – joint and immediate responses to large scale incidents and natural disasters;
- Task force – collaboration for extended periods of time to address a particular problem.

Historically, Rhode Island failed at all three. All of the state's existing interagency land mobile radio (LMR) systems, Police Intercity, the Rhode Island State Police Emergency Radio Network (RISPERN), Washington County Police, Fire Intercity, and Civil Defense State Radio System (CDSTARS), were all VHF high band radios, not universally deployed and non-repeaterized, local systems that catered to a specific constituency. Most importantly, none provide the necessary platform for interoperability that is and will be required in the event of a large-scale disaster. Although, some task force collaborations have utilized NEXTEL technology to communicate, this commercial service cannot be relied upon as a stable full-scale solution to the lack of interoperability.

Rhode Island's grossly inadequate interoperability in the face of a disaster was abundantly clear on the night of February 20, 2003. A rapidly spreading fire in a crowded nightclub, located in one of the state's smallest communities, necessitated mutual aid from numerous police, fire, and emergency medical services. Almost 200 victims, many serious injured, had to be transported to hospitals throughout the state and to burn trauma units in Worcester and Boston.

Fire Intercity, the central dispatch for fire service, was tasked with coordinating numerous responding fire and rescue apparatus to the scene. None of these vehicles could "talk" to each other or to any of the other responders already at the location. Fire Intercity had to "relay" all information and directions to the units. The Life Star helicopter service called to transport the most seriously injured victims to the out-of-state hospitals was given conflicting information with regard to radio frequencies. The police on the scene could not communicate with anyone else. There was no radio communications with the area hospitals. Area trauma units were either contacted by land lines or cell phones. Many responding units seeking directions to the deadly inferno were actually talking to firefighters on the scene via cell phones.

In 2003 the state began deployment of the Rhode Island Tactical Emergency Network (RITERN). The RITERN system has provided municipal police and fire dispatchers as well as state agency first responders access to a single frequency on the Rhode Island Department of Transportation (RIDOT) 800 MHz radio network. The primary purpose of RITERN is to function as an "alert" system, allowing the Rhode Island Emergency Management Agency (RIEMA) and the Rhode Island State Police (RISP) to notify local agency officials of emergency situations or to notify agencies of the need to participate in other communications activities such as conference calls, etc. RITERN has also been extended to hospital dispatchers for the same limited purpose.

The placement of the RITERN equipment represented the first true interoperability among agencies. However, RITERN was only considered a short-term project. The CWG identified all police, fire and hospital dispatch centers in their initial planning and strategy sessions that were to receive base 800 MHz radios. No portable or mobile units were purchased.

The RITERN network utilized a talk group on the DOT 800 MHz trunked radio system. It allows any agency to communicate with another agency or all agencies. As stated previously, although RITERN provides a very important communications function, its usage is limited to emergency only or "alert" transmissions because of traffic loading issues on the DOT trunked network. However, state radio planners knew the RITERN network could be, and should be, the model to expand radio communications statewide.

RISCON Development
In 2003 the Narragansett Police Department applied for funding for the Washington County Interoperability Communications Project. Police agencies in the Washington County area had a thirty-year experience and foundation on which to build a multi-jurisdictional 800 MHz radio system on existing state-owned infrastructure that will encompassed all first responders. A radio system that was established in the 1970's with Law Enforcement Assistance Administration (LEAA) funding still existed in that area.

This proposal was submitted to the Department of Homeland Security Preparedness and Response Directorate. The project award was approximately $3,100,000 to implement a demonstration project that would bring a state-of-the-art interoperability solution to Washington County first responders. The project, eventually named RISCON, is now considered totally separate from RITERN, but a continuation of its aims.

The vision of the RISCON project is to have interoperable communications which will enable all public safety and first responder agencies to communicate within and across departmental and jurisdictional borders.

The major goals and objectives of the Project that are directly related to the technical deployment of the system include:

- Increasing the efficiency of response by enhancing and expanding the partnerships among first responders in the area;
- Enhancing interoperability to include all first responders by installing an 800 MHz trunked radio system compliant with APCO/NASTD/FED Project 25 transmission standards;
- Utilizing existing tower infrastructure whenever possible;
- Eliminating the reliance on commercial vendors for data transmission and establishing a state-owned medium to transmit data; and
- Expanding the network with similar systems statewide and with Connecticut and Massachusetts State Police.

All of the same goals and objectives would be achieved by an 800 MHz system in the central and northern areas of the state.

Through agency partnerships, establishment of a governance structure, innovative implementation, critical evaluation and foresight the project will stand as a model for replication in other areas of the state and throughout the nation. The RISCON system includes adoption of a Project 25 compliant 800 MHz trunked radio system well ahead of the 2013 target date for a 700 MHz solution.

The proposed interoperable radio system will be constructed on a 700/800 MHz Project 25 compliant trunking platform consisting of a main zone controller, a network simulcast subsystem and multiple repeaters located at various sites. Trunked radio is a method of making a group of radio channels available to several different groups through an electronic

switching system that is controlled by a computer. The essential components of the system are the repeater sites and the simulcast subsystem.

The simulcast central controller functions as the brain of the system and manages all the trunking functions. The simulcast software allows the designated system talk groups to broadcast over the antennas. Network management software will create the talk groups that are simply a programmable, internal identification transmitted each time the radio begins a broadcast. The dispatcher does not hear the identification, but the computer controlling the radio system recognizes it. Trunked systems automatically select an available channel from a pool of channels when users press the push-to-talk button on their mobile or portable radios. For routine transmissions, system users can create talk groups that can be reconfigured as needed during emergency situations.

In a repeater configuration all sites simulcast independently in a given geographical area. At each repeater site the controller functions are incorporated into the local site repeaters and manage all trunking functions. The repeaters are the individual channels that are assigned by the various users. One repeater is designated as the “control channel” and is not available for voice calls. The control channel sends and receives digital information that allows all radios to be in constant communication with the controller.

A centralized dispatch console will be utilized for radio traffic monitoring and management. Subscribers on the subsystem will consist of mobile and portable radios that can communicate over a wide coverage area.

A radio will be deployed in every authorized emergency vehicle in the participating communities. The Narragansett Police Department provided a beta site for other communities in Rhode Island and across the region who strive for a town-wide system of radio interoperability. Numerous non-traditional partnerships and in-kind support networks have worked to make this system a success.

Expansion/Enhancement of the RISCON system

An 800 MHz system in the central (Providence) and northern region (North Providence and adjacent communities) of Rhode Island continues the original plans started conceived by them and built off the best practices of the RITERN and Washington County systems.

5.1 Interoperability

Once the SCIP is fully implemented, the State of Rhode Island will provide all responders the ability to communicate over radio in multiple ways. Our primary means of interoperability will be the RISCON system which will link together all agencies involved in responding to a particular incident or event. The RISCON system will be built up to provide at least 97% mobile coverage and 95% portable coverage throughout the state. Additionally a sufficient number of both portable ITAC/ICALL repeaters and portable radios will be held in a strategic cache to achieve interoperability with federal agencies and provide back-up units for local, state, and tribal responders.

However, the State of Rhode Island recognizes the importance of redundancy with any system involved in emergency situations. Therefore, we will strive to continue to provide support for existing systems such as EMSTARS, RITERN, Police and Fire Intercity, Satellite phone systems, HCS and other data systems. Additionally, we will work to provide a redundant system to the RISCON network by leveraging existing technology within the state.

Data Interoperability
Rhode Island also recognizes the importance of data interoperability within the state. The original contract with Motorola, the sole bidder for the creation of our 800 MHz trunked and P-25 compliant system including pricing agreements for the latest upgrade of their system known as the 7.3 platform. The original sites were installed with the 7.1 platform software because the 7.3 build was not available at the time of installation. Once tested and available, Motorola installed the 7.3 platform pursuant to our contact. The installation of the upgrade was completed in Spring 2007 and will continue to build out with the system.

One of the primary interests for the purchase of the 7.3 platform was the capability of voice and data transfer on the same system. There are 6 and/or 10 channels functioning across the network depending on site position. In all cases there is one frequency dedicated to a “control channel.” We stand ready and capable to dedicate another channel to carry data across the system concurrently with voice on the other channels. This provides state-of-the-art capabilities with a goal of migrating data transfer to our proprietary network and divesting dependence on commercial networks which may be less secure. The advantage of owning the network is the elimination of monthly fees associated with air-card costs for each mobile data terminal. A short-term limitation is the relatively narrow bandwidth which results in slower data speed. A single 800 MHz channel is only capable of about 9600 baud.

The future of data transfer on our network will be using the 7.3 platform with 700 MHz channels that are used for data. The wider bandwidth and the capability to use multiple contiguous channels will provide the effective “broadband” capacity necessary for large files and video streaming.

5.2 Mission

The mission of the SCIP is to improve the State of Rhode Island's knowledge about interoperability and available technologies as well as improving our ability to communicate voice and data among federal, state, tribal and local agencies and organizations, ensuring that the network can be pressed into effective service to reach all necessary agencies in an emergency.

5.3 Goals, Objectives, and Initiatives

Rhode Island's strategic initiatives, goals and objectives will work to address the mission of improving the state's ability to communication over voice and data. The state will look to expand the RISCON system through the build out of infrastructure and the purchase of subscriber units for first responders. We will also develop a strategic technology reserve consisting of portable radios and infrastructure to supplement first responder radios and to serve as an equipment back up in the case of failure.

However, certain long-term initiatives much be achieved. As discussed previously in this plan, a secondary statewide interoperability system needs to be created to serve as a redundant back up for RISCON. This can be achieved through leveraging existing disparate technology and frequencies and linking them together under state governance.

Additionally, data interoperability must continue to be built out. The RISCON system has just been upgraded to the latest 7.3 data sharing platform from Motorola, but there are insufficient operating channels to provide true broadband capabilities. The CWG must identify future funding vehicles to increase and expand this capability.

The CWG, in conjunction with RIEMA, and other local, state, tribal and federal partners have developed the following goals and objectives to disperse PSIC funds as well as other future funds and lay the roadwork for future statewide interoperability:

Goal 1:

Provide public safety agencies with multiple means of interoperable radio communications for both voice and data communications that can be leveraged for day to day use and at incidents or events.

Objectives for Goal 1:

- Continue to leverage and build out the RISCON System
- Provide public safety agencies with radios to achieve interoperability
- Indentify, though CASM use, available disparate technologies within the state
- Leverage disparate technologies within the state to create secondary statewide communications system
- Add additional channels to increase data interoperability

Initiatives for Goal 1:

- Expand current infrastructure to create additional coverage in line with strategic needs and identified gaps
- Provide a portable RISCON radio to every frontline fire and police apparatus as well as licensed EMS services that serves the State of Rhode Island
- Provide a portable RISCON radio to every Local Emergency Management Director

- Provide a portable RISCON radio to every Tribal Police vehicle
- Provide a portable RISCON radio to all licensed hospital emergency departments
- Provide a portable RISCON radio to each regional response team (including USAR and DMAT)
- Provide a portable RISCON radio to all colleges and universities
- Provide a portable RISCON radio to applicable state response agencies
- Add additional channels for the Providence Metropolitan area to support concentrated load on the system

Timeline for Goal 1:

- November 2008- August 2008
    - Complete CASM inventory of all current communications systems within the state
    - Distribute PSIC-funded subscriber units to first responders
    - Install additional channels for the Providence Metropolitan area.
- August 2008- January 2009
    - Study gaps within the RISCON system and install PSIC-funded infrastructure to address those gaps
    - Formulate plan for secondary statewide communications system based on findings from CASM study
- January 2009- Date to be determined
    - Create a secondary statewide communications system
    - Add channels to the RISCON system to build out data capabilities

Goal 2

Provide a supply of communications equipment that will allow for the integration of multiple disparate systems or will provide a quick back up to current capabilities, should issues arise.

Objectives for Goal 2

- Indentify, though CASM use, available disparate technologies within the state
- Create a reserve of equipment to quickly integrate non-RISCON agencies within the system or to quickly supplement current capabilities
- Allow for the prepositioning of communications equipment in advance of an anticipated incident or event

Initiatives for Goal 2

- Create a strategic cache of radios for use at large scale incidents and events

- Create a strategic cache of portable infrastructure to support ITAC and ICALL channels in the event of a disaster
- Create redundant regional shelter communication capabilities through the creation of shelter go-kits and the expansion of state EOC amateur radio capability

Timeline for Goal 2

- November 2008- August 2008
    - Complete CASM inventory of all current communications systems within the state
    - Purchase all PSIC-funded equipment including caches of radios and portable towers as well as amateur radio capabilities
- August 2008-December 2008
    - Re-program all statewide communications gateways with the information provided from the CASM survey to provide the on-scene capability to connect disparate radios

Goal 3

Create statewide SOPs and training that are based on NIMS-compliance requirements and identified best practices

Objectives for Goal 3

- Ensure all first responders and support staff are trained in NIMS
- Develop a repository for all communications training and SOPs

Initiative for Goal 3

- Identify and collect all current SOPs governing communications
- Identify all communications training currently offered throughout the state
- Develop statewide communications SOPs and training based on best practices

Timeline for Goal 3

- November 2007- January 2008
    - Identify and collect all public safety radio use SOPs
    - Identify all communications training being offered and collect training documents
- January 2008- March 2008
    - Draft statewide NIMS-compliant SOP based on best practices identified from current SOPs

- Draft statewide NIMS-compliant communications training

- March 2008- April 2008
  - Provide all public safety agencies within the state with draft SOP for review and comment

- April 2008-May 2008
  - Finalize and promulgate statewide SOPs
  - Begin conducting training on the RISCON system

5.4 National Incident Management System (NIMS) Compliance

All plans and documents in the state, including this one, are developed on the basis of NIMS requirements and guidelines. To that end the Governor that the State of Rhode Island signed Executive Order 4-10 on December 9, 2004 which requires all individuals with emergency response and planning duties to adhere to the use of NIMS.

Furthermore, as previously discussed in Goal 3 (Section 5.3), the statewide SOPs and training to be developed for RISCON system will be based upon NIMS compliance. Additionally, RIEMA conducts bi-monthly ICS training to ensure that all first responders have the opportunity to and do become trained in NIMS.

5.5 Review and Update Process

The Communications Working Group and RIEMA will continuously review this SCIP before and after all exercises, incidents, and events for compliance and validity. This plan will also be reviewed annually at the first CWG meeting in the month of July to address any necessary items. Changes and updates to the plan shall be submitted to DHS, as required and promulgated to those affected by the plan.

In addition, the Director of Emergency Management will host a policy level summit on a yearly basis to ensure that all decision makers are informed and educated about interoperable communications goals and objectives. The hope of this summit is to assist in establishing future funding priorities and to address any roadblock to interoperability.

6 Implementation

The creation of this plan comes at an important crossroads for interoperability in Rhode Island. As previously mentioned there have been multiple disparate technologies used for interoperability such as Fire and Police Intercity and the hospital Nextel system. To begin to address this issue, the Washington County Project created an advanced 800 MHz radio system as a pilot project. This project has now evolved into the RISCON system.

Over the four years the RISCON project has been developing, significant political will has been generated to support it. Governor Carcieri regularly sends a representative from his office to serve on the Communications Working Group and the General Assembly included three positions in the FY08 state budget to support the RISCON system. Additionally, local, state, tribal, and federal public safety agencies have shown their support for the system through various letters attached to this document. (See Attachment 3)

Until the RISCON support positions are filled with the RISP, RIEMA and the CWG will take the lead on ensuring the implementation of this plan. The primary POC for this plan as listed in Section 2.3 will temporarily make sure that all individuals complete their implementation responsibilities, until the State interoperability positions are filled. Once the positions are filled, those individuals will work alongside both RIEMA and the CWG to ensure implementation and take over as the primary POC.

The milestones for implementation are discussed above in Section 5.3. Rhode Island's ability to achieve those goals and objectives within the timelines presented will serve as a marker for its ability to implement this statewide interoperability project. Critical success factors will be the ability to develop a viable training program, a NIMS-compliant SOP, and to deliver and support a true statewide interoperable communications system that is capable of both voice and data communications.

7 Funding

To date, various federal grants and local dollars totaling approximately $14.5 million have been invested in RISCON. While RISCON has overcome many obstacles in implementing this critical communications infrastructure, the issue of funding has been a constant impediment to completion; however, Rhode Island has made great strides in the creation of a statewide interoperable communications system.

Many local jurisdictions have opted to use their grant funds to purchase 800 MHz equipment using the State Homeland Security Grant Program, the Law Enforcement Terrorism Prevention Program, and the Buffer Zone Protection Program. The State has also utilized these grant programs to enhance the system.

These local agencies had foresight to see the path that the State was taking to create a statewide interoperable communication network. Several agencies have already gone primary on this system and others have made it their secondary communications network.

The PSIC grant has provided Rhode Island with a vehicle to speed up the enhancement, development, and use of the RISCON system. While the PSIC grant has provided funding, the state has also stepped forward to provide system funding in the FY08 budget as already outlined in Section 2.3. However, with all of the funding mechanisms currently provided to this project, there is still much to be achieved. The CWG, in conjunction with RIEMA, will continue to aggressively identify funding sources for future system enhancement and to further our goals enumerated in Section 5.3.

Future funds must be identified to continue to build out the RISCON system and to begin work on a secondary system. Rhode Island recognizes the necessity of reliable, interoperable public safety communications and will therefore work to establish steady streams of funding to address the needs of first responders.

8 Close

Overall, the State of Rhode Island is well positioned to implement this Statewide Communications Interoperability Plan. The Communications Working Group has been working to develop RISCON into a true statewide interoperability solution. Through this plan and the PSIC funding, it will allow for accelerated built out and realization of this goal. However, once RISCON is fully operational as a statewide interoperability solution, we cannot stop there and must work to leverage existing infrastructure to provide a redundant system as well as investigate new technologies.

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Statewide Communications Interoperability Plan

Attachment 1:

ORGANIZATIONAL LISTS AND CHARTS

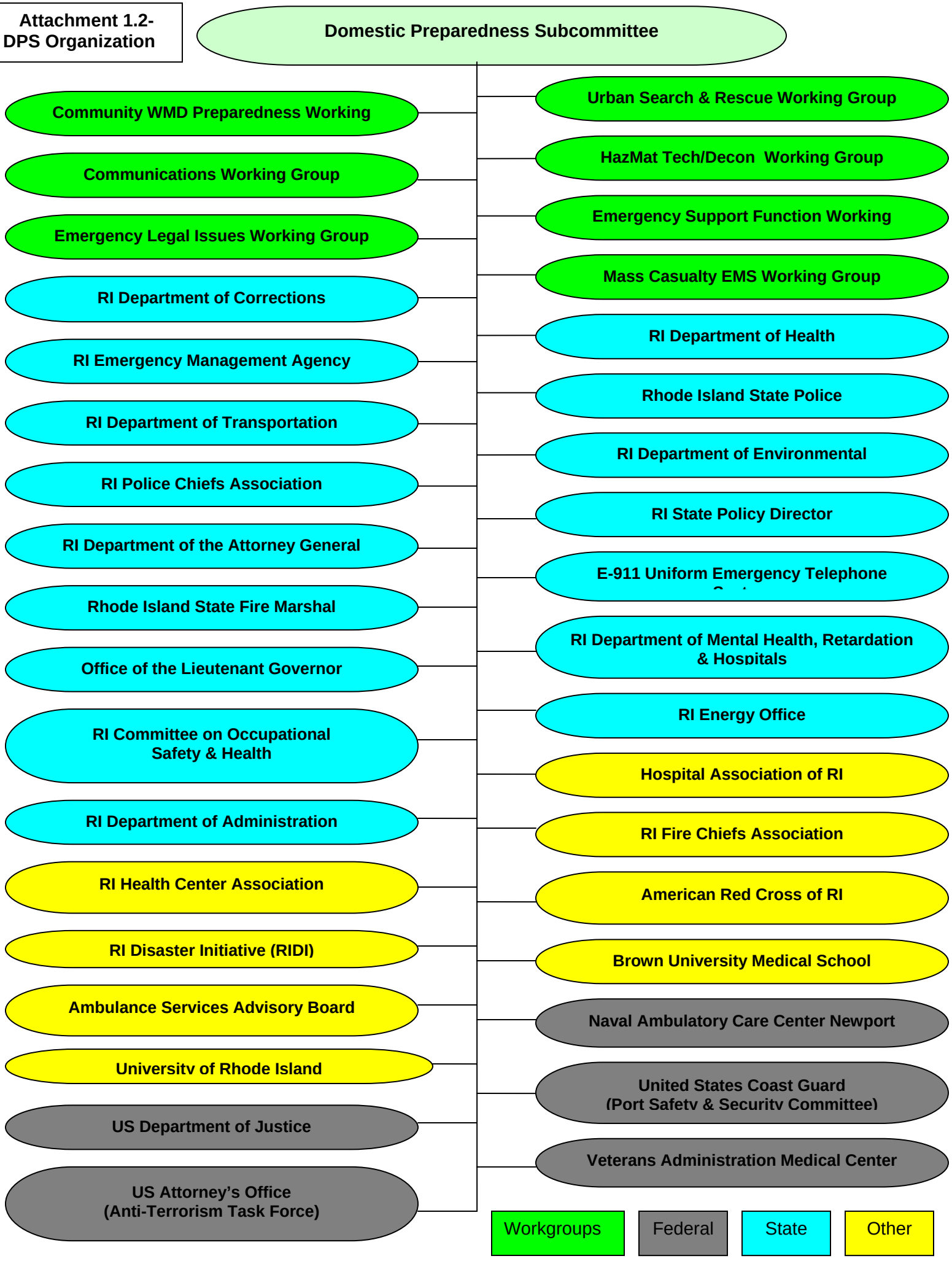
Attachment 1.1- Statute Creating the Emergency Management Advisory Council

TITLE 30
Military Affairs and Defense, CHAPTER 30-15
Emergency Management, SECTION 30-15-6

§ 30-15-6 Advisory council. – (a) There is hereby created the Rhode Island emergency management advisory council (hereinafter in this chapter called the "council"). The council will consist of thirty-one (31) members as follows:
(1) Sixteen (16) ex officio members as follows:
(i) The lieutenant governor;
(ii) The adjutant general;
(iii) The director of administration/statewide planning;
(iv) The director of health;
(v) The director of transportation;
(vi) The director of human services;
(vii) The superintendent of state police;
(viii) The public utilities administrator;
(ix) The director of the department of environmental management;
(x) The director of mental health, retardation, and hospitals;
(xi) The director of elderly affairs;
(xii) The chairperson of the state water resources board;
(xiii) The chairperson of the governor's commission on disabilities;
(xiv) The chairperson of the Rhode Island public transit authority;
(xv) The executive director of the coastal resources management council or his or her designee;
(xvi) The executive director of the American Red Cross, Rhode Island chapter; and
(2) Fifteen (15) members appointed by and serving at the pleasure of the governor, as follows:
(i) Two (2) members of the senate, not more than one of whom shall be from the same political party;
(ii) Two (2) members of the house of representatives, not more than one of whom shall be from the same political party;
(iii) One representative of the electric industry;
(iv) One representative of the gas industry;
(v) One representative of the telephone industry;
(vi) The executive director of the Rhode Island petroleum association or other similarly situated person;
(vii) Two (2) representatives of the general public, one who shall have expertise in disaster preparedness;
(viii) One representative of the Rhode Island league of cities and towns;
(ix) One representative of E-911, the uniform emergency telephone authority;
(x) One representative of the media;
(xi) One representative of the water supply industry;
(xii) One representative of the health care industry; and
(xiii) One representative of the Rhode Island firefighters association.
(b) It shall be the duty of the council to advise the governor and the adjutant general on all matters pertaining to disaster preparedness. The lieutenant governor shall serve as chairperson of the council and the adjutant general shall serve as vice-chairperson. In providing advice to the governor and the adjutant general, the council shall, among other matters reasonably related to their authority, do the following:

(1) Establish a regular meeting schedule and form subcommittees as may be appropriate;
(2) Review emergency management plans and other matters as may be acted upon or otherwise provided for in this chapter;
(3) Establish priorities and goals on emergency management matters on an annual basis;
(4) Study emergency management plans in conjunction with the adjutant general, and otherwise conduct such other studies as may be deemed appropriate;
(5) Review the coordination of the state's emergency management programs with appropriate authorized agencies and conduct studies on the programs as may be necessary;
(6) Review the plans and operations of the various cities and towns in disaster preparedness in conjunction with the director and his or her office as required or necessary; and
(7) [Deleted by P.L. 2000, ch. 170, § 2];
(8) Provide an annual report on its activities in conjunction with the adjutant general.

Attachment 1.2-
DPS Organization



Attachment 1.3- The Communications Working Group (CWG)

Member	Organization
Brian Glancy, *Chairman*	**Rhode Island State Police**
Rick Andreano	**Rhode Island Emergency Management Agency/ Rhode Island Citizen's Corps Council**
Thomas Kilday	**Rhode Island Emergency Management Agency**
Chief James Taylor	**Rhode Island Fire Chief's Association/ Providence Fire Department**
Chief Robert Lloyd	**Rhode Island Fire Chief's Association/ Tiverton Fire Department**
Chief Robert Seltzer	**Rhode Island Fire Chief's Association/ Central Coventry Fire Department**
Colonel Russell Serpa	**Rhode Island Police Chief's Association/ Bristol Police Department**
Chief Andrew Baynes	**Rhode Island Local EMA Director's Association/ Johnston Fire Department**
Joe McGarry	**Providence Communications**
Deputy Chief Dean Hoxsie	**Narragansett Police Department**
J. David Smith	**Roger Williams University/RI College and University Public Safety Director's Association**
Mary Gelardi	**Rhode Island Department of Information Technology/Department of Transportation**
Bob Childs	**Rhode Island Department of Health**
Ed Scott	**Rhode Island Public Transit Authority**
Michael Scanlon	**Rhode Island Department of Environmental Management**
Tom Campbell	**Rhode Island Department of Environmental Management**
Gina Caruolo	**Rhode Island Department of Corrections**
Paul Budzenski	**Rhode Island Department of Corrections**
Klaus O'Neal	**Rhode Island Governor's Office**
Ray LaBelle	**Rhode Island E-911**
Thomas Crotty	**Rhode Island State Police**
Lt. Pamela Icart	**Rhode Island State Police**
Stuart Freiman	**Rhode Island Economic Development Corporation**
Major Mike Teterault	**Rhode Island National Guard**
Erin Lambie	**United States Coast Guard, Sector Southeast New England**
Sergeant Antone Monroe	**Narragansett Indian Tribal Police Department**
Daniel Beardsley	**Rhode Island League of Cities and Towns**

Attachment 1.4- Metropolitan Providence UASI Stakeholders

Agency Name	Primary Jurisdiction	Discipline
LOCAL		
Providence Police Department	City of Providence	Police
Providence Fire Department	City of Providence	Fire/EMS
Providence Communications Department	City of Providence	Dispatch
Providence Emergency Management Agency	City of Providence	EMA
Providence Public Works	City of Providence	Public Works
Providence Water Supply Board	State of Rhode Island	Water Supply
Providence Parks Department	City of Providence	Parks
Providence Housing Authority	City of Providence	Housing
Pawtucket Police Department	City of Pawtucket	Police
Pawtucket Fire Department	City of Pawtucket	Fire/EMS
Pawtucket Emergency Management Agency	City of Pawtucket	EMA
Pawtucket Public Works	City of Pawtucket	Public Works
Central Falls Police Department	City of Central Falls	Police
Central Falls Fire Department	City of Central Falls	Fire/EMS
Central Falls Emergency Management Agency	City of Central Falls	EMA
Central Falls Public Works	City of Central Falls	Public Works
West Warwick Police Department	Town of West Warwick	Police
West Warwick Fire Department	Town of West Warwick	Fire/EMS
West Warwick Emergency Management Agency	Town of West Warwick	EMA
West Warwick Public Works	Town of West Warwick	Public Works
East Providence Police Department	City of East Providence	Police
East Providence Fire Department	City of East Providence	Fire/EMS

Agency Name	Primary Jurisdiction	Discipline
East Providence Emergency Management Agency	City of East Providence	EMA
East Providence Public Works	City of East Providence	Public Works
Cranston Police Department	City of Cranston	Police
Cranston Fire Department	City of Cranston	Fire/EMS
Cranston Emergency Management Agency	City of Cranston	EMA
Cranston Public Works	City of Cranston	Public Works
Warwick Police Department	City of Warwick	Police
Warwick Fire Department	City of Warwick	Fire/EMS
Warwick Emergency Management Agency	City of Warwick	EMA
Warwick Public Works	City of Warwick	Public Works
North Providence Police Department	Town of North Providence	Police
North Providence Fire Department	Town of North Providence	Fire/EMS
North Providence Emergency Management Agency	Town of North Providence	EMA
North Providence Public Works	Town of North Providence	Public Works
Johnston Police Department	Town of Johnston	Police
Johnston Fire Department	Town of Johnston	Fire/EMS
Johnston Emergency Management Agency	Town of Johnston	EMA
Johnston Public Works	Town of Johnston	Public Works
STATE		
Rhode Island State Police	State of Rhode Island	Police
Rhode Island Fire Marshal's Office	State of Rhode Island	Fire
Rhode Island Emergency Management Agency	State of Rhode Island	EMA
Rhode Island Department of Transportation	State of Rhode Island	Public Works
Rhode Island Department of Environmental Management	State of Rhode Island	Police
Rhode Island Department of Health	State of Rhode Island	Health
Rhode Island Department of	State of Rhode Island	Corrections

Agency Name	Primary Jurisdiction	Discipline
Corrections		
Rhode Island Sheriff's Department	State of Rhode Island	Corrections
Rhode Island Airport Corporation	State of Rhode Island	
Rhode Island Capitol Police	State of Rhode Island	Police
Rhode Island National Guard	State of Rhode Island	Military
Rhode Island Public Transit Authority	State of Rhode Island	Transportation
NONPROFIT		
Rhode Island Red Cross	State of Rhode Island	Mass care
Rhode Island Salvation Army	State of Rhode Island	Mass care
Rhode Island Hospital		Medical
Women and Infants Hospital		Medical
Hasbro Children's Hospital		Medical
Roger Williams Hospital		Medical
Miriam Hospital		Medical
Veteran's Administration Hospital		Medical
Pawtucket Memorial Hospital		Medical
Fatima Hospital		Medical
St. Joseph's Hospital		Medical
Kent County Hospital		Medical
Butler Hospital		Medical
Bradley Hospital		Medical
Notre Dame Hospital		Medical
FEDERAL		
Wyatt Detention Facility	US Government	Corrections
FBI		
Coast Guard		
US Marshal's		
Secret Service		
Transportation Safety Authority		
FAA		
AMTRAK Police		Police

Agency Name	Primary Jurisdiction	Discipline
DEA		
ATF		
PRIVATE SECTOR		
Providence and Worcester Railroad		
SATERN Amateur Radio Group	City of Providence	Communications
ARIES Amateur Radio Group	State of Rhode Island	Communications

Attachment 1.5- All Response Agencies within Rhode Island

Barrington		
	Barrinton PD	
	Barrington FD	*Muni.*
	Hampton Meadows FD	*Vol.*
Bristol		
	Bristol PD	
	Bristol FD	*Vol.*
Burrillville		
	Burrillville PD	
	Harissville	*Dist.*
	Nasonville	*Dist.*
	Oakland/Mapleville	*Dist.*
	Pascoag	*Dist.*
	Wallum Lake	*Vol.*
Central Falls		
	Central Falls PD	
	Central Falls FD	*Muni.*
Charlestown		
	Charlestown PD	
	Charlestown Ambulance	
	Charlestown FD	*Dist.*
	Quonochontuag Central Beach	*Dist.*
	Shady Harbor	*Dist.*
Coventry		
	Coventry PD	
	Central Coventry	*Dist.*
	Coventry FD	*Dist.*
	Hopkins Hill	*Dist.*
	Western Coventry	*Dist.*
Cranston		
	Cranston PD	
	Cranston FD	*Muni.*
Cumberland		
	Cumberland PD	
	Cumberland Rescue Service	
	Cumberland FD	*Dist.*
	Cumberland Hill	*Dist.*
	North Cumberland	*Dist.*

	Valley Falls	*Dist.*
East Greenwich		
	East Greenwich PD	
	East Greenwich FD	*Dist.*
East Providence		
	East Providence PD	
	East Providence FD	*Muni.*
Exeter		
	Exeter FD	*Dist.*
	Exeter Rescue Corps	
Foster		
	Foster PD	
	Foster Ambulance Corps	
	Foster Center	*Vol.*
	Moosup Valley	*Vol.*
	South Foster	*Vol.*
Glocester		
	Glocester PD	
	Chepachet	*Dist.*
	Harmony	*Dist.*
	West Glocester	*Dist.*
Hopkinton		
	Hopkinton PD	
	Ashaway Ambulance	
	Ashaway	*Dist.*
	Hope Valley Ambulance	
	Hope Valley/Wyoming	*Dist.*
Jamestown		
	Jamestown PD	
	Jamestown EMS	
	Jamestown FD	*Vol.*
Johnston		
	Johnston PD	
	Johnston FD	*Muni.*
Lincoln		
	Lincoln PD	
	Lincoln Rescue	
	Albion	*Dist.*
	Lime Rock	*Dist.*
	Lonsdale	*Dist.*

	Manville	*Dist.*
	Quinville	*Dist.*
	Saylesville	*Dist.*
Little Compton		
	Little Compton PD	
	Little Compton FD	*Muni.*
Middletown		
	Middletown PD	
	Middletown FD	*Muni.*
Narragansett		
	Narragansett PD	
	Narragansett FD	*Muni.*
New Shoreham		
	New Shoreham PD	
	Block Island Rescue Squad	
	Block Island FD	*Vol.*
Newport		
	Newport PD	
	Newport FD	*Muni.*
North Kingstown		
	North Kingstown PD	
	North Kingstown FD	*Muni.*
North Providence		
	North Providence PD	
	North Providence FD	*Muni.*
North Smithfield		
	North Smithfield PD	
	North Smithfield Fire & Rescue	
Pawtucket		
	Pawtucket PD	
	Pawtucket FD	*Muni.*
Portsmouth		
	Portsmouth PD	
	Prudence Island FD	*Vol.*
	Portsmouth FD	*Muni.*
Providence		
	Providence PD	
	Providence FD	*Muni.*

Richmond		
	Richmond PD	
	Richmond/Carolina	*Dist.*
Scituate		
	Scituate PD	
	Scituate Ambulance Corps	
	Chopmist Hill	*Vol.*
	Hope Jackson	*Vol.*
	North Scituate	*Vol.*
	Potterville	*Vol.*
Smithfield		
	Smithfield PD	
	Smithfield FD	*Muni.*
South Kingstown		
	South Kingstown PD	
	South Kingstown EMS	
	Indian Lake Shores	*Dist.*
	Kingston	*Dist.*
	Union	*Dist.*
Tiverton		
	Tiverton PD	
	Tiverton FD	*Muni.*
	North Tiverton	*Dist.*
Warren		
	Warren PD	
	Warren FD	*Vol.*
Warwick		
	Warwick PD	
	Warwick FD	*Muni.*
West Greenwich		
	West Greenwich PD	
	Hianloland	*Vol.*
	Lake Mishnook	*Vol.*
	West Greenwich Rescue	
	West Greenwich FD	*Vol.*
West Warwick		
	West Warwick PD	
	West Warwick FD	*Muni.*
Westerly		

	Westerly PD	
	Bradford	*Dist.*
	Dunn's Corner	*Dist.*
	Misquamicut	*Dist.*
	Shelter Harbor	*Dist.*
	Watch Hill	*Dist.*
	Weekapaug	*Dist.*
	Westerly Ambulance Corps	
	Westerly FD	*Dist.*
Woonsocket		
	Woonsocket PD	
	Woonsocket FD	*Muni.*

	State Agencies	
	Medical Examiner's Office	
	RI Department of Corrections	
	T.F. Green Fire Dept.	
	T.F. Green Police Dept.	
	RI DEM	
	RI Department of Health	
	RI Sheriffs/Capital Police	
	RI State Fire Marshal	
	RI State Police	
	RI Emergency Management Agency	
	Other	
	Narragansett Indian Tribe	
	RI DMAT	
	RI USAR	
	Yagoo Valley SAR	
	Non-Municipal EMS	
	Acess Ambulance	
	Advanced Medical Transport	
	Alert Ambulance Service	
	American Ambulance Service	
	Blackstone Fire Dept.	
	Brown University EMS	
	Bryant University EMS	
	Coastline Ambulance Services	
	General Dynamics	

	Intercity Ambulance Service	
	Lifeguard EMS	
	Lifestar EMS	
	Med Care Ambulance	
	Med Star Ambulance	
	Med Tech Ambulance	
	Naval Station Fire Dept.	
	New England Ambulance	
	Paramedic Systems	
	RI DMAT	
	RI USAR	
	RISD Public Safety	
	Roger Williams Mobile Care	
	Roger Williams Univ EMS	
	Universal Ambulance Service	
	University of RI EMS	
	Yawgoo Valley SAR	

Attachment 1.6- List of MCCS and Specialty Vehicles in the State

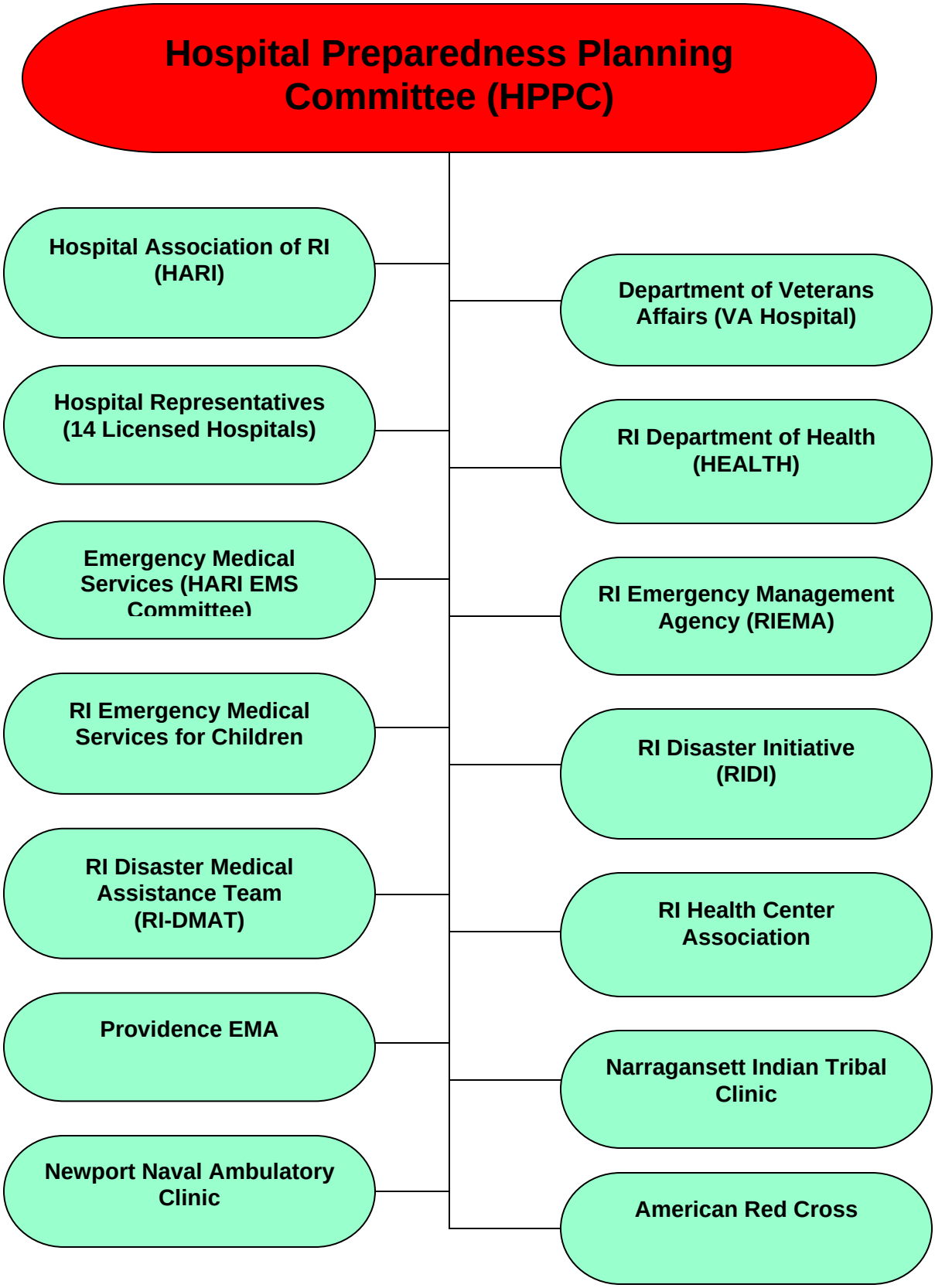
(401)

Type I	RI Emergency Management Agency	946-9996	Gateway	Satellite Dish
Type I	Woonsocket Fire	766-1224	Gateway	Satellite Dish
Type II	Bristol Police	253-6900	Gateway	
Type III	Burrillville Police	568-2533		
Type III	Charlestown Police & SWAT Van	364-1212		
Type III	Cumberland Police	727-7411	Gateway	
Type III	East Greenwich Police	884-2244	Gateway	
Type III	Johnston Police	231-8100		
Type III	Middletown Police	846-1144		
Type III	Newport Police & SWAT Van	847-1306		
Type III	North Providence Police	231-4533		
Type III	Pawtucket Police	726-3911		
Type III	Providence Department of Communications	272-1111		
Type III	RI State Police	444-1111		
Type III	Westerly Police & SWAT Van	596-2022		
Type IV	RI Emergency Management Agency 1	946-9996		
Type IV	RI Emergency Management Agency 2	946-9996		

Mobile Communications Center (Mobile Emergency Operations Center [EOC]; Mobile Command Center; Continuity of Operations Vehicle)

A vehicle that serves as a self-sustaining mobile operations center capable of operating in an environment with little to no basic services, facilitating communications between multiple entities using an array of fixed and/or wireless communications equipment, providing appropriate work space for routine support functions, and providing basic services for personnel in short-term or long-term deployments.

Attachment 1.7- Hospital Preparedness Planning Committee



Attachment 1.8- State Licensed Hospitals in Rhode Island

Hospital	Location
Bradley Hospital**	**East Providence**
Butler Hospital**	**Providence**
Kent Count Hospital	**Warwick**
Landmark Hospital	**Woonsocket**
Memorial Hospital	**Pawtucket**
Miriam Hospital	**Providence**
Newport Hospital	**Newport**
Rhode Island Hospital	**Providence**
Roger Williams Hospital	**Providence**
Eleanor Slater Hospital**	**Cranston**
South County Hospital	**South Kingstown**
St. Joseph's Hospital	**North Providence**
Westerly Hospital	**Westerly**
Woman and Infants	**Providence**

** Denotes that this facility does not have a licensed Emergency Department

Attachment 1.9- RI Colleges and Universities

Name of Institution	Location(s)
Brown University	Providence
Bryant University	Smithfield
Community College of Rhode Island	Warwick, Lincoln, Newport
Gibbs College	Cranston
Johnson and Wales University	Providence, Cranston
New England Institute of Technology	Warwick
Providence College	Providence
Rhode Island College	Providence
Rhode Island School of Design	Providence
Roger Williams University	Bristol, Portsmouth, Providence
Salve Regina University	Newport, Pawtucket
University of Rhode Island	Kingston, Narragansett, Providence, West Greenwich
Zion Bible Institute	Barrington

Attachment 1.10- RI ARES Organization Chart

Rhode Island ARES Field Appointments ~ 2008~		
Section Emergency Coordinator	Rick Andreano, K3OQH	k3oqh@cox.net
District **E**mergency **C**oordinator – **North Zone**	William Ewan,W1VH	w1vh@cox.net
Emergency **C**oordinator – **Woonsocket**	Norman Thibault, W1AUT	w1aut@aol.com
District **E**mergency **C**oordinator – **Central Zone**	(vacant)	
Emergency **C**oordinator – **West Warwick**	John Clarke, W1DBR	
District **E**mergency **C**oordinator – **Metro Zone**	(vacant)	
District **E**mergency **C**oordinator - **East Zone**	(vacant)	
Emergency **C**oordinator - **Newport/Middletown**	Mike Cullen, K1NPT	cullen@cox.net
Emergency **C**oordinator – **Tiverton/LC**	Jamie Tarricone, KA1JF	ka1jf@arrl.net
District **E**mergency **C**oordinator **– South Zone**	John Zabriskie, W1JPZ	RI_ARES_Training@W1JPZ.NET
Emergency **C**oordinator **– North Kingstown**	Mark Titterington, W1EOF	w1eof@hamnutz.com
Emergency **C**oordinator **- Hopkinton**	Peter Harrison, AA1PL	
Emergency **C**oordinator **– Charlestown/SK**	John Lindholm, W1XX	
Emergency **C**oordinator **– Westerly**	Jim Creamer, KB1MAO	
Training Officer	John Zabriskie, W1JPZ	RI_ARES_Training@W1JPZ.NET
Digital Communications	Sean Brennan, KE1AB	ke1ab@arrl.net
Assistant **E**mergency **C**oordinator - **RED CROSS**	Joanne Ramsey, KB1KWJ	
Emergency **C**oordinator - **RI EMA**	Duffy Egan, KB1EJB	
Emergency **C**oordinator - **SATERN**		
Emergency **C**oordinator - **SkyWarn**	Martin Mendelson, N1JMA	n1jma@mailexcite.com

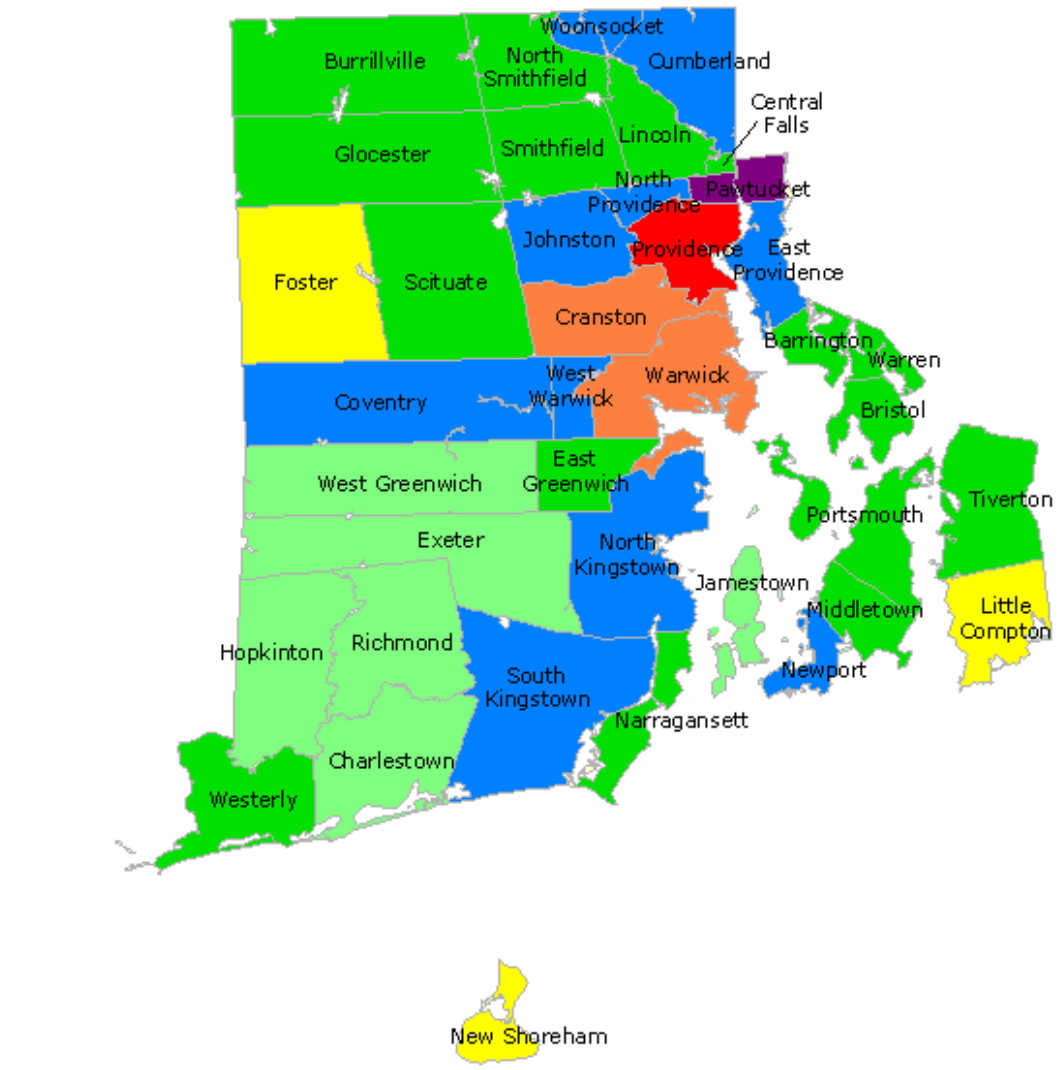
Statewide Communications Interoperability Plan

Attachment 2:

MAPS AND DIAGRAMS

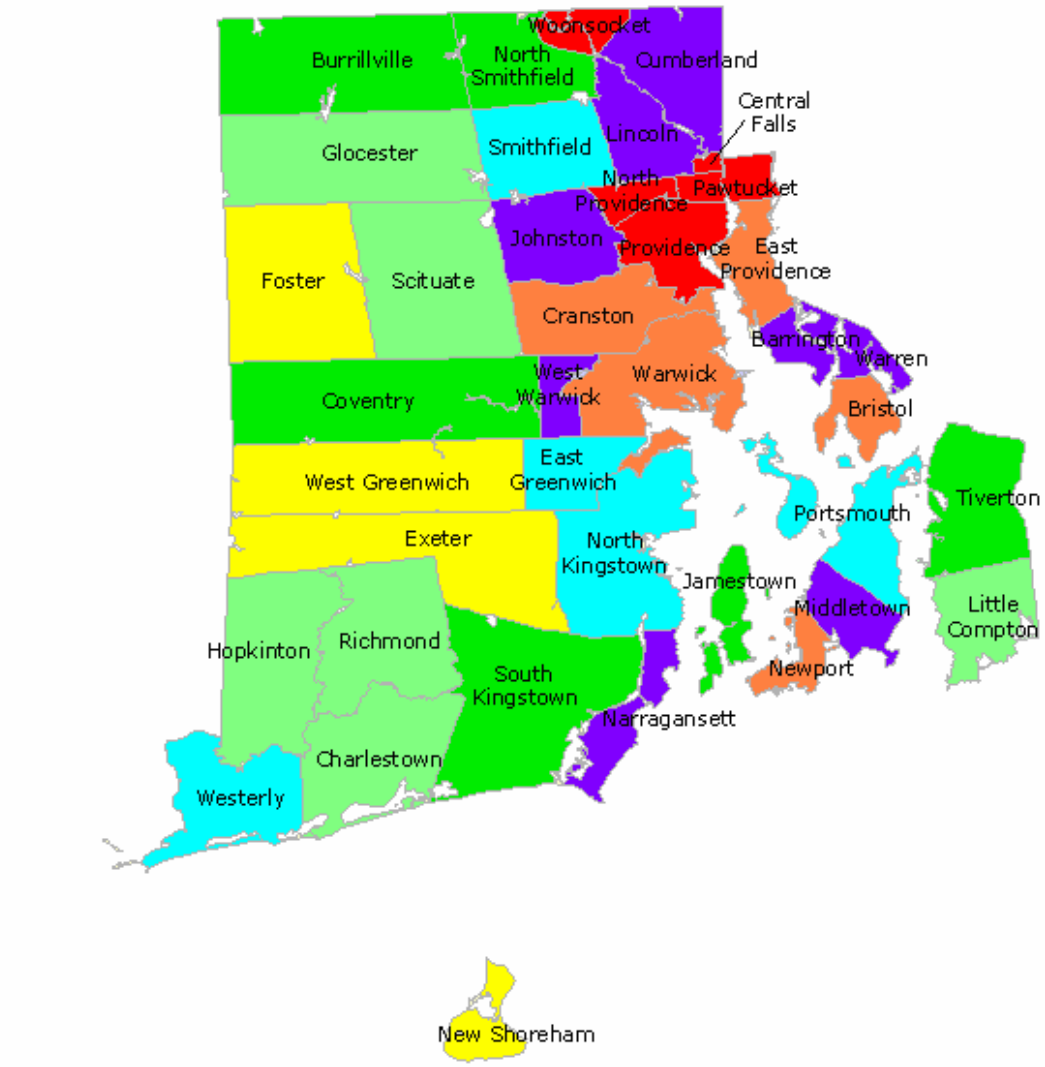
MAP 2.1- Rhode Island Highways and Waterways

Map 2.2- Rhode Island Population Map



< 5,000
5,000 - 10,000
10,000 - 25,000
25,000 - 50,000
50,000 - 75,000
75,000 - 100,000
100,000 +

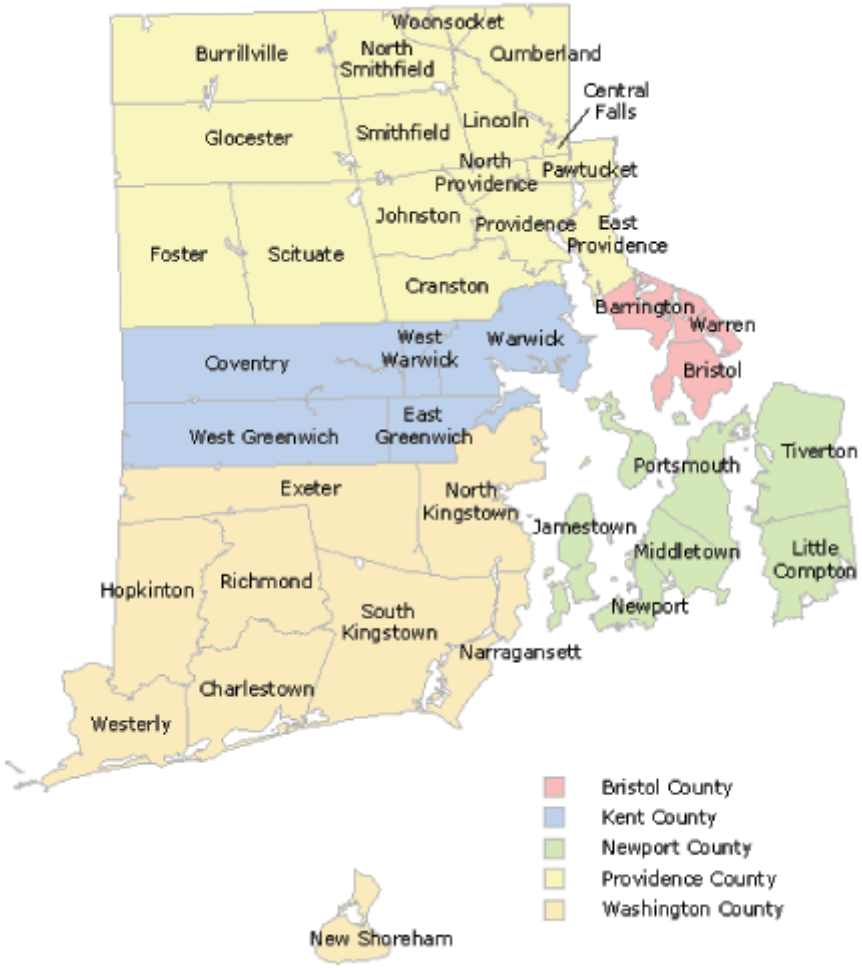
Map 2.3- Rhode Island Population Density Map



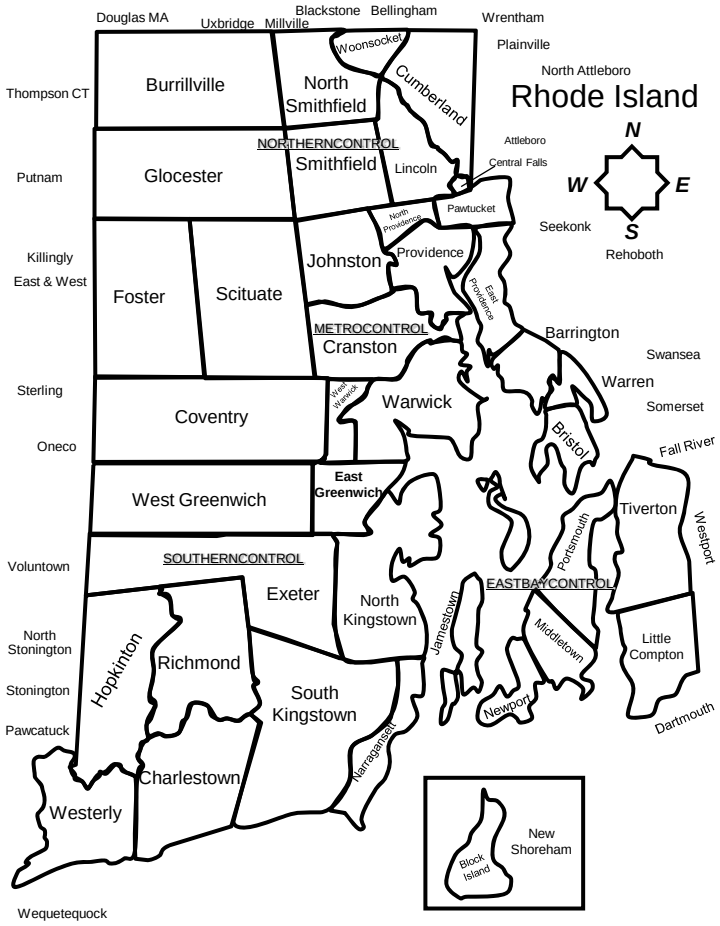
< 150
< 250
< 600
< 1000
< 2500
< 5000
> 5000

residents per
sqaure mile

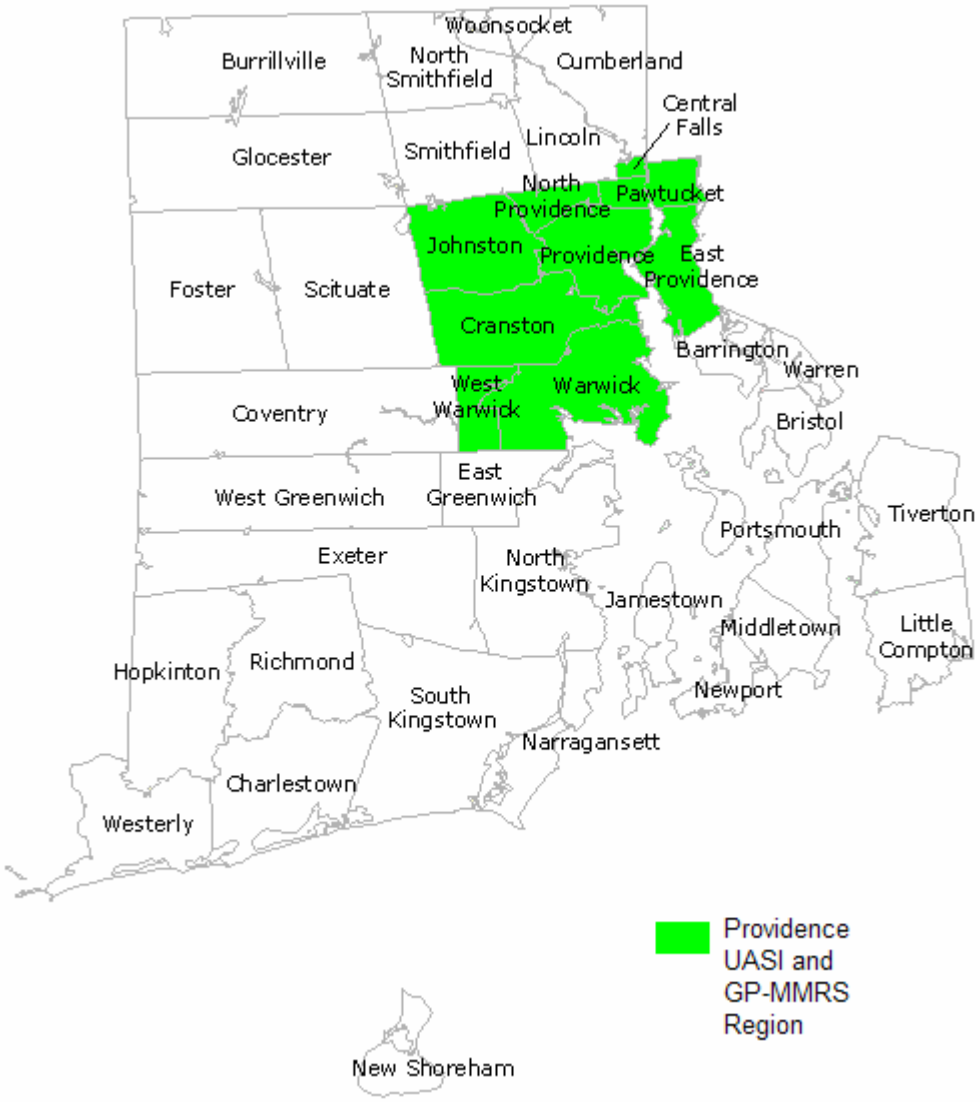
Map 2.4- Rhode Island County Map



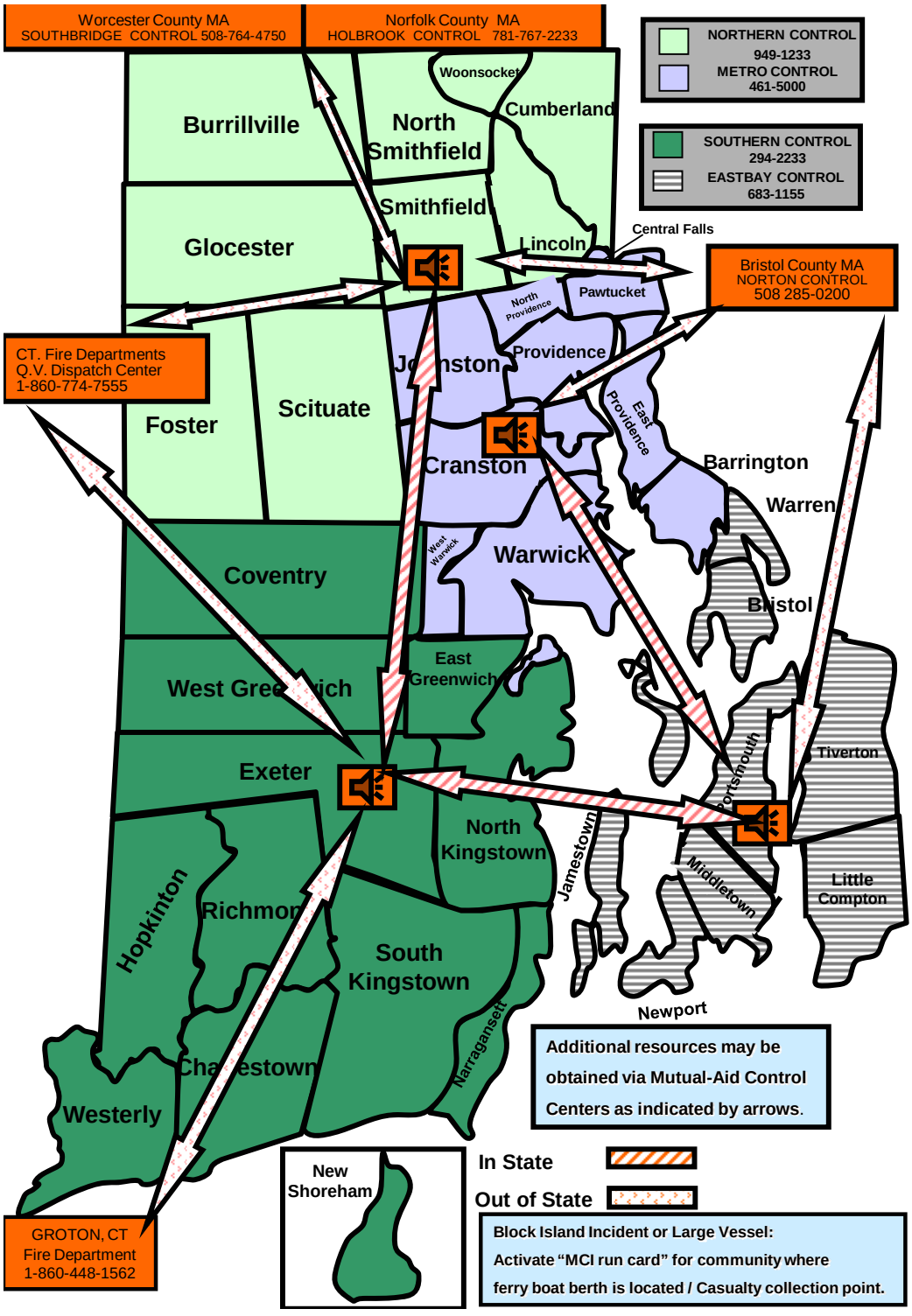
Map 2.5 Towns Bordering Rhode Island



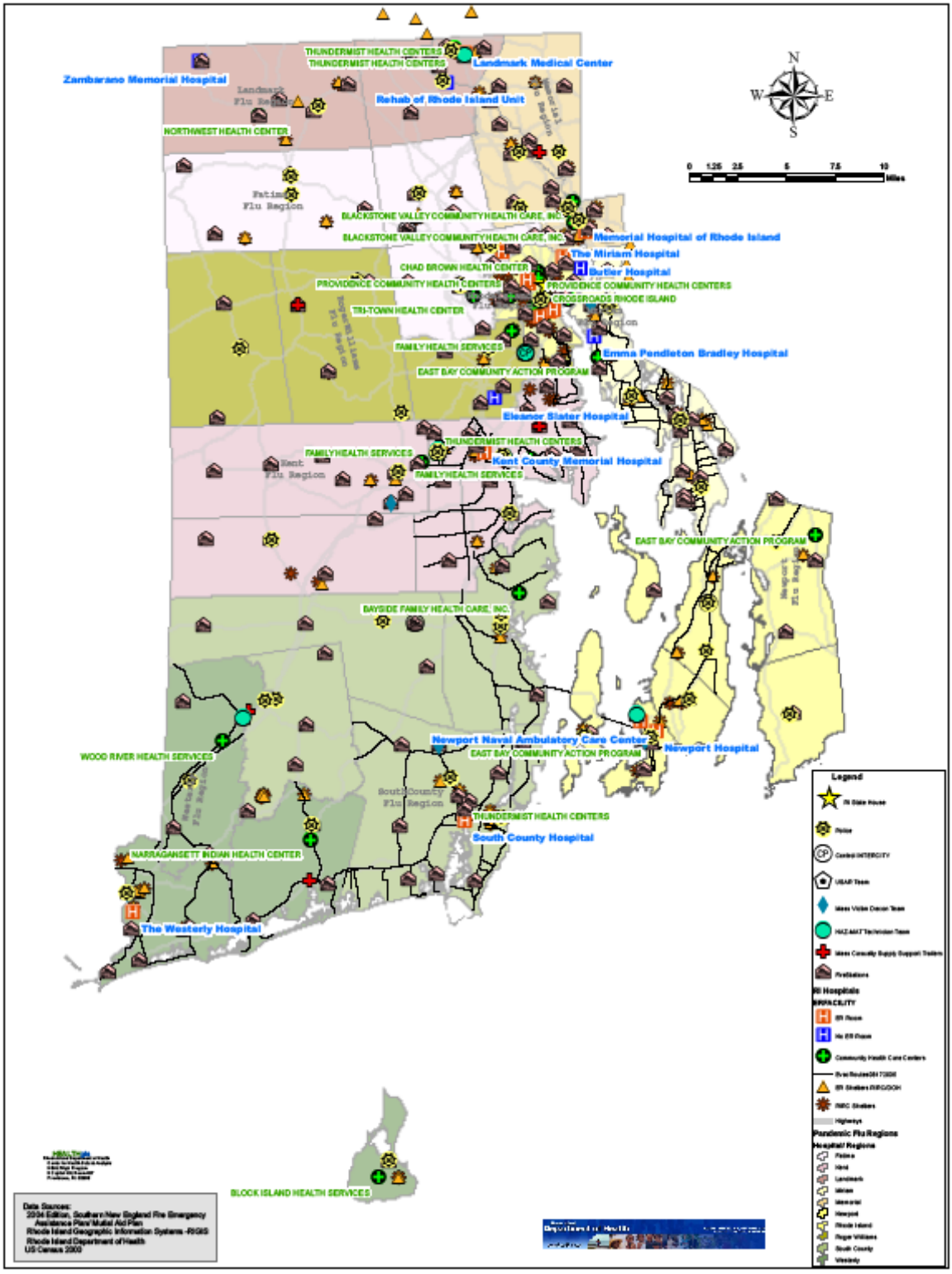
Map 2.6- UASI and GP-MMRS Communities Map



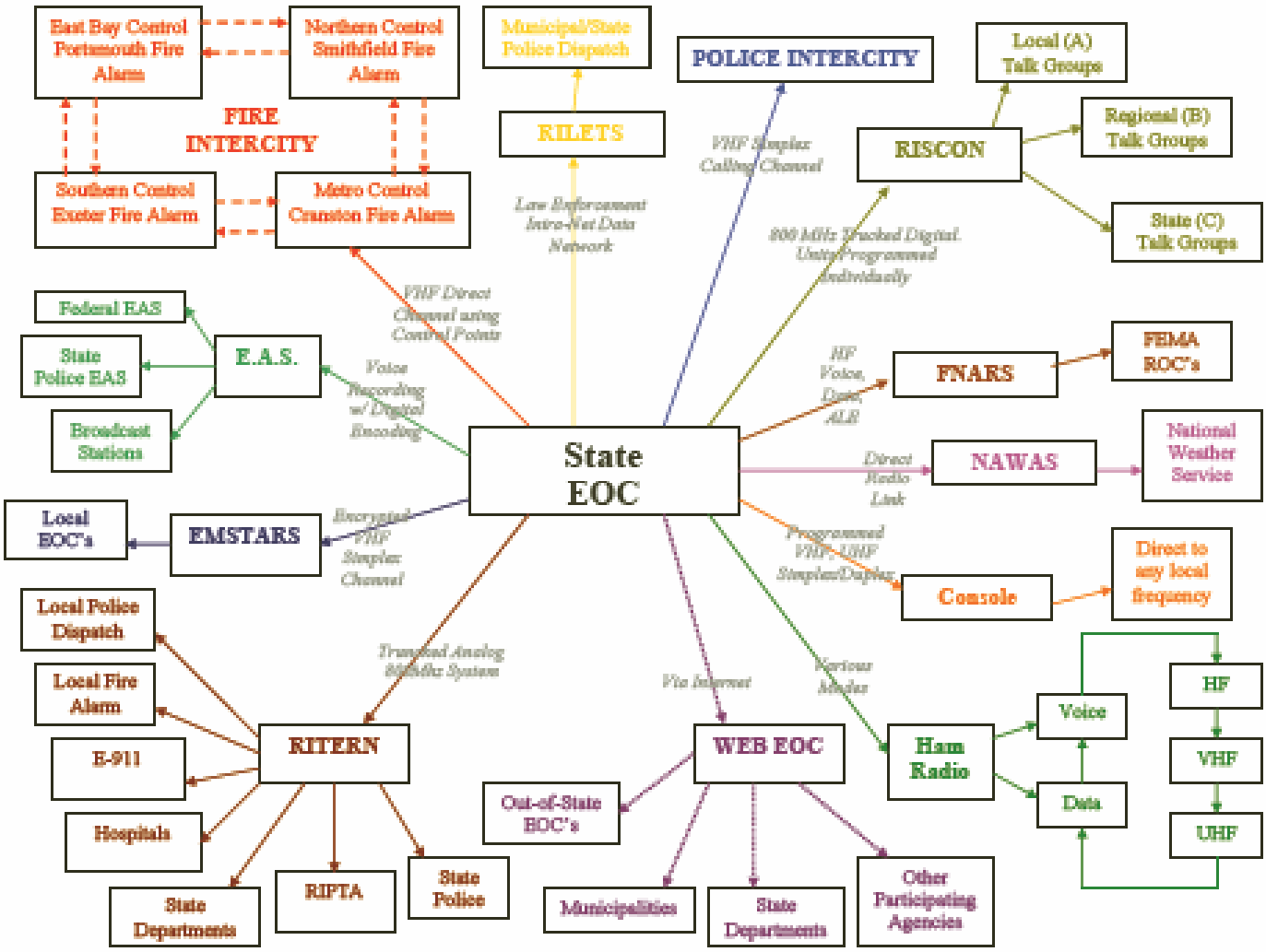
Map 2.7- Fire Mutual Aid Communications Overview



Map 2.8- Hospitals, First Responders, and Specialty Teams in Rhode Island



Attachment 2.9- State Communications Diagram



Statewide Communications Interoperability Plan

Attachment 3:

LETTERS OF SUPPORT

State of Rhode Island and Providence Plantations
Office of the Lieutenant Governor

Elizabeth H. Roberts
Lieutenant Governor

November 27, 2007

Mr. Robert J. Warren
Director
Rhode Island Emergency Management Agency
645 New London Avenue
Cranston, RI 02920

Dear Director Warren:

As the Chair of the Rhode Island Emergency Management Advisory Council, I would like to express my full support for the efforts of the Communications Working Group (CWG) and the Rhode Island Emergency Management Agency (RIEMA) in the development of the Statewide Communications Interoperability Plan (SCIP).

Interoperable communications are an integral part of ensuring that our first responders have the necessary tools to respond effectively to any situation. The SCIP provides a direction for the future of interoperable communications within the state and has clear goals and objectives to achieve this aim.

Thank you for the hard work of your staff and agency partners.

Sincerely,

Elizabeth H. Roberts
Lieutenant Governor

State House, Room 116 • Providence, Rhode Island 02903-1196 • 401-222-2371
Web Address: www.ltgov.state.ri.us.

RHODE ISLAND ASSOCIATION OF FIRE CHIEFS, INC.

INCORPORATED NOVEMBER 6, 1967

November 21, 2007

To Whom It May Concern:

The Rhode Island Association of Fire Chiefs has had an opportunity to meet with State Emergency Management Officials regarding the Statewide Communications Interoperability Plan that has been developed for public safety communications in the State of Rhode Island. After review of the actual plan, and after a thorough discussion about the plan with State Emergency Management Officials, the Rhode Island Association of Fire Chiefs endorses the plan and will provide all necessary support to implement such a plan.

In addition, the Rhode Island Association of Fire Chiefs is confident that the Statewide Communications Interoperability Plan will enhance our current Southern New England Mutual Aid Plan which guides us statewide in day-to-day mutual aid responses throughout the State of Rhode Island.

Respectfully, this letter is submitted on behalf of the Board of Directors of the Rhode Island Association of Fire Chiefs.

Signed,

Chief Robert W. Seltzer
RIAFC Director & Immediate Past-President

RHODE ISLAND POLICE CHIEFS' ASSOCIATION

November 28, 2007

Robert J. Warren, Director
Rhode Island Emergency Management Agency
645 New London Avenue
Cranston, Rhode Island 02920

RE: Communications Interoperability

Dear Director Warren:

During the November meeting of the Rhode Island Chief's of Police (RICOPA) a vote was taken to support the Communications Working Group (CWG) and the Rhode Emergency Management Agency (RIEMA) in the development of the State of Rhode Island Interoperability Plan (RISCIP). The resolution was passed unanimously.

Therefore, I as the President of RICOPA, am sending this letter to you confirming our unanimous support of the State of Rhode Island Interoperability Plan (RISCIP).

RIEMA and RICOPA have been supportive and cooperative partners in this venture and we as an associations will continue to support you and this important initiative.

Sincerely,

Colonel Russell S. Serpa
President

Narragansett Tribal Police
P.O. Box 1414
Charlestown, RI 02813
(800) 287-4225
(401) 364-1100, ext. 236
(401) 364-4076, fax

November 29, 2007

Robert J. Warren, Director
Rhode Island Emergency Management Agency
645 New London Avenue
Cranston, RI 02920

Dear Director Warren,

As Chief of the Narragansett Indian Tribal Police, I would like to express my full support for the efforts of the Communications Working Group (CWG) and the Rhode Island Management Agency (RIEMA) in the development of the Statewide Communications Interoperability Plan (SCIP).

Interoperable communications are an integral part of ensuring that our first responders have the necessary tools to effectively respond to any situation. The SCIP provides a direction for the future of interoperable communications within the state and has clear goals and objectives to achieve this aim.

The Tribal Police Department looks forward to working with you in the development of our 800Mhz link into the Statewide Communications System.

Thank you for the hard work of your staff and agency partners.

Sincerely,

Antone Monroe

Rhode Island
State Emergency Management Director's Association

16 Tobin St.
West Warwick, RI 02893
Tel. 401-265-9968
Fax. 401-822-9266

Tom Senerchia, Chairman — Tom McMillan, Secretary

To: Thomas Kilday
Jeff Stevens

Tom and Jeff,

Please be advised that at the State Director's November 14, 2007 meeting, the local director's made a motion that was unanimously voted upon, that we approve and support the Public Safety Interoperability Communications program as presented to us.

Also I am pleased to inform you that we have delegated a member of our group to join your committee to act on our behalf and to report back to us on a regular basis. I am sure that together we can make this a very successful project.

Looking forward to working with you!

Thomas Senerchia

Thomas Senerchia,
State Director's Chairman

HARI
The Hospital Association of Rhode Island
100 Midway Drive – Suite 21
Cranston, Rhode Island 02920
(401) 946-7887 Fax (401) 946-8188

Edward J. Quinlan
President

November 27, 2007

Robert J. Warren, Director
Rhode Island Emergency Management Agency
645 New London Avenue
Cranston, RI 02920

Dear Director Warren,

As the Co-Chair of the Hospital Preparedness Planning Committee, I would like to express the committee's full support for the efforts of the Communications Working Group (CWG) and the Rhode Island Emergency Management Agency (RIEMA) in the development of the Statewide Communications Interoperability Plan (SCIP).

Clear, efficient interoperable communications between first responders and hospital emergency departments are an essential component to maximize patient care efforts as a successful response to an unexpected event. The SCIP provides a direction for the future of interoperable communications between first responders and first receivers and has clear goals and objectives to optimize opportunities to provide quick and efficient care for the people of Rhode Island.

Sincerely,

Dawn-Marie B Lewis

Dawn-Marie B Lewis
Hospital Emergency Preparedness Coordinator
Hospital Association of Rhode Island

Statewide Communications Interoperability Plan

Attachment 4:

COMPLIANCE MATRIX

SCIP Evaluation Criteria Compliance Matrix

Criteria #	Description	Section/Page #
1.	**Background and Preliminary Steps**	
1.1	Provide an overview and background information on the state and its regions. Include geographic and demographic information.	Section 2.1/Pg. 11
1.2	List all agencies and organizations that participated in developing the plan. (List them according to the categories recommended for a communications interoperability committee in the All-Inclusive Approach section above.)	Section 2.2/Pg. 20
1.3	Identify the point of contact. DHS expects that each state will have a full time interoperability coordinator. The coordinator should not represent or be affiliated with any one particular discipline and should not have to balance the coordinator duties with other responsibilities.	Section 2.3/Pg. 21
1.4	Describe the communications and interoperability environment of the current emergency response effort.	Section 4/Pg. 25
1.5	Include a problem definition and possible solutions that addresses the challenges identified in achieving interoperability within the SAFECOM Interoperability Continuum.	Section 4/Pg. 26
1.6	Identify any Tactical Interoperability Communications Plans in the state.	Section 2.1.3/ Pg. 18&19
1.7	Set the scope and timeframe of the plan.	Section 2.4/Pg. 22
2.	**Strategy**	
2.1	Describe the strategic vision, goals, and objectives for improving emergency response interagency wireless communications statewide, including how they connect with existing plans within the state.	Section 5/Pg 39 Section 5.3/Pg. 46
2.2	Provide a strategic plan for coordination with neighboring states. If applicable, include a plan for coordination with neighboring countries.	Section 4/Pg. 29 Section 4.5/Pg. 37&38
2.3	Provide a strategic plan for addressing data interoperability in addition to voice interoperability.	Section 5.1/Pg. 44
2.4	Describe a strategy for addressing catastrophic loss of communication assets by developing redundancies in the communications interoperability plan.	Section 5.1/Pg. 44
2.5	Describe how the plan is, or will become, compliant with the National Incident Management System (NIMS) and the National Response Plan.	Section 5.4/Pg. 50
2.6	Describe a strategy for addressing communications interoperability with the safety and security elements of the major transit systems, intercity bus service providers, ports, and passenger rail operations within the state.	Section 2 Pg. 7&9 Section 5/Pg. 39
2.7	Describe the process for periodic review and revision of the state plan.	Section 5.5/Pg. 51
3.	**Methodology**	
3.1	Describe the method by which multi-jurisdictional, multi-disciplinary input was provided from all regions of the state. For an example of a methodology that ensures input from all regions, see the Statewide Communication Interoperability Plan, or SCIP, methodology developed by SAFECOM.	Section 2.2/Pg. 20 Attachment 3
3.2	Define the process for continuing to have local input and for building local support of the plan.	Section 3/Pg. 24
3.3	Define how the TICPs were incorporated into the statewide plan.	Section 2.1.3/Pg. 18&19
3.4	Describe the strategy for implementing all components of the statewide plan.	Section 5/Pg 39-43 Section 5.3/Pg 46-49
4.	**Governance**	
4.1	Identify the executive or legislative authority for the governing body of the interoperability effort.	Section 4.1/Pg. 31&32
4.2	Provide an overview of the governance structure that will oversee development and implementation of the plan. Illustrate how it is representative of all of the relevant emergency response disciplines and regions in the state.	Section 4.1/Pg. 32
4.3	Identify the executive or legislative authority for the governing body of	Section 4.1/Pg. 31

	the interoperability effort.	
4.4	Provide an overview of the governance structure that will oversee development and implementation of the plan. Illustrate how it is representative of all of the relevant emergency response disciplines and regions in the state.	Section 4.1/Pg. 31&32
4.5	Provide the charter for the governing body, and use the charter to state the principles, roles, responsibilities, and processes.	No Charter, See Pg. 31&32
4.6	Identify the members of the governing body and any of its committees. (List them according to the categories recommended for a communications interoperability committee in the All-Inclusive Approach section above.)	Attachment 1.3
5.	**Technology**	
5.1	Include a statewide capabilities assessment (or a plan for one) which includes, critical communications equipment and related interoperability issues. At a minimum this should include types of radio systems, data and incident management systems, the manufacturer, and frequency assignments for each major emergency responder organization within the state. Ultimately more detailed information will be required to complete the documentation of a migration strategy. States may use the Communications Asset Survey and Mapping (CASM) tool to conduct this assessment.	Section 4/Pg. 25
5.2	Describe plans for continuing support of legacy systems, and developing interfaces among disparate systems, while migrating to newer technologies.	Section 4/Pg. 27-28
5.2.1	Describe the migration plan for moving from existing technologies to newly procured technologies.	Section 4/Pg. 27-28
5.2.2	Describe the process that will be used to ensure that new purchases comply with the statewide plan, while generally allowing existing equipment to serve out its useful life.	Section 5.3/Pg. 46
6.	**Standard Operating Procedures (SOPs)**	
6.1	Include an assessment of current local, regional, and state operating procedures which support interoperability.	Section 4.3/Pg. 35
6.2	Define the process by which the state, regions, and localities will develop, manage, maintain, upgrade, and communicate standard operating procedures (SOPs), as appropriate.	Section 4.3/Pg. 35
6.3	Identify the agencies included in the development of the SOPs, and the agencies expected to comply with the SOPs.	Section 4.3/Pg. 35
6.4	Demonstrate how the SOPs are NIMS-compliant in terms of the Incident Command System (ICS) and preparedness.	Section 4.3/Pg. 35
7.	**Training and Exercises**	
7.1	Define the process by which the state will develop, manage, maintain and upgrade, or coordinate as appropriate, a statewide training and exercises program.	Section 4.4/Pg. 36
7.2	Describe the process for offering and requiring training and exercises, as well as any certification that will be needed.	Section 4.4/Pg. 36
7.3	Explain how the process ensures that training is cross-disciplinary.	Section 4.4/Pg. 36
8.	**Usage**	
8.1	Describe the plan for ensuring regular usage of the relevant equipment and the SOPs needed to improve interoperability.	Section 4.5/Pg. 37-38
9.	**Funding**	
9.1	Identify committed sources of funding, or the process for identifying and securing short- and long-term funding.	Section 7/Pg. 53
9.2	Include a plan for the development of a comprehensive funding strategy. The plan should include a process for identifying ongoing funding sources, anticipated costs, and resources needed for project management and leveraging active projects.	Section 7/Pg. 53
10.	**Implementation**	
10.1	Describe the prioritized action plan with short- and long-term goals for achieving the objectives.	Section 6/Pg. 52

10.2	Describe the performance measures that will allow policy makers to track the progress and success of initiatives.	Section 5.3/Pg. 46-49
10.3	Describe the plan for educating policy makers and practitioners on interoperability goals and initiatives.	Section 5.5/Pg. 51
10.4	Describe the roles and opportunities for involvement of all local, state, and tribal agencies in the implementation of the statewide plan.	Section 5.5/Pg. 51 Section 3/Pg. 24 Section 2.2/Pg. 20
10.5	Establish a plan for identifying, developing, and overseeing operational requirements, SOPs, training, technical solutions, and short- and long-term funding sources.	Section 5.3/Pg. 46-49
10.6	Identify a POC responsible for implementing the plan.	Section 2.3/Pg. 21
10.7	Describe critical success factors for implementation of the plan.	Section 5.3/Pg. 46-49
11.	**PSIC Requirements**	
11.1	Describe how public safety agencies will plan and coordinate, acquire, deploy and train on interoperable communications equipment, software and systems that: 1) utilize reallocated public safety - the public safety spectrum in the 700 MHz frequency band; 2) enable interoperability with communication systems that can utilize reallocated public safety spectrum for radio communications; or 3) otherwise improve or advance the interoperability of public safety communications system that utilize other public safety spectrum bands	Section 4/Pg. 28-29 Section 4.4/Pg. 36 Section 5.1/Pg. 44
11.2	Describe how a strategic technology reserve (STR) will be established and implemented to pre-position or secure interoperable communications in advance for immediate deployment in an emergency or major disaster.	Section 5.4/Pg. 47
11.3	Describe how local and tribal government entities' interoperable communications needs have been included in the planning process and how their needs are being addressed.	Section 3/Pg. 24 Attachment 1.3
11.4	Describe how authorized non-governmental organizations' interoperable communications needs have been included in the planning process and how their needs are being addressed (if applicable).	Section 3/Pg. 24 Section 2.2/Pg. 20

Statewide Communications Interoperability Plan

Attachment 2
Standard Operating Procedures (SOPs)

Rhode Island Emergency Management Agency
RISCON
Standard Operating Procedures

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Rhode Island Statewide Communications Network

RISCON Standard Operating Procedures

Attachment 2

State of Rhode Island
Emergency Management Agency
625 New London Avenue
Cranston, RI
401-946-9996

Mission Statement

In accordance with the General Laws of Rhode Island , Chapter 30-15-2, the Rhode Island Emergency Management Agency (RIEMA), in alliance with the Interoperable Communications Committee (ICC), pursues and promotes interoperability policies and standards which will ensure effective, fail safe communications during emergency situations.

1.1 The Statewide Communications Interoperability Plan (SCIP) relies on the states RISCON system which has a broad spectrum of diverse users, each with its own operational need. IAW the General Laws of Rhode Island, chapter 30-15-43, RIEMA manages RISCON to ensure the system functions are maintained.

1.2 The SCIP goals are :

GOAL 1: Establish statewide, multi-spectrum communications interoperability as a high priority for all stake holders.

Goal 2: institutionalize continuous process improvement functions across state and municipal agencies.

Goal 3: Create a communication architecture which interfaces disparate wireless communication systems, facilitates burgeoning technologies, and integrates relevant open standard platforms.

Goal 4: Utilize advanced communications technology to provide stake holders with the commensurate level of mission critical interoperability.

Goal 5: Optimize the use of funding sources to accomplish the goals of the SCIP. Conduct continuous forecasting to ensure fiscal resourcing meets coast demands of RISCON infrastructure improvement and perpetual maintenance.

Goal 6: Incorporate current best practices approaches to improving interoperability. Institutionalize continuous best practice improvement function across state and municipal agencies.

Goal 7: Create a statewide communications infrastructure that provides interconnectivity for stakeholders.

Goal 8: Institutionalize use of interoperability training objectives during state and local exercises.

Goal 9: Develop National Incident Management System (NIMS) complaint communications training plans, and SOP classes for statewide use that achieve Communications Unit Leader (COML) certification.

Goal 10: Organize a pool of technical professionals to assist user agencies with evaluation of public safety wireless communications projects.

1.3 The Rhode Island Interoperable Communications Committee (ICC) consists of members who represent a large number of users with varying degree of interests. ICC is considered the user end of RISCON and should provide the necessary guidance to RIEMA. ICC assist in establishing benchmarks for RISCON based on first responder standards and needs. Interaction between RIEMA and ICC will serve the best interest of citizens in the state to ensure quality standards are established and carried out.

1.4 The Standard Operating Procedures (SOPs) are developed by the state, regions, and localities to manage, maintain, upgrade and communicate standard operating procedures for their systems are to follow the guidance from NIMS, National Interagency Fire Center, National Crime Information Center, the National Response Plan, National Public Safety Telecommunication Council (NPSTC), and the National Fire Protection Association and any other nationally recognized bodies.

Rhode Island Emergency Management Agency
RISCON
Standard Operating Procedures

Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.1a	System Architecture
Revised:				

1. Purpose or Objective
To define the primary configuration uses, and users of RISCON.

2. Technical Background:
The radio system is a Motorola-based 800 MHz ASTRO 25 trunked simulcast digital radio system. The system, as it was deployed is divided into three (3) separate simulcast sub-system "zones" or "cells". For the purpose of clarity throughout this documentation we will refer to these as zones. The three (3) existing zones are the Southern Zone, the Northern Zone and the Providence Zone. Each of these zones operates in a simulcast mode. The Northern Zone transmits and receives out of nine (9) sites and has ten (10) radio channels at each site. The Southern Zone transmits and receives out of thirteen (13) sites and has ten (10) channels at each site. The Providence Zone transmits and receives out of five (5) sites and has twelve (12) channels at each site. Note that, for each site, one channel is reserved as the control channel. This reduces the available channels for talk group usage by one at each site.

Simulcast
Simulcast is the controlled simultaneous transmission of identical audio information over the same radio frequency channel by all RF transmitters within the zone. Received audio from each of the fixed sites in the zone is routed through a comparator system that selects only the best audio to be repeated by all RF sites within the zone. The simultaneous transmission of the audio allows for superior coverage over a much larger area. The other advantage is the greater RF overlap from the multiple RF sites minimizes dead areas and allows for additional in-building penetration. The simultaneous transmission of audio at all radio sites within the simulcast zone also allows for the same frequencies to be used at each site, greatly increasing spectral efficiency. One disadvantage of a simulcast system is that the simplest localized radio traffic is broadcasted over all RF sites within the zone.

3. Operational Context: D/N/A

4. Protocol/ Standard:

Agencies and all members, regardless of membership or participation level will be required to agree to an end user agreement (Attachment 3). Complying with the standards set forth by FEMA and the ICC group. This agreement is found in Attachment 3 of this document and will be complied by RIEMA with regardless of membership level and participation.

5. Procedure:
Agencies wishing to join the network must submit their request to RIEMA in writing. A copy of the request will be forward to the ICC for approval after requirements are met as outlined in this SOP. The request must include the number of radios, and related equipment expected to be used by the end user.

6. Management
RIEMA is responsible for the overall management of this system. ICC will provide issues and make recommendations to RIEMA for possible changes in the system.

Rhode Island Emergency Management Agency
RISCON
Standard Operating Procedures

RISCON system is the primary communication system for most State, Local and governmental agencies. It is private non-commercial system established to allow direct communications with first responders and first receivers though out the state. This is its primary mission. RISCON also provides a communication system for daily use for other non-first responders. RISCON also provides interoperability radio service to all 39 cities and towns in the State.

The following is a list of agencies that rely on this system as their primary communication system:

RIEMA will provide updated list of full time and part time user list once system mapping is completed as outlined in DHS Rhode Island Radio System Review.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.1b	Operational Management of RISCON
Revised:				

1. Purpose or Objective

To assign responsibility of the operational management of the RISCON Infrastructure to include Microwave Radio, Subscriber Radios, Base Stations, Towers, Antenna's and all supporting equipment Statewide.

2. Technical Background:

- **Capabilities**

For the purpose of this standard, system maintenance includes all facilities, towers, electronics, power and ancillary equipment required to support the system. Systems management shall be the responsibility of the RIEMA System Manager.

RIEMA

The State of Rhode Island through RIEMA is ultimately responsible for the overall system. They will maintain the fleet map, program radios and maintain contracts with vendors for system maintenance. The prime vendor, Motorola, provides 24/7 system monitoring and, with their local subcontractors, provides a majority of the system support. Motorola and other vendors where it has contractual responsibilities must appraise the RIEMA System Manager of any incidents that affect the day-to-day operations of RISCON and develop recommendations to further enhance systems quality management.

Motorola is under contract to provide maintenance that covers virtually all major systems associated with the 800 MHz trunked radio network. The Motorola contract does not cover the towers, microwave radio, antennas, transmission lines, tower top amps, climate control equipment, generators, UPS batteries) or any facility maintenance items. These remain as RIEMA responsibility for preventive maintenance and overall equipment maintenance.

RIEMA is responsible for the oversight of all items relative to the operations of the network regardless if RIEMA has outsourced work to outside vendors such as Motorola.

RIEMA is responsible to maintain all of the outdoor systems listed above to include additional items such as: alarms, grounds, security, fencing, commercial power delivery, fuel delivery, testing equipment, vendor access, and overall support for the system as outlined in each MOU. All such items should have an active alarm reporting system that is monitored.

RIEMA will provide maintenance schedules for all equipment on the system.

RIEMA shall work with other member agencies that may have qualified staff that can respond to system failures and make the necessary repairs on a timely basis.

RISP

RISP is responsible for the Microwave Network System to track all system failures. RISP will continue to report to the RIEMA and ICC of issues related to the Microwave Network System.

RISP has the responsibility for the primary microwave ring plus some microwave spurs. These spurs include: Chopmist to North Scituate; Hope Valley to Exeter; Lincoln to East Providence;

Lincoln to Providence; and, Portsmouth to Wickford RISP. RISP has a contract for monthly preventative maintenance on the microwave radios and annual service on the microwave towers.

RISP is also responsible for all RISP RISCON subscriber units and all facilities at the RISP sites.

City of Providence
Providence handles in-house all of the normal Motorola servicing for the 5-sites in their zone. This includes call out and depot replacement. They have system monitoring capability in their shop. The City has a contract with Motorola for 24/7 monitoring and annual software/system upgrades and preventative maintenance and technical support on an as need basis. Alarm notifications from Motorola are sent on to Providence staff for response.

Providence is responsible for their own microwave spurs for connectivity to their 5 radio sites. Providence contracts microwave maintenance with Sideband Systems, Inc. Sideband provides biannual preventive maintenance on the electronics. No tower or antenna maintenance is covered by this contract.

- **Constraints: N/A**

3. Operational Context:
RIEMA managers make decisions on issues related to the day-to-day operation of the systems and any urgent or emergency system operational or repair decisions.

An urgent or emergency situation is one where immediate decision authority is needed to allow the system as a whole, or any of the subsystem components, to continue supporting normal wide-area voice and data communications services. It is recognized that RIEMA staff may have to obtain authorizations for emergency repairs

RIEMA staff is responsible for the day-to-day management, operation and oversight of the systems. While specific duties are not detailed in this document, the general duties include:

1. Monitoring the systems and components for normal operations.

2. Diagnosis of system performance, problems, and the development of corrective action recommendations.

3. Dispatching appropriate repair services in the event of a malfunction of the system equipment.

4. Managing the database elements including subscriber IDs, talkgroup IDs, and the various parameters that relate to their effective operation.

5. Working with all agencies and agency technical staff to diagnose and resolve problems that involves radio operations, maintenance or repair of the equipment.

6. Being the point of contact with equipment manufacturers for issues related to the radio systems.

7. Providing timely information to system users on any issues that arise, or repair/maintenance issues related to a system equipment that would affect normal radio operations. (through web link on RIEMA web site, web EOC and email)

8. Monitoring the performance of the entire network for normal operations.

9. Monitoring system databases for normal operations, and conducting regular database backups.

Due to the complexity and distributed administration and maintenance of the systems, problems can typically appear when changes are made to hardware or software. In order to keep all representatives informed of any updates, notifications shall be sent to all ICC representatives and their alternates in the event of any of the following:

- Any planned maintenance work being done on the systems that affects performance for other representatives would be preceded with reasonable notification of the maintenance work being done.
- Any equipment malfunctions or failures that affect system performance for other representatives of the systems.
- ICC committee meetings held each month shall review operational reports of the systems and share ideas or issues that have arisen that may be of interest to user agencies.

4. Recommended Protocol/ Standard:

This is an ongoing process for the management of the system. Details regarding response plans are in Section 4.1 of this manual.

5. Recommended Procedure:

The specific procedures for performing these functions are either defined in the other standards procedures. Contractors are required to conform to the standards outlined in this and other portions of this document. RIEMA is responsible to ensure any of the vendors assigned to maintain the system have been familiarized to these standards. The RIEMA System Manager shall keep the ICC advised of issues that may affect the system and propose changes to protocols when necessary for consideration of the ICC.

6. Management

RIEMA with the assistance of the ICC is responsible for the compliance of this policy.

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Standard Operating Procedures

Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.2a	Network Management
Revised:				

1. Purpose or Objective
To define the responsibilities for network management.

2. Technical Background:

- **Capabilities**

RISCON 800 MHZ Network
The radio system is a Motorola based 800 MHz ASTRO 25 trunked simulcast digital system. The system is divided into three (3) separate simulcast sub-system "zones" or "cells". The three (3) existing zones are the Southern Zone, the Northern Zone and the Providence Zone. Each of these zones operates in a simulcast mode. The network is supported by multiple microwave hops for connectivity.

Microwave System
The microwave system currently supports a mix of several different radio manufactures and models. The RISP ring network is Harris Constellation 155/180 with the spurs all Aviat IRU 600. The RIEMA microwaves are a mixture of Harris Truepoint, Ceragon Public Safety, Motorola/Cambium PTP, and GE MDS LEDR series 900S radios. Providence has all Harris Truepoint radios. The networks are composed of, but not limited to channel banks, hubs, switches, routers, servers, local area networks, and wide area network links connecting sites together consisting of microwave equipment, and the network management tools provided by the equipment manufacturers.

- **Constraints**

The system network is complex. RIEMA shall maintain all system documentation for all facilities, such examples are as built documents, frequency studies, site plans, FCC license data, expiration dates on frequencies, tower specifications and drawings, network diagrams, rack diagrams showing all equipment for each site, and other related supported equipment.

3. Operational Context:
The components of the networks are considered as "owned" or shared as outlined in MOUs by RIEMA, which is responsible for the maintenance of the sites and equipment. Agreements between RIEMA and maintenance contractors are at RIEMA's discretion; however, RIEMA is ultimately responsible for the system.

The backbone of the systems is structured as an integrated network. Any infrastructure hardware and software upgrades or changes that may impact the system will be discussed at an ICC meeting prior to installation.

All maintenance work being scheduled that may affect system performance is preceded by reasonable and appropriate notification to the user agencies.

The configurations for each of the components of the system are documented primarily for the purpose of maintenance, but also affect future planning. The manufacturer provides the original 'as built' documentation.

The other defined standards for maintenance, documentation, notification, changes, security, and training also pertain to the network portion of the systems.

4. Recommended Protocol/ Standard:
This is an ongoing task in the operation and management of the systems.

5. Recommended Procedure:
The methods for performing detailed system operations are defined in the technical resource manuals and training for the systems. The technical resource manuals are classified as 'Restricted Information' in accordance with Protected Critical Infrastructure Information (PCII), and are not available to the general public except by formal written request to RIEMA.

6. Management
RIEMA is accountable for this standard and shall advise the ICC through an approved mechanism of any changes in the business practices.

NOTE TO ICC REVIEWER: OTHER ICC SOP CONSIDERATIONS FOR THIS SECTION

COMMENT: Microwave Infrastructure components should consist of industry standard equipment, uniformed through-out the entire network, and have a single source vendor for maintenance and spare parts if possible; currently, there are many manufacturers with several models of microwave equipment. This makes for inefficient maintenance as spare parts are needed for all types.

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Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.3	Database Management and Maintenance
Revised:				

1. Purpose or Objective

To define the responsibilities for managing the system databases.

The databases contain objects for the system and sub-systems defining the operational characteristics of:

- Subscriber Radios
- Radio Users
- Talk groups
- Profiles for Radio Users and Talk groups
- System portion of the fleet map programming
- System and Subsystem equipment operational parameters
- Security Group structures
- Login User accounts and privileges
- System usage reports

The databases shall not contain equipment-programming parameters for such things as routers, switches, hubs, and channel banks etc. Nor do the databases contain the software load information of servers and client computers.

2. Technical Background:

- **Capabilities**

The system and subsystems contain a central database; however the management of the databases is distributed among the RIEMA staff responsible for the various aspects of the data found in the databases.

- **Constraints**

The databases contain the operational personality of the entire system, because of this critical function the data shall be properly managed for system functionality and archived regularly in case of data loss or corruption.

3. Operational Context:

The system databases are partitioned to facilitate the distributed management of the data contained in them, the system manager and/or administrators shall manage the portions of the “above listed” data.

Existing and new end users must request approved from RIEMA of changes to the database via e-mail or in hard copy form. Changes such as new subscribers, lost radios, changes to templates, changes to Alias, ID's and other related information that will impact on a user coming on line to the system.

New users must advise RIEMA of all intentions to join and follow procedures related to new user membership.

RIEMA is responsible for maintaining and archiving a current copy of all radio code plug data.

RIEMA staff backs up the system databases weekly.
Multiple revisions of backups are dated and kept in a rotating stock, so that a restore is possible from an earlier backup if the need arises.

Multiple database backups are made at least once per month and the tapes are kept “off-site” in the event of a building disaster.

Database restores are done by RIEMA and only in the event of system software reloading and version changes, system database corruption, or as defined in the Disaster Recovery section of this manual.

Database restores are performed where there is a need if a non-critical condition exists and if approved by RIEMA.

RIEMA notifies agencies of any database issues that may adversely impact their normal operations.

4. Recommended Protocol/ Standard:
This is an ongoing task in the operation and management of the systems.

5. Recommended Procedure:
The methods for performing the database operations are defined in the technical resource manuals for the systems. The technical resource manuals are classified as ‘Restricted Information’, and are not available to the general public except by formal written request to RIEMA.

The procedure for this standard is at the discretion of RIEMA.

6. Management
RIEMA is responsible for managing the data attributes and is responsible for backing up the system databases. RIEMA will also advise the ICC on changes in policy and procedures that may affect the operations of this system.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.4a	System Login
Revised:				

1. Purpose or Objective

To provide role definitions for all access privileges that can be use by personnel that log into the system to use applications and support tools are referred to as "Login Users". These are technical support staff such as the system manager, administrators, technical support staff etc. This is different than "Radio User" as referred to in other standards. Every user's login ID on the system is unique.

2. Technical Background:

- **Capabilities**

Every login user of the system has a minimum of one login account, possibly more if different levels of access rights are needed for different purposes, such as administrative or general use. Every account can be individually set with the security and application rights needed to meet the needs of each user.

- **Constraints**

All user account IDs shall be unique; the system databases do not allow duplicate IDs. The login user aliases are limited to a specific length.

3. Operational Context:

Every login user of the system has a user ID that is only for that individual's use. An individual may need more than one login ID, such as user IDs are associated with agencies, therefore, any person working at
multiple agencies that utilize the system will have an ID for m

4. Recommended Protocol/ Standard:

The methods for performing the database operations are defined in the technical resource manuals for the system. Prime site users must be fully trained on the use of the system and be certified by RIEMA prior to authorization for access.

5. Management

RIEMA is responsible for the creation of administrative accounts, and responsible for subsequent creation of users, granting permissions, and oversight on the use of the system and for its security,

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.4b	Alias List Standard
Revised:				

1. Purpose or Objective

Login user, radio user and radio zone aliases are stored within system databases and are maintained by RIEMA.

2. Technical Background:

- **Capabilities**

Having the "Agency Alias" table readily available to RIEMA staff facilitates agency planning and assists agencies with reference information on identifying ownership of radio zones and users.

- **Constraints**

The "Agency Alias" table is kept in a central location and kept up to date by the system manager.

3. Operational Context:

Radio users and zones are prefixed by an agency ownership acronym, as defined in the Naming Standards section of this manual. Depending on the agency name, the first two or three characters are specified in the naming standard. Additional agency subdividing in the acronym table is optional.

4. Recommended Protocol/ Standard: NA

5. Recommended Procedure:

RIEMA manages the contents of the state "Agencies Alias" . Alias naming conventions are found in Appendix 3 of this document. (To be developed by RIEMA and Presented to the ICC upon completion)

6. Management

RIEMA is responsible for maintaining, archiving, updating and distributing the agency acronym table along with the Agencies Alias".

"

Rhode Island Emergency Management Agency
RISCON
Standard Operating Procedures

Version:	**One**	**RISCON Standards, Protocols & Procedures**		
Issued:	**Jan 6, 2014**	**Section:**	**1.0**	**SYSTEM MANAGEMENT**
Approved by:		**Sub-Section:**	**1.5a**	**Revisions and Changes to these Standards**
Revised:				

1. Purpose or Objective

The purpose of this section is to define the process by which these standards, protocols and procedures shall be revised and/or changed.

This procedure addresses changes resulting from periodic procedure reviews or requests for additions, deletions or changes made by a participating department or agency.

2. Technical Background: N/A

3. Operational Context:

RIEMA is charged with setting standards and determining protocols and procedures for the most optimal operations between and among the users of RISCON.

The users fall into three groups:

- RISCON end users who have full system access to the system.
- Agencies with limited access or part time to the systems for the purpose of interoperability with RISCON agencies.)
- Outside agencies having access to the system for the purpose of interoperability with RISCON agencies that may own their radio system but have a RISCON talk group in their radio.

The ability to communicate among these groups is possible due to the interoperability agreements between RISCON and the outside agencies. However, inclusion into the RISCON system shall be at the approval of RIEMA after an assessment of need is performed. This assessment shall include a comprehensive study of the system to be abandoned by the requesting entity. This assessment shall include the scope of the current system in place, license and frequency designations, and stated reasons for transitioning to the RISCON system. This assessment shall also be filed within RIEMA to track all units within that particular system and inventoried hardware. The request shall meet a priority of need assessment with first responder and emergency user considerations met first before any requested ancillary use of the system.

4. Recommended Protocol/ Standard:

Routine Review

- Under the direction of the RIEMA and the ICC committee this manual of standards, protocols and procedures will be reviewed annually to determine if changes are warranted.
- Upon completion of the review:
  - ✓ Written report of all findings
  - ✓ Recommended changes.

Submitted Request

Requests to delete, add, and/or change adopted standards, policies and/or procedures shall be made in writing to RIEMA. In the interest of time RIEMA or the ICC Chair can direct a request for immediate consideration be implemented.

5. Recommended Procedure:

1. A written request for any change shall be sent to the System Manager at RIEMA with a copy to the ICC chairperson and shall include:

   - A full description of the deletion, addition, or change including section and sub-section references
   - The reason for the change (including the potential consequences if the request is not approved)
   - A preliminary assessment on other system users, and an estimate of associated costs, if any.

2. A request can be forwarded to the RIEMA for review.

3. A sub-committee as established by the ICC Chair shall forward the completed assessment along with recommendations including strategies to mitigate negative impacts, if appropriate.

4. ICC shall advise all agencies of all requests along with potential impact and invite their comment.

5. ICC shall approve, disapprove or modify the request. The committee shall notify all parties of their decision.

6. If approved, RIEMA shall set forth operational and/or financial responsibility as appropriate and notify all parties.

6. Management

The RIEMA and ICC Chair will manage this process.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.5b	Variance and Waivers
Revised:				

1. Purpose or Objective
The purpose of this section is to define the process by which variances or waivers to these standards, protocols and procedures are granted to a requesting agency.

- **Variance** is defined as an allowed divergence from full adherence to an adopted standard, protocol or procedure.
- **Waiver** is defined as a complete release from an adopted standard, protocol or procedure.

2. Technical Background: N/A

3. Operational Context:
RIEMA is charged with setting standards and determining protocols and procedures for the most optimal operations between and among the users of RISCONs.

The users fall into three groups:

- RISCON radio users with full system access.
- Outside agencies having limited access to the systems for the purpose of interoperability with RISCON agencies.
- Outside agencies having access to the systems for the purpose of interoperability with RISCON agencies, and having dedicated talk groups for their own use.

The ability to communicate between these groups is possible due to the interoperability agreements between RISCON and the outside agencies. The improper use of this equipment can have minor to grave consequences. These standards, policies and procedures were developed to maximize service to the users of RISCON and the surrounding area, and minimize potential negative consequences. Therefore, variances and waivers shall not compromise the integrity of RISCONs or participants.

4. Recommended Protocol/ Standard:
Each request for variance or waiver from the adopted standards, policies and/or procedures shall be made in writing to RIEMA and a copy to ICC.

5. Recommended Procedure:
The written request for a variance and/or waiver to RIEMA shall include:

- Description of the desired variance or waiver including section and sub-section references.
- Reason for the variance or waiver (including the potential consequences if the request is not approved).
- Preliminary assessment on the other system users, and an estimate of any associated costs to implement the request.

At its discretion, RIEMA may act on the request, but will generally forward requests to the ICC/Technical Sub-committee for review, analysis and/or recommendation.

- The RIEMA staff, or their designee, in consultation with the requesting agency and ICC chair, can approve a temporary variance or waiver until the official process is completed.
- Emergency deviations from the standards shall be communicated to all affected parties.

An assessment shall be conducted by the Technical sub-committee and shall address:

- Technical impact to current and future system performance including which systems or subsystems is affected.
- Operational impact including capacity impact to current and future system performance.
- The degree of conformance with ICC policies and standards.
- Cost impact to current participants.
- Potential alternative solutions.

Technical committee as designated by the ICC Chair shall forward the completed assessment to RIEMA and the ICC along with recommendations including ways to mitigate negative impact if appropriate.

RIEMA and the ICC shall advise all affected agencies of all requests, along with potential impact and invite comments.

RIEMA and the ICC shall approve, disapprove or modify the request, and shall notify all affected parties of the decision.

If approved or modified, ICC shall set forth operational and/or financial responsibility as appropriate and notify all affected parties.

6. Management

RIEMA and the Chair of ICC, acting on behalf of the committee, shall manage this process.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.6a	System Security Groups
Revised:				

1. Purpose or Objective

Security groups are used to protect the systems by managing the administrative access to the various objects in the system databases. A security structure using security groups is defined for the overall security and management of the systems.

2. Technical Background:

- **Capabilities**

All objects in the system databases are independently assigned to specific security groups. User login accounts are independently assigned various levels of access to the various security groups as needed. The security groups allow managing access rights to what users need to control and view. This protects overall system security and simplifies management of the systems.

- **Constraints**

Once a security group is created, it cannot be deleted, only renamed. The security group name field is limited to a specific length.

3. Operational Context:

Security groups are created which allow RIEMA to access and protect the objects in the database. Each agency on the system has a minimum of one security group. Additional security groups can be created as needed if there is a need to segregate objects into groups requiring different access privileges or different login users.

4. Recommended Protocol/ Standard:

A security group is created for each agency to place all of that agencies associated radios and users into for ease of tracking. Radio users are assigned to the security group of their primary agency affiliation. Any change to a radio template via a change in security group, prior to implementation the affected end user(s) should be notified when such change has taken effect.

5. Recommended Procedure:

The security group structure is part of the system planning process and was created as part of the fleet map loading of the system. All additions and updates are managed by RIEMA. Changes and requests to security groups should be made to RIEMA and the Chair of the ICC for consideration. RIEMA and the ICC Chair should review all such requests and either approve or disapprove such requests. If approval is made, the ICC Chair will advise the agency of such approval and recommend to RIEMA that changes to security level requests should be implemented. If all change requests are managed though the prime site, then permit authorizations to allow that change is to take place.

6. Management

RIEMA is responsible for the security group structure on the system and is responsible for the usage of the security groups as defined in the procedure.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.7a	Equipment Standards
Revised:				

1. Purpose or Objective

To set the minimum technical and performance standards for subscriber radios operating on RISCON. To establish a policy avoiding premature obsolescence of subscriber radios. To establish procedures for RIEMA to measure, test, certify and publish a list of subscriber radios that are approved for use on the system.

2. Technical Background:

- **Capabilities**

RISCON utilizes digital communication technology with the primary use being voice communications. For example: The system utilizes the APCO P25 Phase 1 protocol, a proprietary digital format, and a 9600 baud control channel and ADP encryption..

- **Constraints**

Subscriber radios from different vendors often utilize different operating software providing a variety of services, features, functionality and performance to the users. Many of these radios interact differently with the infrastructure and can potentially exhibit undesirable operational characteristics. An example of an undesirable operational characteristic is poor simulcast audio recovery that results in reduced geographic range, garbled audio, etc.

It is also possible that new, unproven radios and/or software can exhibit performance and functionality characteristics that are destructive to the overall performance, capacity and/or security of RISCON.

3. Operational Context:

System users need access to radios that meet operational needs for the lowest cost. All radios that are used on the RISCON system should have the following minimum standard: APCO P25 Phase 1 protocol, a proprietary digital format, and a 9600 baud control channel and ADP encryption.

Users need the flexibility and knowledge to optimally choose from available radios, and at the same time be discouraged from requesting radios which would be operationally undesirable, problematic, or not cost effective. Users are prohibited from using radios that are destructive to the system.

4. Recommended Protocol/ Standard:

Before a new radio is approved for use it must undergo testing on the system. Members of a radio test team are appointed by RIEMA and additional members of the ICC Test Team as appointed by the ICC Chair are responsible to conduct actual radio tests. Once sample radios are obtained, the testing process shall be completed as quickly and efficiently as practical so as to not delay the availability of new radios to users. New anticipated radios must have a proven track record of operating on a P25 standard.

5. Management

RIEMA is responsible for managing this procedure including maintaining all testing and certification records, managing radio equipment manufacturer initiated submittals, and coordinating activities of the test team. RIEMA maintains and has available a list of all radios approved for use on the system along with any limitations on use of the radio.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.7b	Encryption Standards
Revised:				

1. Purpose or Objective
Encryption of radios issued to RISCON agencies is the responsibility of RIEMA. RIEMA shall provide encryption services to all approved agencies utilizing RISCON as required.

3. Technical Background:

- **Capabilities**

Encryption is an option on digital radio equipment that must be specially ordered and manually configured. The RISCON system is capable of three forms of encryption: Advanced Digital Privacy (ADP); Data Encryption Standard (DES); and. Advance Encryption Standard (AES). Depending on the level of encryption required, some radios are capable of storing multiple keys for different uses and situations. RISCON system utilizes ADP for encryption.

- **Constraints**

Encryption comes in many forms, and can be system specific. Care shall be taken to ensure the type of encryption used is compatible with the system and other radios assigned. Radios transmitting in the DES encrypted mode cannot be heard by dispatchers, ADP encryption users, or non-encrypted users. It shall be noted that due to the way that encrypted radios are programmed in RISCON system, use of the emergency button causes the radio to jump to a dispatched and unencrypted talk group for handling of the emergency.

3. Operational Context: N/A

4. Recommended Protocol/ Standard:
Primary dispatch and interoperable talk-groups will not be encrypted at any time to ensure interoperability with outside agencies. Each agency shall determine if encryption will be used on its own administrative and tactical talk groups.

5. Recommended Procedure:
Agencies wishing to use encryption shall obtain approval from RIEMA and the ICC board. When approved the chair of the ICC will recommend to RIEMA to carry out the approved request.

6. Management
RIEMA and the ICC will manage this protocol.

Different talk groups may utilize AES encryption standard while others talk groups may use ADP encryption. ADP is Motorola PROPRIETARY encryption and is not a recognized standard encryption under the P-25 standard.

The State needs to adapt AES for any talk group that truly needs encryption because of the superior 256 bit key encryption. Another issue with using the non-standard ADP is the lack of interagency interoperability. This would affect any joint task force efforts and any interoperability with neighboring states as the region moves forward with ISSI connectivity. Using any non-standard P-25 options, like ADP, reduces the State's ability to procure subscribers from multiple venders.

Should encryption only be available to medical emergency units and Law Enforcement Agencies and only to special units such as SWAT, Undercover, Detectives, Drug Enforcement other special users as approved by the RIEMA and the ICC?

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Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.8a	Requesting System Access
Revised:				

1. Purpose or Objective

Establishes the procedure for requesting agency access on RISCON, and access to other agencies individual talk groups.

2. Technical Background:

- **Capabilities**

Only radios that are programmed by RIEMA can access RISCON system and will be allowed on the system. RIEMA shall be consulted to ensure the specified equipment can operate correctly and is approved for the system prior to submitting a request for access. Any agency wishing access to another agency talk group must have a signed MOU from that agency for access. Submitted request are sent to RIEMA and a copy to the ICC.

Inclusion into the RISCON system shall be at the approval of RIEMA after an assessment of need is performed. This assessment shall include a comprehensive study of the system to be abandoned by the requesting entity. This assessment shall include the scope of the current system in place, license and frequency designations, and stated reasons for transitioning to the RISCON system. This assessment shall also be filed within RIEMA to track all units within that particular system and inventoried hardware. The request shall meet a priority of need assessment with first responder and emergency user considerations met first before any requested ancillary use of the system.

- **Constraints**

Each agency controls outside users access to the agency's individual talk groups. RIEMA will not give access to any other talk group without first having the written approval from the agency.

3. Operational Context:

To ensure operational integrity of the system and avoid potential interoperable issues, agencies that may wish to have other agency talk groups programmed into their radio must justify the need for such a request. Changes to radio templates may affect operational personnel at dispatch centers and well as impact how end users will use their radios. Once permission is granted and prior to the execution of such changes, those agency subscriber radios and dispatch personnel must be trained prior to turn on.

4. Recommended Protocol/ Standard:

Requests for access to RISCON are submitted in writing to RIEMA, who will forward the request to all required parties for approval.

5. Recommended Procedure:

The access request form in Appendix 3 should be used, or requested from RIEMA and completed by the requesting agency's representative, and returned to RIEMA for processing.

6. Management

RIEMA is responsible for the routine handling of the requests.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.9a	Outside Agency Participation
Revised:				

1. Purpose or Objective

Establishes the procedure for an eligible outside agency, such as a local, state or federal agency, an adjoining State, an Emergency Medical Service (EMS) provider, or a special purpose governmental agency to apply for full participation in RISCON.

2. Technical Background:

- **Capabilities**

Agencies requesting participation shall be prepared to purchase, negotiate a lease agreement, or already own 800 MHz digital trunking radios approved by RIEMA and ICC. In addition, participation could require the purchase and installation of additional equipment, features, and/or options in order to be compatible with RISCON's system.

- **Constraints**

All agencies eligible to join RISCON shall do so in accordance with, and meet the requirements of, this standard and agree to abide by the provisions in the end user agreement. Operational plans shall be presented to RIEMA with a copy to the ICC for review along with interoperable issues the requesting agency may deem appropriate.

Because of the limited number of available Fail-soft channels, outside agencies may not be granted a fail-soft channel assignment, and will receive a lower priority for all talk group assignments; unless they can demonstrate the need as emergency responders or receivers, however interoperability access is not affected by this policy.

3. Operational Context:

Generally there are two ways to participate in RISCON, full participation and limited participation through interoperability. Limited participation through interoperability is possible by those agencies operating on VHF, UHF or 800 MHz analog systems. This procedure deals only with agencies seeking full participation.

4. Recommended Protocol/ Standard:

Requests for full participation shall be submitted in writing to RIEMA copy to the ICC, and be signed by the requesting agency director or department head. The requestor is also required to review the enclosed end user agreement found in Appendix 2 of this standard and must agree to its provisions.

5. Recommended Procedure:

The request shall provide an outline of plans the requesting agency has developed for full participation. The written request shall indicate the name and contact information for the person designated to lead the project.

If a technical use plan is already in place, the agency shall submit the plan to RIEMA for review to ensure compliance and compatibility with RIEMA's plan. If a technical use plan is not in place, RIEMA with the assistance of the ICC shall assist the requesting agency in developing a plan. Costs associated with the development of a technical plan are borne by the requesting agency. When the plan is complete it is submitted to the RIEMA and the ICC, which shall review the plan for compliance and compatibility with the SCIP's.

RIEMA and the ICC shall act on the request within a reasonable time period. RIEMA and the ICC can accept the request as submitted, accept request with conditions or deny the request. If the request is initially denied, ICC shall provide details on changes or additions to the plan that brings the plan into compliance with SCIP's plan.

Following making design changes that bring the agency's plan into compliance with the SCIP plan, the requesting agency can resubmit the request.

6. Management

The RIEMA and the ICC Chair is responsible for management of this procedure.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.9b	Requesting Limited Participation
Revised:				

1. Purpose or Objective

Establishes the procedure for requesting limited participation in RISCON. Limited participation is defined as utilizing the system for interoperability with RISCON agencies, and/or for purposes of mutual aid.

This procedure is not intended to restrict any authorized users from access to the 800 MHz conventional interoperability channels [NPSPAC] currently in use.

2. Technical Background:

- **Capabilities**

The eligible agency shall use only RIEMA approved 800 MHz equipment capable of communicating on assigned and licensed public safety land mobile channels.

- **Constraints**

All agencies eligible to join RISCON shall do so in accordance with, and meet the requirements of, this standard and agree to abide by the provisions in the end user agreement. Operational plans shall be presented to RIEMA and the ICC for review along with a summary of interoperable issues the requesting agency may as deem relevant by the requesting agency appropriate.

Because of the limited number of available fail-soft channels, outside agencies may not be granted a fail soft channel assignment, and will receive a lower priority for all talk group assignments, however interoperability access is not affected by this policy.

3. Operational Context:

Interoperable communications between agencies is at the discretion of each talk group owner, and permission can be rescinded at any time by, RIEMA, or ICC.

While all government agencies in RISCON area are eligible to use the system, certain information shall be furnished to RIEMA for administrative and equipment programming purposes prior to commencing operations on any interoperability channel.

4. Recommended Protocol/ Standard:

Each agency shall submit a letter of intent to RIEMA and forward a copy to the ICC. RIEMA shall approve the application only when technical and training requirements are met. Any agency requesting limited participation must agree to the provisions outlined in Appendix 3 of this SOP.

5. Recommended Procedure:

Each eligible agency wishing to interoperate with full participants in RISCON system shall submit a letter of intent to RIEMA. The letter should contain information as to when the agency intends to begin using the system, which agencies they are requesting interoperability with, and indicate the

name and contact information of the agency's radio communication point-of-contact., including contact information.

Following receipt of the letter of intent, ICC shall notify the radio point of contact for the agencies with whom the interoperability is requested and forward the documents for consideration. When ICC receives the responses back from the agencies requested, and is satisfied that the agency has met all technical and training requirements, a favorable recommendation is made to RIEMA to approve the application. NOTE: Requesting agencies are strongly encouraged to obtain preliminary agreement from thr agencies with whom they requesting interoperability before submitting their request to RIEMA and the ICC.

RIEMA shall develop a directory that includes appropriate and necessary information for each agency including name and contact information for the agency's radio communication point-of-contact, and any other information that is necessary as determined by RIEMA.

6. Management

RIEMA staff is responsible for managing and forwarding documents as appropriate.

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Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.9c	Configuration Approval
Revised:				

1. Purpose or Objective

Establishes the procedure for obtaining approval of the technical design configuration developed by an agency requesting full participation in RISCON.

2. Technical Background:

- **Capabilities**

The technical design shall be consistent with and capable of operating on RISCON

.

- **Constraints**

The design plan shall be consistent with the capacity constraints of the system.

3. Operational Context:

This protocol provides guidelines for developing a design plan that is compatible with the overall plan adopted by RIEMA.

4. Recommended Protocol/ Standard:

The requesting agency shall submit a document to RIEMA and a copy to the ICC providing complete details on plans for full participation in RISCON. The plan is subject to a review process, including but not limited to review by RIEMA.

5. Recommended Procedure:

When the reviewers are satisfied that the plan meets the constraints of RISCON and is compliant with the standards inherent in the system, the plan shall be submitted to RIEMA as part of its formal request for participation.

6. Management

The requesting agency is responsible for managing this procedure. The staff at RIEMA provides assistance and advice.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.10d	Subscriber Radio Users
Revised:				

1. Purpose or Objective

Establishes the minimum training standards for radio users, which ensures proper operation of radios on the system.

2. Technical Background: N/A

3. Operational Context:

System functionality and integrity shall be maintained by ensuring that only trained personnel operate radio equipment.

4. Recommended Protocol/ Standard:

- Radio users shall successfully complete appropriate training on assigned radios before being allowed to operate on the system. Appropriate training shall, at a minimum, include formal training from a qualified instructor who is approved by RIEMA and the ICC.
- Radio users shall be trained on the technical operation of assigned radios.
- Radio users shall be trained on how to operate the radio within RISCON along with any special features of the system they will use, e.g. interconnect, private call, etc.
- Radio users shall be trained on and demonstrate familiarity with all applicable mutual aid requirements and interoperable requirements and standard operating procedures.
- RIEMA staff assists user agencies in identifying training needs and implementing training programs to meet those needs.

5. Recommended Procedure:

This manual does not set forth the specific training procedures or training modules; however, RIEMA should review radio user training documents to ensure conformity.

6. Management

Each User Agency is responsible to ensure that:

- Personnel assigned radios receive the appropriate training
- Only trained and qualified personnel operate radio equipment (create training module for State training Academies.
- Radio users are familiar with all applicable sections of the system standards manual.
- ICC staff should from time to time conduct audits of agency use of radios using RISCON system to ensure that:
  - Interoperability features are carried out in the prescribed manner and understood based on RISCON standard operating procedures and those agency-specific procedures submitted to RIEMA during the approval process.
  - Interoperability at the dispatch function should be tested from time to time to determine effectiveness.

- After action reports annual shall be prepared by the ICC for recommend changes.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	1.0	SYSTEM MANAGEMENT
Approved by:		Sub-Section:	1.10e	Training Conventional Users
Revised:				

1. Purpose or Objective:

Establishes the minimum training standards for radio users having access to interoperable talk groups of this system that ensures the proper operation of radios on the system and safeguard against improper utilization of Zone, State and Regional Interoperability resources.

2. Technical Background: **N/A**

3. Operational Context:

System functionality and operability is maintained by ensuring that only properly trained personnel use the interoperable talk groups on RISCON for interoperable/mutual aid communications. If non-participating agencies do not have appropriate training, then communications system failure or a degradation of system resources may occur.

4. Recommended Protocol/ Standard:

- Interoperable radio users shall have:
  - ✓ Successfully completed appropriate training and
  - ✓ Demonstrated knowledge of Section 3: Interoperability Guidelines.
- The end user training emphasizes:
  - ✓ The use of interoperable channels
- The dispatch and supervisory training emphasizes:
  - ✓ The use of interoperable channels
  - ✓ The use of patching, and patched channels
  - ✓ The use of cross band repeaters and gateway devices
  - ✓ The use of RF control stations
  - ✓ How a non-participants radio experiences are affected by digital communications.
- Radio users with access to interoperable channels must be familiar with all applicable mutual aid requirements and interoperable requirements, and standard interoperability procedures.

5. Recommended Procedure:

This manual does not set forth specific training procedures or training modules.

6. Management:

RIEMA is responsible to prepare and maintain current training materials on the interoperable talk groups and to ensure that copies are available to non-participating radio users. RIEMA will establish a Radio user standard teach lesson plans to be used by all Fire, Police and Municipal Academies. In addition to these standard training a train the trainer program will be developed for the state.

Agencies requesting and/or using the interoperable talk groups are responsible to ensure that:

- Radio users successfully complete appropriate training and demonstrate knowledge of interoperable procedures before being allowed to operate the interoperable talk groups.
- Radio users are familiar with all applicable interoperable sections of this manual.
- Radio users are familiar with all applicable mutual aid requirements and interoperable standard operating procedures.
- ICC staff should from time to time conduct audits of agency use of radios using RISCON system to ensure that:
  - ✓ Interoperability features are carried out in the prescribed manner and understood.

After action reports shall be prepared by the ICC for recommend changes and submitted to RIEMA for review and action.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.1a	Naming Standards – Radio Alias
Revised:				

1. Purpose or Objective

Establishes the principle by which all agencies on the radio system determine an agency alias/acronym for their radios in order to ensure that there are no duplicates and to facilitate intuitive understanding of the acronym as it relates to the agency's name.

2. Technical Background:

- **Constraints**

Every radio user ID in the system shall be unique. There can be no duplicate IDs. The radio user alias field holds up to 14 characters and the legal values that the system can accept are: upper case alpha, numeric, period, dash, forward slash, and number sign.

3. Operational Context:

With the exception of the first few characters users are technically free to choose any unique name. However, since this is a shared system, radio user aliases that are programmed into the system shall have naming conventions for agencies that will not conflict with each other. All alias assignment shall be at the discretion of RIEMA communications staff.

4. Recommended Protocol/ Standard:

In order to meet this need the radio user aliases are prefixed with a unique three digit numeric identification number for the agency.

The naming standard for most agencies only govern up to the first three characters. The characters following the first three are at the individual agency's discretion, for example, the agency can opt to internally use more than two characters for the internal identifications.

A master list of radio user aliases is maintained in the system, and the naming prefix template is maintained in RIEMA' s SOP. Radio user aliases are readily accessible through the data terminal. As alias names are created and approved, they shall be placed on the master list for operations and planning. (See Management Section 1.3 – Database Management & Upkeep)

5. Recommended Procedure: N/A

6. Management

RIEMA is responsible for following and maintaining the defined standard.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.2a	Talk group ID Allocation
Revised:				To BE Developed

1. **Purpose or Objective**

The purpose of allocating talk group ID ranges for individual agencies allows agencies and RIEMA to manage the pool of IDs as talk groups are configured. This simplifies the management of the IDs and provides an easier indication of agency IDs.

2. **Technical Background:**

System a talk groups shall be in the range of 3000001 to 3065534.

B System talk groups shall be in the range of 800001 to 865,534.

3. **Operational Context:**

RISCON starts at the beginning of the talk group range with 3000001 or 800001.

4. **Recommended Protocol/ Standard:**

For programming radio users and talk groups, individual agencies can only use the IDs assigned to them by RIEMA.

5. **Recommended Procedure:**

Agencies needing an additional allocation shall make a written request to ICC for review prior to new assignments being given.

6. **Management**

RIEMA individually manages the ID ranges for day to day activities, and for reserve allocation.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.2b	Subscriber Template Standards
Revised:				

1. Purpose or Objective

RISCON contains a large number of talk groups to support the various agencies that subscribe to the system.

For the effective management of the system this policy defines the process that is used to document the radio subscriber template information. Subscriber template configuration information is classified as confidential, and is not released to the public.

2. Technical Background:

- **Capabilities**

The subscriber template is parameter information programmed into the individual subscriber radios to control how those radios perform on RISCON system.

An agency's subscriber template spreadsheet is developed and maintained by RIEMA with the input of each agency's radio representative. This is to ensure the agency gets the talk groups, features, and functionality desired from the radios, while maintaining the overall functionality and integrity of the radio system.

The radio subscriber template is usually specific to a particular agency, but an agency can elect to have different template versions depending on the department's needs and operations.

The templates normally contain the following information:

- **Radio Configuration** - Specific information related to a particular model of radio, including but not limited to; button assignment, display options, menu items, and other radio wide parameters
- **Conventional** - Personality information that determines the radios operation in the conventional mode such as frequencies, tones, and signaling options
- **Trunking** - Identifies systems and talk group specifics that the subscriber radio has access to, as well as system and unit specific ID numbers relating to the radios operation
- **Scan** - Defines the limits and lists of the subscriber radio's scan function, when equipped
- **Zone Assignment** - Where talk groups are combined into specifically labeled banks within the radio that represent or reflect operations of a particular agency, or operation. The zone designation reflects an acronym that should easily identify the zone as belonging to a particular agency, as reflected in Appendix 3, Radio Zone Aliases.

- **Constraints**

Access is tightly controlled, and is considered confidential

3. Operational Context:

RIEMA is responsible for managing the subscriber template information of the users. The ID information is kept secure as described in Section 7 of this manual.

4. Recommended Protocol/ Standard:

RIEMA and each agency's radio representatives maintain a subscriber template spreadsheet for each of the agency's template versions.

5. Recommended Procedure:

- If individual agency representatives desire to make updates and changes to their templates, the changes shall be coordinated with RIEMA. This allows RIEMA technicians to document any updates, coordinate those changes that affect other agencies and/or users, and maintain the database for reference and interagency fleet map planning.

- RIEMA, at the direction of an agency using encryption, may omit listing any information in the master fleet map spreadsheets for encrypted talk groups used for undercover operations and other highly sensitive activities.

- The disclosure of the template configuration information including talk group IDs, user IDs, user privileges and other related system information could substantially jeopardize the security of the system, and make it more susceptible to tampering, sabotage, unauthorized use, jamming, hacking, unauthorized access to the contents of confidential voice and data communications. Therefore, the master fleet map spreadsheets shall be classified as 'Restricted Information', and are not available to the general public except by formal written request to RIEMA.

6. Management

RIEMA manages the fleet mapping, subscriber templates, and radio system programming for all agencies, and the details of the process for communicating the information. ICC should work with agencies to ensure uniformity and establish standards that will be enforced.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Nov 15, 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.3a	Talk group Ownership
Revised:				

1. Purpose or Objective

Defines the ownership of private, shared, and interoperable talk groups and resources, and provides a standard so that RIEMA shall have firm guidelines on allowing particular talk groups programmed into radios. Talk group planning and development shall be coordinated with RIEMA prior to implementation.

2. Technical Background: **N/A**

3. Operational Context:

Talk groups are considered 'owned' by the agency requesting the creation of the talk group. The process for pre-defined sharing authorizations is explained in Section 2.4b.

4. Recommended Protocol/ Standard:

There are three tiers of talk groups that are programmed into the system:

Private:

Private talk groups that are owned by the individual user agencies, used for normal day to day operations, and are not shared with any other agency.

Talk groups prefixed with the owning agency's identification as defined in the talk group naming standards of the system standards manual.

Shared:

Private talk groups are owned by the individual user agencies, and shared with other agencies by mutual agreement. These are generally used for routine or pre-planned activities between the sharing agencies.

Talk groups prefixed with the owning agency's identification as defined in the talk group naming standards of the system standards manual.

Private and shared talk groups are "owned" by a particular agency or group of agencies and the talk group shall not be programmed into other agency's radios unless specifically authorized by the "owner". RIEMA shall not allow a talk group to be programmed into a radio without such authorization.

Before a talk group can be shared, the owning agency must "pre-authorize" the sharing arrangement and/or provide a letter of authorization.

Interoperable:

Interoperable (i.e. Mutual Aid) talk groups are intended for interagency communications and assistance and fall into two categories: 1) those used for 800 MHz communication only, and 2) those that are patched to conventional RF resources.

Interoperable talk groups shall not be owned by any specific agency, and shall not require agency letters of authorization. The authorizations are defined in Section 3 of this manual. This provides

standing written documentation so that RIEMA has firm guidelines on allowing particular talk groups in radios.

Because these are non-owned talk groups, talk group names shall not be prefixed with agency identification.

5. Recommended Procedure:
The procedure regarding pre-authorizing talk group sharing is defined in Section 2.4b of this manual.

6. Management
RIEMA is responsible to see that this policy is implemented as defined in this system standards manual.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.4	Talk group and Radio User Priorities
Revised:				

1. Purpose or Objective

The purpose of establishing varying priority levels for talk groups is to assure the most critical talk groups on the system are granted a channel as quickly as possible where the system is experiencing busy conditions.

2. Technical Background:

- **Capabilities**

The system priorities can be managed at the radio user level and at the talk group level.

- **Constraints**

All radio user priorities are set to 10, as radio users change talk groups, the effective priority is set by the assigned talk group.

3. Operational Context:

Priority levels in the system are managed at the talk group level. The goal is to distribute priorities across the systems talk groups in a way that maximizes the ability for critical groups to communicate and minimizes the number of talk groups with high priority. All user priorities are set to the lowest priority level, 10. As radio users change talk groups, the effective priority is set by the assigned talk group.

4. Recommended Protocol/ Standard:

RIEMA assigns talk group priority levels not exceeding the level defined by the criteria below. Talk group priorities that are assigned to level five or above are subject to the review and audit provisions that are specified in the Management Section 1.7 of these system standards.

Priority 1: [Definition: EMERGENCY]: Only Emergency Alert calls, i.e. emergency button pressed, are given the Priority 1 status automatically by the system's controllers.

Priority 2: [Definition: EXTRAORDINARY/TEMPORARY]: Is used for temporary re-prioritization (via system manager terminal) of a lower priority talk group for critical operations, i.e. presidential motorcade, major incident command, etc. In addition Priority 2 is assigned to dedicated "EMERGENCY ALARM" talk groups for agencies such as Transit that do not use the Emergency Alert (emergency button) function.

Priority 3: [Definition: Shared Talk groups normally dealing with MUTUAL AID]: system-wide mutual aid interoperability talk groups.

Priority 4: [UNASSIGNED]:

Priority 5: [Definition: Talk groups dealing with the Safety and Protection of Life and Property]: Is used for talk groups that have an impact on the delivery of services that involve the safety and the protection of life and property. Priority 5 talk groups may also include those talk groups used by personnel involved in high risk and mission critical field operations.

Priority 6: [UNASSIGNED]:

Priority 7: [NON-MISSION CRITICAL]: Is for all other "secondary", "administrative", "non-essential" or "non-mission critical" talk groups used by subscriber agencies, both public safety and general government. (See Glossary - Definitions and Acronyms for explanation of "Mission Critical" and related terms.)

Priority 8 [Outside Agency]: Is used by outside agencies talk groups, where the agency is not a RISCON or OTHER entity and has requested a dedicated talk group for their own use, as defined in Section 1.9a.

Priority 9: [UNASSIGNED]:

Priority 10: [PRIVATE CALLS]:
Is used for private calls as defined by direct point to point radio to radio communications that are not carried out within a talk group. This priority will also be used for talk groups that are established for system testing.

The priority assigned to each talkgroup will be determined in consultation with owning agency at the time the agency's fleetmap is established, and each agency will be apprised of any changes to the priority assigned to its talkgroups.

5. Recommended Procedure:
N/A

6. Management
RIEMA is responsible for supervision and management of this procedure. ICC should review and recommend changes as deemed necessary

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.5	Telephone Interconnect
Revised:				For future Capability

There is no Telephone Interconnect feature on RISCON.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.6	Audio Logging Recorders
Revised:				To be developed

1. Purpose or Objective

Establishes the procedure for the use and accessing of audio logging devices.

2. Technical Background:

- **Capabilities**

A System Audio Logging Recorder allows all audio based radio traffic on the system to be recorded and stored for future reference.

A talkgroup does not need to be active at a console position to be recorded.

- **Constraints**

DES Encrypted calls are recorded, however, the encryption key is not installed into the system and therefore those recordings are unusable and unrecoverable.

Audio Loggers do record private calls.

Other options for logging recorder audio sources are console logging audio outputs and individual control station based systems.

- Console logging audio outputs include transmit audio, and select and un-select receive audio. Console logging audio is only available for talkgroups that are active at the console work position. There is no way in which the separate audio for a specific talkgroup can be identified as belonging to that specific talkgroup. There can be received audio on multiple talkgroups on the un-select logging recorder audio channel. Frequently the audio from more than one talkgroup can be mixed together resulting in the inability to understand any one of the mixed audios being recorded simultaneously.

- A control station can be used as a source to receive the audio from a specific talkgroup. Multiple control stations, one for each specific talkgroup to be recorded, can be used at any one recording location. Control stations could also be used to record encrypted talkgroups if properly equipped and with the correct encryption key.

2. Operational Context:

The primary system audio logger is installed at the ____. A secondary logger with limited capability is housed at the back-up dispatch center. Both logging systems are normally accessed and controlled by _____staff

3. Recommended Protocol/ Standard:

An agency that needs to access the recording system, or requires a copy of any logged radio traffic should make their request to RIEMA staff or Radio Communications Supervisor at each Dispatch

Center. The request should include specific information detailing the talkgroup, radio user(s), radio ID, time of day, and any other information that would help in processing the request.

Individual agencies are allowed to purchase, operate, and maintain their own secondary logging systems for their own use, but access for those systems is limited to talkgroups specific only to those agencies unless otherwise approved by RIEMA.

4. Recommended Procedure:

Requests for audio records should be directed to the _____, which is the agency responsible for processing those requests. All requests should be for legal purposes only. The request should outline the nature of the request and why, unless the request is for a special investigation.

5. Management

ICC is responsible for this policy, while the RIEMA is responsible for the operation and data back-up of the logging system.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6 , 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.7	Private Call
Revised:				To be developed for future capabilities

1. Purpose or Objective

To manage the use of private calls on the system. While this is a useful feature that is needed by some users, it shall be managed to an appropriate level to protect the primary radio communications purpose of the system.

2. Technical Background:

- **Capabilities**

Private calls can be placed between authorized individual users of the system. This communication is outside of normal talkgroup communications, and is essentially a private communication between to two radio users. Console operators can also place private calls to the radio users.

- **Constraints**
  - The private call feature must be enabled in the users radio template and in the system controller in order for the feature to work
  - A private call will consume a voice channel for the duration of the conversation
  - Private calls are simplex; only one end can talk at a time.
  - A low-tier radio cannot initiate a private call; it does not have the feature available.
  - A mid-tier radio can only place private calls to numbers that are pre-programmed into the radio.
  - A high-tier radio can place a private call by dialing the number directly via keypad entry.
  - Private calls are recorded by the system.
  - For the duration that a radio user is involved in a private call, the user will not be involved in dispatch or talkgroup communications.
  - The system is not able to restrict the usage of private call on the system, unlike interconnect calls, which can be managed.

3. Operational Context:

The private call resource is to be used as a supervisory or system maintenance function. If there is a business need for a radio user to have this ability, it can be granted, but the resource must be closely managed to protect the RF resources of the system. This is also a capability of the dispatch consoles.

4. Recommended Protocol/ Standard:

Private call usage shall only be programmed for the users of the system that have a need for the function; the primary purpose of the system is for radio communications. The priority level for private calls is 10; this is defined under the priority section of this document.

5. Recommended Procedure:

RIEMA and the agency radio representatives shall work with the user groups to plan the appropriate private call programming requirements if any, for those users, in order to protect the resources of the system.

6. Management

RIEMA is responsible for following this procedure and monitoring the effect and usage of this resource. If negative impact or excessive usage is determined, private call permission can be reconsidered and possibly revoked.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2013	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.8	Status Message Transmission
Revised:				

There is no Status Message feature on RISCON.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	2.0	CONFIGURATION & ALLOCATION
Approved by:		Sub-Section:	2.12	Emergency Button
Revised:				To Be Developed

1. Purpose or Objective

There are a large variety of users on the radio system with various emergency alarm/notification needs. The various ways the emergency alarm can be configured allows for flexibility of use, however, it is important to plan the use of the feature in such a way that when an emergency button is pushed, it is responded to quickly and appropriately.

RIEMA shall ensure that users are aware of the radio system's emergency signal capabilities, and provide users with a means to maximize their use of this benefit.

Note: Agencies may request to have the Emergency button disabled if the radio user is not a first responder. This request must be in writing and only the agency that owns the radio my make the request.

2. Technical Background:

- **Capabilities**

The emergency button feature, if programmed, shall allow a radio user to send an emergency notification by pressing a button on the radio. The notifications audibly and visually alert all dispatch console positions with the talkgroup in their active configuration. Subscriber radios having the talkgroup selected also receive the emergency notification once the 'emergency' radio is keyed, and displays the radio ID (or alias depending on the model of radio) of the radio generating the emergency.

Emergency calls are also automatically assigned the highest priority available by the system controller, and are the first available from the queue if the system is in a busy situation.

- **Constraints**

Radio template designs must avoid any instance where an emergency is declared, but the user can not be identified, or the emergency is directed to the wrong dispatcher or agency.

3. Operational Context:

In all RISCON radio configurations, the emergency alarm feature is always programmed for the recessed orange button on the top of the portable radio, or the top left feature button on the mobile radio.

An agency can use the emergency button, if they so elect, however the process to receive the emergency notification needs to be documented and contain resolution for the items listed below in item 4.

No user of the system is provided with emergency signaling capability, unless the user agency provides for 24-hour a day, seven day a week (full time) direct dispatch capability, or has a written agreement with a 24-hour dispatch center that supports this function. No dispatcher shall clear an emergency without ascertaining what action is necessary to handle said emergency; and taking the appropriate action to do so. RIEMA shall further develop an approved procedure for responding to emergency calls and the proper handling of such calls.

4. Recommended Protocol/ Standard:

Use of the emergency button as an emergency signaling option shall be available to any agency on the radio system, subject to certain conditions and provisions.

1. Agencies are not allowed to use this capability of the radio system without prior training provided to all users that have the feature activated in their radio.
2. All agencies implementing the emergency button shall have a plan in place to respond to emergency button activation. RIEMA and the ICC should address emergency procedures for all agencies prior to implementation.
3. It is the individual agency's responsibility to determine how an emergency alarm is answered, and which talkgroup(s) are capable of responding to an emergency alarm, and to which talkgroup a specific alarm reverts to.
4. All emergency key response plans must include, at minimum:
    - A central radio monitoring point identifying which radio user pushed the key, the location and nature of the emergency, and the proper agency response.
    - A central monitoring point shall be available during any/all hours that personnel are using the radio system.
    - A policy shall be in place for use of the emergency button by radio users.
    - A response plan shall be in place to assist the radio user in need.
    - In the event the central radio monitoring point is not the same agency as the radio user, an agreement on policy, monitoring, use, and response, shall be in place among the agencies.
    - In the event of an accidental activation, the user should provide their ID (Badge, Employee Number etc) to validate the activation was accidental. Failure to provide this information within 5 seconds would indicate the emergency is real.

5. Recommended Procedure:

ICC should determine who on the network needs to have the emergency button activated. With the large number of users on the system and given it is a statewide system, management control over this feature may reduce the need for other users to respond to accidental trips.

6. Management

Agencies that wish to use the emergency key function shall coordinate with agency resources that receive the emergency calls. The receiving agencies shall have an appropriate plan in place, and documented as to the process to handle the emergency calls.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.1a	Zone Management
Revised:				

1. Purpose or Objective:

Establishes a dedicated, system-wide, interoperable talkgroups associated with each Zone in all radios assigned to RISCON for interagency communications when coordination is required between any users on the system, but especially:

- Law enforcement, Fire Suppression, EMS, and EMA
- RISCON first responders, other state and local agencies that have radio capabilities associated with each Zone.
- Homeland Security agencies and responders

2. Technical Background:

- **Capabilities**

RISCON planners recognized the need to make common interoperable talkgroups available to all subscribers, but primarily for use by law enforcement fire departments and EMS agencies for interagency and incident command communications. RIEMA and the ICC should review interoperability standards and how they will function within each Zone and determine to what extent, additional Zones should be programmed into radios. The primary dispatch-command control should be programmed and accessible using the A selector switch on a radio. Other National emergency channels such as 800 MHz interoperable 8CALL90 & 8TAC91-94 can be programmed in the B/C/D switch position. Other frequencies authorized by RIEMA that are in direct mode for local, point-to-point, radio-to-radio communications should be established using other channel assignments or switch positions.

- **Constraints**

RIEMA and ICC need to revaluate the deployment of radios within Zones, along with fleet maps and how they are be used for normal day to day dispatch, address interoperability issues for each Zone, determine how and when State wide and System access is needed and what group or groups of agencies will have this capability. Included in the review is to determine when or how encryption will be deployed.

3. Operational Context:

The Zone wide talk groups are used for everyday interoperability command and control of agencies working in local zone regardless of agencies. .

Multiple Zone talk groups can also be used for short-term high intensity events such as a law enforcement, pursuit,. fire mutual aid events that cross State borders, and for long-term extraordinary events like a plane crash or storm disaster.

If possible avoid patching between any Zone talk group and any channel or frequency outside of RISCON unless this is the only suitable means for interagency communicating are unavailable, or if the other available means for coordination of communications are insufficient.

Alternatives to an Zone patching may include:

- Use of a patch between the 8TAC91-94 channels and VTAC11-14 and/or UTAC41-43

- Radio to radio cross band repeaters between tactical channels at the scene via a gateway device (ACU-1000) at the scene or command site
- Radio console soft patching of a preauthorized VHF or UHF mutual aid or tactical channel to a preauthorized talkgroup on RISCON

4. Recommended Protocol/ Standard:

The following table shows the layout of the 'A Zone', the naming standard for all radios on the system. This zone is duplicated in ALL subscriber radios and consoles for system-wide interoperable communications.

Below is an example: (This should be found in each agencies Communication plan)

Common Channels		
Unified Command	A1	Digital
Unified Command	A2	Digital
Unified Command	A3	Digital
Unified Command	A4	Digital
Unified Command	A5	Digital
Unified Command backup on B	A1PSE	Digital
Unified Command backup on B	A2PSE	Digital
Unified Command backup on B	A3PSE	Digital
Joint Operations	A6	Digital
Joint Operations	A7	Digital
Joint Operations	A8	Digital
Joint Operations	A9	Digital
All RISCON Hailing	A10	Digital
Joint operations Back Up (System B)	A6OPSE	Digital
Joint operations Back Up (System B)	A7OPSE	Digital
Joint operations Back Up (System B)	A8OPSE	Digital

5. Recommended Procedure:

Normally, an event that requires interagency coordination begins on a main dispatch radio channel of one of the public safety agencies.

- When it becomes apparent that interagency coordination of law enforcement and/or EMS agencies is needed, a dispatch operator or supervisor shall advise the incident commander to switch talkgroups to an alternative Zone. This information should be reviewed by RIEMA and the IC.
- The specific radio channel to be used is specified and shall be issued by RIEMA to ensure frequesy continuity. The following groups are responsible for the requesting a Zone Wide or Wide area talk Group Assignment, dispatch center operator, incident commander, Communications Unit Leader (COML), or their designee.
- If the selected Zone cannot be used for any reason, or if additional public safety interagency intercommunication is required, a console patch between the mutual aid channels and/or Interoperable frequencies and the appropriate Zone' talkgroups can be set up by the dispatch supervisor.

Dispatch center support and the decision to use the console patch is the responsibility of the dispatch center supervisor.

6. Management:

Responsibility for monitoring performance and for modifying this procedure is a function of RIEMA and the ICC technical committee.

The dispatch center supervisor is responsible to ensure that there is a procedure for use of a patch between the interoperability channels and the 800 talkgroups in the dispatch center. This procedure should be found in detail in the agency communication plan.

Dispatch center operators shall receive initial and continuing training on this procedure and the use of this resource. As Directed in the agency's Stanadard Operating Gudilines.

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Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.1b	Use of RISCON patch to Statewide VHF Fire Mutual Aid
Revised:				Under development with RIEMA And ICC.

1. Purpose or Objective:

This establishes procedures for use of an audio gateway patch between RISCON and the statewide fire mutual aid VHF frequency, in accordance with the Tactical Interoperable Communications Plan (TICP). The use of any mutual aid or interoperable radio resource requires that the procedures defined in the TICP be followed.

2. Technical Background:

- **Capabilities**

A non-repeated VHF fire mutual aid radio channel covering Rhode Island is available for use by personnel of fire service agencies needing to coordinate with personnel of fire service entities from other jurisdictions. This radio frequency can quickly be patched to the 800 MHz trunked radio system through the dispatch console.

- **Constraints**

An 800 MHz talkgroup can only be in one patch. A conventional radio resource can only be in one patch.

A patch between an 800 MHz talkgroup and the fire mutual aid VHF frequency can result in radio coverage over an area greater than the service area of RISCON on the fire mutual aid VHF frequency. Therefore, whenever an 800 MHz talkgroup patched to the fire mutual aid VHF frequency is in use, no other practical use can be made of the fire mutual aid VHF frequency in a geographic area larger than RISCON service area.

When the fire mutual aid VHF frequency is patched to an 800 MHz talkgroup, and when an 800 MHz radio user transmits thereby keying up the fire mutual aid base station, the fire mutual aid frequency may not effectively be re-used elsewhere in the region. This is the same on a VHF radio to VHF radio basis for local area communications among personnel of agencies on VHF radio systems because of the interference potential from the fire mutual aid base station transmitter overriding the local users. This interference potential varies depending on the location of the fire mutual aid base station and the location of the other local area VHF only users.

3. Operational Context:

Patches between the fire mutual aid VHF frequency and the corresponding 800 MHz radio system talkgroups shall only be used when there is a significant need for communications between personnel on the VHF radio systems and users of RISCON. Use must always be in compliance with the rules governing fire mutual aid VHF frequency usage.

The fire mutual aid VHF frequency without a patch to an 800 MHz talkgroup is primarily used for interagency communications among fire personnel on VHF radio systems.

The fire mutual aid frequency and the associated patched 800 MHz talkgroup can be used for short-term high intensity events, and for long-term extraordinary events.

The fire mutual aid VHF frequency patched to the 800 MHz talkgroup shall be used only if other suitable means for interagency communicating are unavailable or if the other available means for coordination of communications are insufficient. Other means may include:

- Use of a patch between the VHF, UHF, and/or 800 MHz Interoperability channels
- Radio to radio cross band repeaters between tactical channels at the scene
- Radio console patching of a preauthorized agency VHF tactical channel to a preauthorized talkgroup on RISCON.

4. Recommended Protocol/ Standard:

It is recommended that an 8TAC91-94 channel normally be used for console patching to the mutual aid channel. No personnel in any dispatch center may patch the mutual aid VHF frequency to an 8TAC91-94 channel without authorization from the incident commander or dispatch supervisor.

5. Recommended Procedure:

Normally, an event that requires interagency coordination begins on a main dispatch radio channel of one of the public safety dispatch centers.

When it becomes apparent that interagency coordination of personnel from fire service agencies is needed, and coordinating participants are on VHF and RISCON, a console patch between the fire mutual aid VHF frequency and an 800 MHz 8TAC91-94 channel can be required.

Dispatch center operator support, and the decision to use the fire mutual aid VHF frequency patch to 8TAC91-94 channel, is the responsibility of the dispatch center supervisor in the center that started the event.

6. Management:

The use and management of the fire mutual aid VHF frequency continues to be the responsibility of RIEMA through the Fire Communications Advisory Board. This Board governs the use of that common channel. All users of RISCON patched to the fire mutual aid talkgroup shall comply with the fire mutual aid VHF operation rules.

Responsibility for monitoring performance and for modifying this procedure is a function of RISCON Fire Department and technical committee of ICC.

The dispatch center manager is responsible for insuring that there is a procedure to patch between the fire mutual aid VHF frequency and the 8TAC91-94 channel in the dispatch center.

Dispatch center operators shall receive initial and continuing training on the use of this procedure.

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Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.1c	Use of RISCON to Statewide Law Enforcement VHF Mutual Aid
Revised:				Under development with RIEMA And ICC.

1. Purpose or Objective:

This establishes procedures for use of an audio gateway patch between RIEMA and the statewide police mutual aid VHF frequency, in accordance with the Tactical Interoperable Communications Plan (TICP). The use of any mutual aid or interoperable radio resource requires that the procedures defined in the TICP be followed.

2. Technical Background:

- **Capabilities**

A large VHF radio repeater system covering much of the geographic area is available for use by law enforcement agencies using VHF radio systems that need interagency communications. This VHF interoperability radio frequency can be quickly patched to RISCON through the dispatch console.

- **Constraints**

An 800 MHz talkgroup can be in only one patch. Similarly, the law enforcement mutual aid frequency can only be in one patch.

A patch between an 800 MHz talkgroup and the law enforcement mutual aid VHF frequency can result in radio coverage over an area greater than the service area of RISCON on the mutual aid VHF frequency. Therefore, whenever an 800 MHz talkgroup is patched to the mutual aid VHF frequency is in use, no other practical use can be made of the mutual aid VHF frequency in a geographic area larger than RISCON service area.

When the mutual aid VHF frequency is patched to an 800 MHz talkgroup, and when an 800 MHz radio user transmits thereby keying up the mutual aid repeater station, the mutual aid frequency may not effectively be re-used elsewhere in the region. This is the same on a VHF radio to VHF radio basis for local area communications among personnel of agencies on VHF radio systems because of the interference potential from the mutual aid repeater station transmitter overriding the local users. This interference potential varies depending on the location of the law enforcement mutual aid repeater and the location of the other local area VHF only users.

3. Operational Context:

Patches between the law enforcement mutual aid VHF frequency and the corresponding 800 MHz radio system talkgroups shall only be used when there is a significant need for communications between personnel on VHF radio systems and users of RISCON. Use must always be in compliance with the rules governing the mutual aid VHF frequency.

The mutual aid VHF frequency, without a patch to an 800 MHz talkgroup, is primarily used for interagency communications among law enforcement personnel who are all on VHF radio systems.

The law enforcement mutual aid frequency and the associated patched 800 MHz talkgroup can be used for short-term high intensity events, and for long-term extraordinary events.

The mutual aid VHF frequency patched to the 800 MHz talkgroup shall be used only if other suitable means for interagency communicating are unavailable or if the other available means for coordination of communications are insufficient. Other means may include:

- Use of a patch between the VHF, UHF, and/or 800 MHz Tactical Interoperability channels
- Radio to radio cross band repeaters between tactical channels at the scene
- Radio console patching of a preauthorized agency VHF tactical channel to a preauthorized talkgroup on RISCON

4. Recommended Protocol/ Standard:

It is recommended that an 800 MHz 8TAC91-94 channel normally be used for console patching to the mutual aid channel. No personnel in any dispatch center may patch the mutual aid VHF frequency to an 8TAC91-94 channel without authorization from the incident commander or dispatch supervisor.

5. Recommended Procedure:

Normally, an event that requires interagency coordination begins on a main dispatch radio channel of one of the public safety dispatch centers.

When it becomes apparent that interagency coordination of personnel from fire service agencies are needed, and coordinating participants are on VHF and on RISCON, a console patch between the police mutual aid VHF frequency and the 800 MHz 8TAC91-94 channel can be required.

Dispatch center operator support, and the decision to use the police mutual aid VHF frequency patch to the 8TAC91-94 channel, is the responsibility of the dispatch center supervisor in the center that started the event.

6. Management:

The use of and the management of the law enforcement mutual aid VHF frequency continues to be the responsibility of the Rhode Island Police Chief's Association through the Police Communications Advisory Board. This Board governs the use of that common channel. All users of RISCON when patched to the law enforcement mutual aid talkgroup shall comply with the mutual aid VHF operation rules.

Responsibility for monitoring performance and for modifying this procedure is a function of RIEMA and technical committee of ICC.

The dispatch center manager is responsible for ensuring that there is a procedure to patch between the fire mutual aid VHF frequency and the 8TAC91-94 channel in the dispatch center.

Dispatch center operators shall receive initial and continuing training on the use of this procedure.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.1d	System-Wide and State-Wide Talkgroup Radio Discipline
Revised:				

1. Purpose or Objective

To define the policy for the acceptable use of RISCON wide-area talkgroups.

2. Technical Background:

This standard is to act as clearly defined discipline for agencies/entities to follow when using wide-area talkgroup on the RISCON system.

RISCON is configured in three regional zones: North Zone, South Zone, and the Providence Zone.

- **Capabilities**

Local Talkgroups – Local talkgroup is the primary talkgroup that most RISCON users utilize on a day-to-day basis. User talkgroups are programmed either on the North, South, or Providence zones.

Zone -Wide Talkgroups – System-wide talkgroups are talkgroups RISCON users utilize for interoperability or for itinerant use. These talkgroups are programmed on both the North, South or Providence zones for zone wide communications.

State-Wide Talkgroups – State-wide talkgroups are talkgroups RISCON users utilize for interoperability or for itinerant use. These talkgroups are programmed on both the North and South zones, as well as the Providence zone.

- **Constraints**

Note that the use of ***System-Wide*** talkgroups activates additional transmitter sites outside the normal operating zone, which draws additional and limited infrastructure resources to handle system-wide talkgroup calls. The use of these channels should be sparse and concise recognizing the need for efficiency outside the normal operating zone. RIEMA will regularly monitor the use of system-wide channels and will not allow excessive itinerant communications to interfere with mission-critical communications. The use of these talkgroups may be rescinded for any agency abusing this function in accordance with RISCON SOP.

3. Operational Context:

RIEMA requires that each public safety radio is equipped with **Zone-*Wide*** talkgroups for interoperability and for itinerant use.

These talkgroups are primarily intended for specific interoperable communications where all RISCON standards and protocols for regional and statewide communications apply; and, to facilitate multi-jurisdictional agency-to-agency communications. Note that these talkgroups are utilized by all RISCON users, and there should be no expectation that these talkgroup are private.

Itinerant use is defined as non-mission critical communications in support of units operating outside their normal coverage area, where they need to remain in contact with their home dispatch. Examples of itinerant use includes:

- A Providence police officer on official duty outside their jurisdiction that needs to communicate with Providence Dispatch
- A regional response team travelling to/from an incident that needs to communicate with their local dispatch
- A pursuit outside the jurisdiction
- Itinerant use will occur on a pre-defined talkgroups in accordance with RISCON policies

4. Recommended Protocol/ Standard:

Adherence to proper radio discipline primarily rests with the agency/entity and their users with the following exceptions:

- All RISCON participants utilizing RISCON must abide by all FCC Rules and Regulations. FCC rules are found in Title-47 of the Code of Federal Regulations [CFR], Part-90, Private Land Mobile Radio Services
- All RISCON participants are expected to utilize statewide resources sparingly.
- Misuse of the RISCON system will be reported to RIEMA to handle directly with the agency/entity department head or their designee. The reporting parties contact information should be provided in the notification.
- RISCON regional and statewide talkgroups are designated as interoperable groups. The following are recommended while using interoperable talkgroups:
    - Plain English by RISCON is the policy established by NIMS and Appendix XX on procedure for all radio communications
    - Usage of 10-codes or acronym when utilizing RISCON interoperable talkgroups is (profihibed.)
    - RISCON recommends the phonetic alphabet listed in this addenix.XX

5. Recommended Procedure:

Traffic is permitted on the **Zone-*Wide*** talkgroups without RISCON coordination. RIEMA shall be notified when a Zone wide Talkgroup is used for an event.

Radios programmed with ***State-Wide*** talkgroups for an event requires prior approval by .RIEMA.

6. Management

RIEMA will address any misuse of system-wide/state-wide talkgroups directly with the agency/entity.

RIEMA will coordinate any use of regional/statewide talkgroups for planned interoperability training

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Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.2a	Interoperability with NPSPAC National Channels
Revised:				

1. Purpose or Objective

This defines procedures for the use of 800 MHz conventional interoperable radio channels.

2. Operational Background:

- **Capabilities**

There are five nationwide 800 MHz frequency pairs assigned by the FCC exclusively for interoperable communications between public-safety radio users. One pair is reserved by the FCC as a calling/hailing channel, while the other four are reserved for tactical communications, normally used during incident command situations. These channels follow a nationally recognized naming plan for interoperable radio channels, and are labeled 8CALL90 for the calling channel, and 8TAC91, 8TAC92, 8TAC93, and 8TAC94 for the tactical channels respectively. These frequencies use analog modulation in a 25 kHz bandwidth repeater mode, or direct radio-to-radio "talk around" mode for on-scene interoperability.

- **Constraints**

If any of these frequencies is selected in a mobile or portable radio in the radio system, the radio user loses the priority revert feature as part of the talkgroup scanning function.

These radio frequencies are in the NPSPAC band of 800 MHz frequencies and all mobile and portable radios shall be able to function in compliance with NPSPAC specifications to use these channels.

3. Operational Context:

These 800 MHz interoperability frequencies can be used for day to day interagency coordination, for urgent or emergency mutual aid situations, and/ or for other purposes where coordination between radio users on separate 800 MHz radio systems must intercommunicate to perform assigned duties.

These channels shall not be used for regular communication between radio users with full access to RISCON radio system.

4. Recommended Protocol/ Standard:

8CALL90 Calling Channel & 8TAC91-94 Tactical Channels

- The 8CALL90 and 8TAC91-94 channels are labeled (ICALL/ITAC-1/4 are currently label on the RISCON System and programmed in Charlie (C) bank in all subscriber radios.
- Outside agencies using RISCON shall have the conventional 8CALL90 and 8TAC91-94 channels included in their fleet maps. These channels shall be used when traveling outside the coverage area of RISCON and are used to communicate with another 800 MHz base and/or mobile radios on those channels.
- Dispatch center in congintion with the EOC will monitor the 8CALL90 channel at all times, and 8CALL90 should be monitored nationwide in any other public-safety dispatch center with 800 MHz capabilities.

- Transportable mobile repeaters can be installed in mobile command posts or other areas as needed.
- The talk around 8TAC91-94 radio channels are also available for use with on scene cross band repeat or cross band patch operations such as VHF to 800 MHz or UHF to 800 MHz

5. Recommended Procedure:

Normally, events that require interagency coordination begin on a dispatched radio channel of one of the public safety dispatch centers. The dispatch center operator that handles the event initially becomes the responsible dispatch operator and shall provide dispatch service to all personnel in all units participating in the event.

- If coordination is required with personnel in units of another 800 MHz radio system, the dispatch center shall assign an 8TAC91-94 channel and inform the affected units in their agency to switch to the assigned channel. The dispatch center that assigned the channel is responsible for all notifications that the 8TAC91-94 channel is being used, and when there is no further need the channel is released.
- When first responders personnel on RISCON respond to/with personnel using VHF or UHF radio equipment, either**:**
  1. The dispatch center shall request that a patch be created at the scene or in another dispatch center with the capability to create the patch, and proceed as described above.
- If interagency coordination is required for a time period longer than a few hours, or if the area where interagency coordination is needed does not have adequate network coverage, a mobile communications unit with on-board repeaters shall be sent to the area of the event operations for better coordination of communications.
- If an 800 MHz radio user from outside of RISCON comes into the area and needs assistance, the outside radio user can call for help on the 8CALL90 channel. The requested PSAP shall immediately respond to that call.
- If the requested PSAP does not respond to the assistance call, any other dispatch center can respond to, and serve the caller.

6. Management

Any public-safety 800 MHz radio system user may obtain a license for mobile and portable radio use of the 8CALL90 and 8TAC91-94 radio channels.

Dispatch center managers are responsible for preparing and conducting initial and continuing training for dispatch center operators on the procedures established for use of the 8CALL90 and 8TAC91-94 channels consistent with this procedure.

Responsibility for monitoring the use of and for recommending modifications to this procedure is a function of RIEMA and the ICC.

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Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.2b	Use of "Shared" and "VRS" Channels
Revised:				To be developed by RIEMA and the ICC tec committee

1. Purpose or Objective

Provide Standard Operating Procedures, and operating parameters for 'Shared' and VRS Repeaters.

Regional Objective

Create an operating procedure that maintains the safety of personnel in situations where they are out of range of the radio system. With the limited number of available 'Shared' and 'VRS' channels, and the number of potential users, it is important that the use of mobile radios on these channels is limited. Once a radio is keyed, there is no way to control the footprint of the transmission other than limiting the power of that transmission. With two available 'Shared' channels, limiting the use of mobile radios addresses the emergency scene needs of the fire service and still meets the needs of greater range of mobiles for police, fire, and EMS personnel on the remaining 'Shared' channel.

2. Technical Background:

- **Capabilities**

Provides the ability to communicate from one subscriber to another when out of range of the radio system.

- **Constraints**

Portable units have limited range of operation depending upon the terrain and other conditions.

The high transmitter power of mobiles units when compared to the low powered portables creates the potential for a mobile radio to transmit over or 'drown out' a portable radio's transmission.

There are only two (2) 'Shared' channels and one (1) VRS channel available.

The 'Shared' channels are only allowed in RISCON's public safety mobiles and portables and mobile command posts. It is possible for mobile units to transmit over portable units without knowing it and endangering personnel operating on emergency scenes. The number of potential users in RISCON area can cause conflict during emergency operations.

'Shared' channels must be utilized only by authorized personnel for urgent or emergency situations, or other purposes where the system is not available, such as a convoy of vehicles out of the coverage area**.** It is not intended to be as a "chat channel", administrative channel, or any other non-emergency use.

3. Operational Context:

'Shared' channels shall be utilized only by authorized personnel assigned to 'Shared' channel for urgent or emergency situations, and/or for task teams or other purposes **where the system is not available.** 'Shared' channels are intended to be used by personnel who have lost contact with the radio system controller as a result of location (basement, subbasement, buildings or areas with poor or no coverage) or due to unavailability of the system.

4. Recommended Protocol/ Standard:

- The need or necessity for 'Shared' channels in each agency's radio is determined by that agency. If an agency opts to not place these in radios the agency is responsible for any limitations on the ability to communicate on the emergency scene.
- Encryption may not be used.
- Emergency operations require communications capabilities to maintain safety of personnel.

5. Recommended Procedure:

- Unit to unit communications is initiated when one or more units operating on scene are out of range of the radio system.
- 'Shared' channels shall be utilized by on scene personnel at their discretion. The dispatch centers can not monitor the 'Shared' channels to assign usage. With 'Shared' channels available for each service, on scene units requiring the usage of a 'Shared' channel shall announce the intent to utilize the channel.

6. Management

Elevated external antennas connected to portable radios and/or external power amplifiers must not be allowed on 'Shared' channels.

RIEMA, ICC and Individual agencies are responsible for ensuring that users and units utilizing 'Shared' channels follow the standards, protocol, and procedures.

Special Note on Training

- 'Shared' procedures shall be addressed in the training of all emergency personnel operating within the system. That training needs to cover the different on scene procedures utilized by police, fire, and EMS personnel. It is also crucial to system users that all emergency personnel are aware of the rules and procedures to utilize these channels. Improper usage or misuse can result in a scene safety issue for operating personnel.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.3a	Control Stations
Revised:				

1. Purpose or Objective:
Establish procedures for the use control stations for various purposes.

2. Operational Background:

- **Capabilities**

A control station is a radio that is set up with the same transmission and reception capabilities as a mobile or portable radio; however, it is installed at a fixed location and does not move.

- **Constraints**

A control station can function on only one radio system talkgroup at a time.

Use of a control station with a gateway device to patch disparate radio systems, can have a region wide impact. This type of patch can be easily accomplished, but may cause harmful interference under certain circumstances. Patching using a control station is not recommended regardless, if a dispatch point needs to patch they should contact the main dispatcher in the area they are being served.

3. Operational Context:
There are a number of uses for control stations including:

- An agency that does not have a dispatch console may use a control station to communicate with the network and with its end users.
- Control stations can be used to gain access to RISCON from a dispatch center that is on a radio system other than RISCON.
- Control stations can be used for day-to-day purposes, for urgent or emergency situations, for task teams and for other purposes.
- If the system goes to fail soft, users are not allowed to use their control stations except for first responders.
- Control station users must comply with all of the standards outlined in this document.

4. Recommended Protocol/ Standard:

- Use of control stations is recommended to gain access to RISCON by radio user agencies that are not on the system.
- Use of control stations for backup dispatching can be permitted, and is an optional use determined by each agency. Some agencies may elect to use portable radios in portable radio battery chargers for backup capability.
- Use of control stations by an agency without a dispatch center is permissible, and is an optional choice for radio user agencies served by RISCON.

- Use of control stations by agencies that have a dispatch center on RISCON at locations away from the dispatch center may be permitted, and is an optional selection available to each agency.
- Multiple control stations can be used for day-to-day communications, for urgent or emergency situations, for communications with task teams and for other purposes.

5. Recommended Procedure:

- Any agency wanting to use more than one control station at one location is only permitted to use that configuration if the design is compliant with Section 1.7. The process for obtaining permission is to submit an application for multiple control stations to the technical committee. The application shall describe the location and use of each control station and make it clear that the multiple control station configuration design meets the criteria in Section 1.7.
- No special permission is required for an authorized user wanting to use a control station on RISCON; however, the control station must meet the standards for radio equipment operating on RISCON, as defined in Section 1.7a and 1.7b. In addition, the equipment must be registered on the system in accordance with Section 1.6c.
- The transmit and receive audio on control stations can be logged by the owner of the control station.

6. Management:

Each agency using control stations shall have written procedures, consistent with this procedure, clearly defining conditions under which the stations are used. All dispatch center operators shall be trained on the application of the procedures, and there shall be continuing training to maintain a good level of understanding of the procedures by all dispatch center operators. These procedures should found in the agency's communication plan.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.3b	Cross Band Repeaters
Revised:				

1. Purpose or Objective:

Establish procedures for the use of temporary radio system to radio system repeaters and/or gateway devices for interagency intercommunications in a local area.

2. Operational Background:

- **Capabilities**

There are several gateway devices available that can interconnect to mobile and/or portable radios in any location. When such a device receives a transmission on one radio, it keys the transmitter on the other radio and feeds the audio from the receiving radio to the transmitting radio. The communications can actually go in either direction, but only one direction at one time. The radios can be any combination of VHF, UHF, and 800 MHz radios.

- **Constraints**

Care shall be taken in cross band repeating because all radio traffic on both communication channels appears on each of those communications channels and communications channel congestion can occur. In addition, care shall be taken in cross band repeating to avoid confusion when traffic from another radio system suddenly appears on a communications channel.

Care shall also be taken to assure that only one radio to radio cross band repeater is in use in a given area on at least one of the communications channels or a significant amount of collision interference will occur.

In any patching process, care shall be taken to avoid passing through the digital modulation process in radios more than one time to avoid severe degradation of audio quality.

3. Operational Context:

Radio to radio cross band repeaters shall be used for day-to-day activities, for urgent or emergency situations, for tactical teams and for other purposes.

4. Recommended Protocol/ Standard:

These radios shall not be used to interconnect traffic to a RISCON talkgroup that is not authorized in accordance with the Shared Talkgroups Procedure #2.4.

Use of any gateway or cross-band device shall also comply with any and all of the Tactical Interoperability Communications Plans [TICP] that pertain to the area(s) being covered.

Any agency using any radio system, conventional or trunked, can employ radio to radio cross band repeaters; however, use of these radio to radio cross band repeaters shall be restricted to local area operations only. The incident commander shall keep in mind that if one of the radios is on the input frequency of a repeated conventional channel, or on a talkgroup of RISCON, there could be a significant impact on communications across a wide area.

The only channels that should be used in the radios for these gateways or cross band devices are preauthorized conventional radio channels, and RISCON talkgroups.

The user of cross band repeaters should be coordinated with RIEMA. In those areas where cross band repeaters must be deployed, RIEMA and the ICC should be advised and concur.

5. Recommended Procedure:

Radio to radio cross band repeater equipment can be carried and deployed in vehicles. The equipment shall only be used under direction of the incident commander and should only be used for communications in a local area for coordinating activities of personnel from different agencies involved in a single event.

The incident commander, or their designee is responsible for ensuring that only authorized channels are used in a radio to radio cross band repeating configuration. Care shall be exercised in the selection of a RISCON talkgroup selected for use in radio to radio cross band repeaters.

The incident commander, or their designee is responsible to assure that two or more cross band repeaters do not include a single conventional channel or a single RISCON trunked talkgroup so that collision interference will not occur.

6. Management:

Any agency utilizing a gateway device or cross-band repeater is responsible for the training of personnel who operate those devices, and is required to obtain the necessary clearances for the radio channels and talkgroups that it intends to link. The manager of such an agency shall ensure that detailed procedures for the setup and use of the equipment are available to the operator. If the repeater causes interference on the 800 MHz system it must be immediately shut down at RIEMA's direction.

No special licensing of gateway devices is required.

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Issued:	Jan 6, 2014	Section:	3.0	INTEROPERABILITY STANDARDS
Approved by:		Sub-Section:	3.4	In-Cabinet Repeat Policy
Revised:				

1. Purpose or Objective:
This section provides a disaster recovery alternative means of communicating in the event that the master controllers for RISCON are lost.

2. Operational Background:

- **Capabilities**

An alternative exists to provide radio communications if all modes of the SmartZone simulcast system become inoperable. Special hardware connectors are pre-deployed at the tower sites, and are installed on pre-determined repeater stations at specific sites, converting them into stand–alone repeaters.

- **Constraints**

The implementation of a disaster recovery plan can greatly reduce the coverage that the simulcast system currently provides. One channel can only be activated at one site at a time in this configuration, so coverage will be limited to the specific site's radio footprint for that particular channel, and portable radio coverage could be reduced significantly. There will be a delay in implementing In Cabinet Repeat due to the time required for technicians to travel to/between sites.

3. Operational Context:
In the event of a disaster at a 'Prime Site', technicians will be dispatched to the remaining sites to activate pre-determined channels. RIEMA technicians will determine the exact sites and stations that require activation, with the failsoft channel assignments being considered.

4. Recommended Protocol/ Standard:
If the decision is made that the ICR Plan must be implemented, RIEMA technicians will be dispatched to pre-selected sites, activating individual repeaters by the site and priority shown in Appendix 6.

5. Recommended Procedure:
When RIEMA staff determines that a situation exists that inhibits normal or failure modes of system operation, technicians will be deployed immediately to activate the ICR mode of operation, until which time the system has been repaired and can resume normal operations

6. Management:
RIEMA will manage this process.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	4.0	MAINTENANCE
Approved by:		Sub-Section:	4.1	Agency Maintenance Plans
Revised:				Working with Motorola and other agencies

1. Purpose or Objective

To define the system maintenance responsibilities and roles. The maintenance levels for RISCON and sub-systems shall be set to a standard to protect the overall functionality and integrity of the system for all users. A proper maintenance standard protects the warranties of the system and sub-systems.

2. Technical Background:

- **Capabilities**

Standards in maintenance protect the integrity of the system and protect the warranties of the sites and equipment. Coordinated maintenance is simplified by having one set of maintenance standards rather than multiple standards.

- **Constraints**

Improper maintenance poses a risk to the operational functionality of RISCON and sub-systems, and can risk equipment warranties.

3. Operational Context:

Each radio tower site and piece of equipment is considered "owned" by RIEMA, who is responsible for the maintenance of the sites and equipment. Agreements between RIEMA and maintenance contractors are at RIEMA's discretion, but RIEMA is ultimately responsible for the system.

Maintenance of the system and subsystems is separated into two categories, and three severity levels:

- **Categories:** Scheduled (Preventative) Maintenance, and Unscheduled (Corrective, Repair) Maintenance

- **Severity Level Matrix:**

Severity Level	Level	Description
Critical	**1**	**A system failure or outage that creates total system unavailability to one or more sites, one or more coverage areas, or one or more groups of users.**
Severe	**2**	**A system failure or outage that impacts or reduces the coverage, the capacity, or the operational capability of the system, site, coverage area or group of users. At least 1/3 or more of the available resources have failed.**
Impaired Service Effecting	**3**	**A system failure or outage that reduces the coverage, capacity, operational capability of the system, sites, coverage area or group or users. At least less than 1/3 of the available resources have failed.**
Impaired Not Service Effective	**4**	**A system failure or outage that has little or no reduction in coverage, capacity, operational capability of the system, sites, coverage areas or group of users.**

4. Recommended Protocol/ Standard:

(Level 1)

Upon notification of a failure/outage by either automatic or manual means, the responsible agency shall immediately begin investigation into the reasons, location and system/user impact. Additional notifications should be made as soon as practical to the RIEMA @ _____, affected areas, users and/or other service providers as necessary. Service personnel shall strive to have the location and failure/outage identified within 1 hour after the initial notification. Mobilization of the required resources necessary for service restoration should begin within 1 hour after the location and failure is determined. Initial follow up notifications should take place within 2 hours after initial notification to the affected areas, users and/or other service providers as necessary and every 2 hours thereafter until service is fully restored or the level reduced to Impaired Non Service Affecting. The follow up notifications shall include the estimated time for service personnel to be on site at the failure/outage location, overall system impact, temporary work around if applicable. Within 1 hour after arrival at the failure/outage site a restoration plan and time estimation shall be communicated to the affected areas, users and/or other service providers as necessary. Follow up notification on the progress with revised restoration time estimates shall be made every 2 hours. If the estimated restoration time frame exceeds 4 hours from arrival on site, a notification call with details of the failure/outage and the restoration plan including estimated time to repair shall be made to all affected parties and all service providers. Once service is restored the affected areas, users shall be notified to confirm system restoration prior the leaving the site or demobilization. Outage reporting and documentation shall be completed and submitted as required.

(Level 2)

Upon notification of a failure/outage by either automatic or manual means, the responsible agency shall immediately begin investigation into the reasons, location and system/user impact. Additional notifications should be made as soon as practical to the RIEMA, affected areas, users and/or other service providers as necessary. Service personnel shall strive to have the location and failure/outage identified within 2 hours after the initial notification. Mobilization of the required resources necessary for service restoration should begin within 2 hours after the location and failure is determined. Initial follow up notifications should take place within 2 hours after initial notification to the affected areas, users and/or other service providers as necessary and every 4 hours thereafter until service is fully restored or the level reduced to Impaired Non Service Affecting. The follow up notifications shall include the estimated time for service personnel to be on site at the failure/outage location, overall system impact, temporary work around if applicable. Within 1 hour after arrival at the failure/outage site a restoration plan and time estimation shall be communicated to the affected areas, users and/or other service providers as necessary. Follow up notification on the progress with revised restoration time estimates shall be made every 4 hours. If the estimated restoration time frame exceeds 8 hours from arrival on site, a notification call with details of the failure/outage and the restoration plan including estimated time to repair shall be made to all affected parties and all service providers. Once service is restored the affected areas, users shall be notified to confirm system restoration prior the leaving the site or demobilization.

(Level 3)

Upon notification of a failure/outage by either automatic or manual means, the responsible agency within 1 hour shall begin investigation into the reasons, location and system/user impact. Additional notifications should be made as soon as practical to the RIEMA, affected areas, users and/or other service providers as necessary. Service personnel shall strive

to have the location and failure/outage identified within 2 hours after the initial notification. Mobilization of the required resources necessary for service restoration should begin within 4 hours after the location and failure is determined. Initial follow up notifications should take place within 2 hours after initial notification to the affected areas, users and/or other service providers as necessary and every 4 hours thereafter until service is fully restored or the level reduced to Impaired Non Service Affecting. The follow up notifications shall include the estimated time for service personnel to be on site at the failure/outage location, overall system impact, and a temporary work around if applicable. Within 1 hour after arrival at the failure/outage site a restoration plan and time estimation shall be communicated to the effected areas, users and/or other service providers as necessary. Follow up notification on the progress with revised restoration time estimates shall be made every 4 hours. If the estimated restoration time frame exceeds 8 hours from arrival on site, a notification call with details of the failure/outage and the restoration plan including estimated time to repair shall be made to all affected parties and all service providers. Once service is restored users shall be notified to confirm system restoration prior the leaving the site or demobilization.

(Level 4)

Upon notification of a failure/outage by either automatic or manual means, the responsible agency within 2 hour shall begin investigation into the reasons, location and system/user impact. Additional notifications should be made as soon as practical to the RIEMA, affected areas, users and/or other service providers as necessary. Service personnel shall strive to have the location and failure/outage identified within 4 hours after the initial notification. Mobilization of the required resources necessary for service restoration should begin within 8 hours after the location and failure is determined. Initial follow up notifications should take place within 4 hours after initial notification to the affected areas, users and/or other service providers as necessary and every 4 hours thereafter until service is fully restored or the level reduced to Impaired Non Service Affecting. The follow up notifications shall include the estimated time for service personnel to be on site at the failure/outage location, overall system impact, and a temporary work around if applicable. Within 1 hour after arrival at the failure/outage site a restoration plan and time estimation shall be communicated to the effected areas, users and/or other service providers as necessary. Follow up notification on the progress with revised restoration time estimates shall be made every 8 hours. If the estimated restoration time frame exceeds 8 hours from arrival on site, a notification call with details of the failure/outage and the restoration plan including estimated time to repair shall be made to all affected parties and all service providers.

Once service is restored users shall be notified to confirm system restoration prior the leaving the site or demobilization.

ESCALATION/DE-ESCALATION

The initial failure/outage level shall be determined by the affected agency/user as described above. Due to the complexity of the system, the initial determination may not be correct or the circumstances, current events or actual failure/outage may require the level to be changed.

USER ESCALATION

At anytime during the failure/outage, agencies may request that the level be escalated to a higher level. The escalation request should be made to the service agency responsible for the site/equipment causing the failure/outage. The escalation request shall include the information on what has changed since the initial level determination and how the request meets the criteria for the requested level as defined above. The responsible service agency shall evaluate and discuss the escalation request with the requesting agency. If the request meets the criteria for the higher level as defined above, the level shall be escalated and the appropriate response and restoration plan implemented. If the request does not meet the criteria for the higher level as defined above, the level shall not be escalated. If an agreement cannot be reached between the affected agency

and the service provider, the level shall be escalated and the appropriate response and restoration plan implemented. All escalations shall be documented and reported as required.

SERVICE PROVIDER ESCALATION/DE-ESCALATION
After the actual failure/outage cause has been determined, a service provider may raise or lower the level as appropriate if failure/outage meets the criteria for a new level. If the initial level is changed, a new notification should be made to the affected areas, users and/or other service providers as necessary and the appropriate response and restoration plan implemented.

5. Recommended Procedure:
Any broad maintenance issues that affect multiple agencies shall be discussed and resolved at ICC. The ICC should present to RIEMA and assessment of maintenance issues that affect the entire system.

Repair of any equipment not normally maintained by RIEMA requires the notification and consent of the owning agency.

RIEMA and/or their contracted service providers are responsible for:

- FAA registrations and FCC licenses, ensuring that equipment is properly licensed and copies of the licenses are posted at the sites as required by regulations.
- Maintaining equipment within the limits of RISCON's FCC licenses.
- Notifying the responsible personnel of equipment and location issues that require attention.
- Managing the inventory of the radio subscriber and infrastructure equipment. For purposes of this standard, the following equipment and is not limited to:
    - Towers
    - Antennas
    - Cabling/Connections/Fix End Wave Guides, Ladders, Ice Shields etc.
    - Shelters
    - Generators
    - Alarm Systems
    - Racks/Radios/Computers/Base Station Radios etc.
    - Lighting Protection Systems
    - Back Up Systems
- Ensuring that equipment at the tower sites that is not part of the radio system inventory shall be clearly labeled to indicate agency ownership.
- Routine equipment maintenance logs are kept at the sites.
- Maintaining current copies of all as-built documentation at each site and at the offices of RIEMA field services. RIEMA is responsible for ensuring the accuracy of all as-built data related to the infrastructure equipment and any changes or shall be immediately documented. RIEMA shall distribute the updated information as required.
- Maintain equipment in accordance with vendor specifications.
- Comply with R56 standards at all times for all infrastructure equipment while under the management control of RISCON.
- Advise RIEMA of when service and maintenance agreements are about expire.

- Coordinating, implementing and/or overseeing configuration changes affecting the system infrastructure.
- Any work being scheduled affecting the system and/or sub-systems performance and reasonable notification to the system's users of same.
- Ensuring all technicians assigned to work on system equipment have successfully completed appropriate training on the equipment. Training requirements are referenced in the training section of the standards manual.
- Following a preventive maintenance plan as defined in the preventative maintenance section of the standards manual.
- Maintaining a list of the qualifications and contact information of technical staff in the event of emergency contact..
- Maintaining a list of the available spare parts/equipment pertaining to the system and sub-systems. All infrastructure spares, after returning from the repair center shall be re-installed into the same location they were removed from, and verified for correct operation prior to closing the repair case.
- Ensuring any equipment upgrades or changes affecting normal operations of the system are adequately discussed and approved by the technical committee.
- Determining how critical an equipment failure is operationally, determining the appropriate action, and escalating or de-escalating the repair process as needed.

6. Management

RIEMA is responsible for managing the maintenance of the radio system equipment and sites, and managing the repair responsibilities in emergency situations.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	4.0	MAINTENANCE
Approved by:		Sub-Section:	4.2	Preventative Maintenance
Revised:				RIEMA SOP

1. Purpose or Objective

A failure of a portion of the system can impact users well beyond the failed portion of the system. For example, failure of a backup power system at a tower site during a shore power loss will have a serious impact on the rest of the system. The maintenance levels for the 800MHz system and subsystems shall be set to a required standard to protect the functionality of the overall system. A proper maintenance standard protects the warranties of the system and subsystems.

2. Technical Background:

- **Capabilities**

Standards in preventative maintenance protect the integrity of the system and protect the warranties of the sites and equipment. Coordinated preventative maintenance is simplified by having one set of preventative maintenance standards rather than multiple standards.

- **Constraints**

Improper preventative maintenance poses a risk to the operational functionality of RISCON and subsystems, can risk equipment warranties, and may lead to premature equipment failures.

3. Operational Context:

RIEMA is responsible for the maintenance of all sites and equipment except where an agency has agreed to take full responsibility for its equipment. Separate agreements between RIEMA and maintenance contractors are allowed, but RIEMA is ultimately responsible for the oversight of maintenance of the system to ensure all vendors maintain a level of service consistent with R56 standards. Outside vendors will be held accountable for any deficiencies in the quality of their work.

Maintenance logs shall be reviewed and archived by RIEMA staff. The maintenance logs are subject to review by the technical committee upon request.

4. Recommended Protocol/ Standard:

RIEMA is responsible for:

- Monitoring the performance of the system and subsystem equipment using the monitoring and reporting tools that are part of the system. If issues arise, it is RIEMA's responsibility to resolve the problem directly, or to bring the issue to the technical committee if broader resolution is needed.
- Monitoring the performance of all technical staff and those of outside vendors.
- Ensuring that FCC and FAA rules and regulations are followed.
- Ensuring that the 'R56' site installation standards are maintained with all existing and future equipment.
- Appropriating spare modules, boards, field replaceable units (FRU) for the equipment is properly inventoried and maintained.
- Notifying system users when preventative maintenance may impact the system.
- Ensuring back-up power systems are properly maintained and always ready for service.

- Managing contracts for maintenance service and support.

RIEMA shall perform and document monthly inspections designed to test equipment redundancy and identify issues before problems arise. The testing shall include, but is not limited to the following:

- Power system testing and maintenance
- Shelter inspection
- Tower inspection
- Equipment inspection all equipment related to each site and shall conform to vendor specifications for radios, base stations, all equipment that supports the microwave network and trunked land mobile radio system.
- Alarm Activations
- Back Power Failure Testing

5. Recommended Procedure:

Preventative maintenance shall be performed as outlined in the schedule found in Appendix 8. RIEMA shall ensure that all maintenance schedules and adherence there to are written in any contract that performs service to RISCON.

6. Management

RIEMA is responsible for managing the preventive maintenance for the equipment and sites.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	4.0	MAINTENANCE
Approved by:		Sub-Section:	4.3	Record Keeping Requirements
Revised:				

1. Purpose or Objective
The purpose is to define the record keeping requirements of RISCON.

2. Technical Background:

- **Capabilities**

Proper record keeping facilitates the maintenance and support of the system.

- **Constraints**

3. Operational Context:
The following records are maintained by RIEMA, and are kept readily available for the support staff that is responsible for managing and maintaining the system:

- System Standards Manual
- System documentation and technical procedure manuals
- Current system and equipment as built documentation as defined in section 4.6 of this manual
- Equipment manuals
- Contact information as defined in section 4.4 of this manual.
- Spare equipment information as defined in section 4.5 of this manual
- Preventative maintenance logs as defined in section 4.2 of this manual
- System fleetmap and subscriber template configurations

The details for and of any documentation not specified in this manual, are at RIEMA's discretion.

5. Recommended Procedure:
RIEMA staff shall compile system performance reports, and ensure that all documents and records are kept current. System data back-ups are archived, and stored at "on site" and "off site" locations.

6. Management
RIEMA is responsible for managing the record keeping.

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Issued:	**Jan 6, 2014**	**Section:**	**4.0**	**MAINTENANCE**
Approved by:		**Sub-Section:**	**4.4**	**Contact Information Requirements**
Revised:				

1. Purpose or Objective

To define the procedure and process for maintaining the internal and external staff contacts information responsible for the support of the RISCON system, and distribution of the contact information in a secure fashion.

2. Technical Background:

- **Capabilities**

Having the contact information readily available to the system support staff facilitates:

- General-purpose day to day communications
- Source information for distribution lists
- Notification for equipment / location issues
- Contacting support staff in the event of a system failure, after-hours service calls, or disaster recovery
- Having a clear list of vendor support contacts
- Facilitating the information electronically/centrally eliminates duplication of effort.

- **Constraints**

The contact information shall be kept up to date and available to the support staff of RISCON. This information is classified as 'Restricted Information".

3. Operational Context:

RIEMA maintains current contact information of support staff for RISCON.

The contact information shall contain:

- Internal support staff, communications specialists, supervisors, technicians, etc.
- External support staff, subcontractors, equipment providers, etc.
- Building security contacts

RIEMA staff is responsible for the accuracy of the contact information.

4. Recommended Protocol/ Standard:

RIEMA shall store emergency contacts and documents related to disaster planning and recovery.

5. Recommended Procedure:

RIEMA shall maintain all contact information of support staff of RISCON. The resource shall be accessible to appropriate staff. The contact information to be saved includes such items as:

- Agency
- Functional role
- Work address
- Contact phone numbers "work, home, pager, cell" at the support persons discretion.
- Email addresses

Any changes to contact information shall be updated through RISCON..

6. Management

RIEMA is responsible for this process, through coordination with RISCON staff.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	4.0	MAINTENANCE
Approved by:		Sub-Section:	4.5	Spare Parts and Equipment
Revised:				RIEMA SOP

1. Purpose or Objective

The purpose is to define policies and procedures for spare parts and equipment, including storage and financial responsibility.

2. Technical Background:

- **Capabilities**

A spare parts inventory facilitates quicker system recovery in the event of an equipment failure by having replacement parts readily on hand. Spare parts can also be used to assist the troubleshooting process of failed equipment and guarantees the appropriate field replaceable units are available in the event a replacement is needed.

- **Constraints**

The spare parts stocks shall be kept “pure”. Intermittent or defective parts are not to be introduced into the spare parts stock.

3. Operational Context:

All spare parts and equipment are considered “owned” by RIEMA. It is RIEMA’s or the owner agency financial responsibility for maintaining and storing the spare parts. For those agencies that maintain their own equipment, they will ensure that sufficient number of spare parts is maintained.

RIEMA or the owner agency maintains a centralized resource established for the tracking of spare parts and equipment; this resource also contains a log of equipment returned to the manufacturer/contractor for repair.

RIEMA or the owner agency is responsible for the functionality of the spare parts and equipment information sharing resource and for performing backups and archives of the spare information.

4. Recommended Protocol/ Standard:

RIEMA uses a central electronic resource for the tracking of spare equipment, the details of this process is at the discretion of RIEMA. RIEMA is responsible for providing of spare parts required to maintain the system or sub-systems.

5. Recommended Procedure:

RIEMA staff shall maintain an inventory of the spare parts, radios, and equipment available in a central information resource.

All work performed on the system is tracked by RIEMA with an internal work order process and external case number assignment from the system support center. Any non-consumable part or board that is used for repairs to the system is then tracked through the repair process by the assigned case and return authorization number assigned by the system support center.

When an item is returned from the repair facility, it is placed back in service in the device or unit from which it was removed, and is monitored for a reasonable amount of time to verify the repair. When the original item is verified working properly, the case that was opened with the repair facility shall be

closed with the vendor. The spare part used during the repair is then returned to the spares inventory until required again.

6. Management The RIEMA or the owner agency is responsible for this process.

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Issued:	**Jan 6, 2014**	**Section:**	**4.0**	**MAINTENANCE**
Approved by:		**Sub-Section:**	**4.6**	**Equipment Configuration Information**
Revised:				**RIEMA SOP**

1. Purpose or Objective

Outlines the purpose for the documentation of system, subsystem, and console equipment configurations.

All equipment configurations are classified as 'Restricted Information'.

2. Technical Background:

- **Capabilities**

Current configuration documentation of equipment hardware, firmware, circuit routes and software facilitates:

- Troubleshooting of system and subsystem equipment problems
- Reloading of configurations into equipment that has been replaced or lost its configuration
- Planning configuration upgrades and changes
- Maintaining a higher level of service for the users of the system

- **Constraints**

Equipment configuration information shall be made available to the support staff having a need for the information, and shall not be released to the general public.

3. Operational Context:

System and Subsystem:
Infrastructure as-built documentation is provided as part of the system documentation. It is RIEMA's responsibility to maintain the equipment configuration information and to keep the information current.

Current copies of as-built equipment configuration documentation are maintained at each site for the equipment located at the site, and at the offices of RIEMA operations center.

RIEMA is responsible for maintaining the configuration information of the system and subsystem equipment, and for assuring the accuracy of all as-built data related to the infrastructure equipment. Any changes or alterations shall be documented immediately.

Console:
The field services staff is responsible for backing up the console configuration files located on the server. The backups shall be done on a regular basis. Supervisors can request additional back-ups if a large amount of changes have been made.

Portables and Mobiles:
RIEMA is responsibility to manage the mobile and portable radio fleet information, including such details as manufacturer, model, firmware, flash code, and template information.

4. Recommended Protocol/ Standard:

RIEMA operations center or at Providence location will maintain a central electronic storage resource for the system equipment configuration information, which is accessible by the technical staff.

5. Recommended Procedure:

The system manufacturer provides equipment configuration and as-built documentation as part of the system documentation.

RIEMA is responsible for managing the configuration information, including:

- Maintaining current soft copies of the information and protecting the data from loss
- Maintaining current hard copies of the configuration of the equipment at the equipment locations
- Updating the configuration information as changes are made within the system
- Resolving of configuration issues and errors

The disclosure of the equipment configuration information and other related system information could substantially jeopardize the security of the system; therefore, all system configuration information is classified as 'Restricted Information'.

6. Management

RIEMA is responsible for maintaining and keeping the equipment configuration information current.

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Issued:	**Jan 6, 2014**	**Section:**	**4.0**	**MAINTENANCE**
Approved by:		**Sub-Section:**	**4.7**	**Software Location**
Revised:				**Also kept at both prime sites**

1. Purpose or Ob Jan 6, 2014jective
To define the locations and responsibilities of the master and archived software copies and configuration backups for RISCON.

2. Technical Background:

- **Capabilities**

Having current software and data back-ups stored at multiple locations both on and off site protects against complete loss of data in the case of disaster. Multiple backups ensure that the required software is available when it is needed.

- **Constraints N/A**.

3. Operational Context:
The following software shall have the master copies kept secure at the RIEMA office, and archive copies kept at the RIEMA office:

- Backups of infrastructure and subscriber databases
- Infrastructure equipment software
- System server software
- System documentation
- Console software

The following software is kept secure at the RIEMA office.

- Radio programming software and templates
- Subsystem equipment software

4. Recommended Protocol/ Standard:
This is an ongoing process, configuration backups are brought to the archive locations as made. Software changes shall be reflected in the source and archive locations.

5. Recommended Procedure:
As software changes occur, the master copy of the infrastructure and server software is kept at RIEMA operations center.

As infrastructure and subscriber changes occur, and backups are made, the current backups are kept at the RIEMA operations center or at Providence Location.

RIEMA and ICC should appraise all users on the impact of system software upgrades.

6. Management
RIEMA is responsible for all software of the system infrastructure, servers, subsystem equipment, consoles, client workstations, and radio templates.

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Issued:	**Jan 6, 2014**	**Section:**	**4.0**	**MAINTENANCE**
Approved by:		**Sub-Section:**	**4.8**	**Notification of Maintenance Activities**
Revised:				**On RIEMA Web Page**

1. Purpose or Objective

This section defines the procedure for notifications of scheduled and unanticipated maintenance activities having an impact on normal system operations.

It is the policy of RIEMA and the ICC to provide guidelines for radio user notifications for any maintenance actions having a potential for system interruptions.

2. Technical Background:

- **Capabilities**

Typically, equipment functionality can change when hardware and software configuration alterations, or other maintenance activities are performed. Notification of planned maintenance activities that impact the normal operation of the system allows user agencies and subscribers to make preparations as needed.

- **Constraints**

If the notification process is difficult and lengthy, it can become a barrier to performing scheduled maintenance activities, or can hinder an emergency repair of the system.

Unnecessary disruption in the operational use of the system due to a lack of notification creates unnecessary issues for resolution by ICC.

Failure to make proper notification to user agencies can result in unneeded confusion, and loss of communications for radio users, and possible compromise of any special operations communications.

3. Operational Context:

Affected agencies shall be notified by phone of maintenance activities that impact their subscribers of the system. This notification of maintenance will also be posted on the RIEMA web page under the heading RISCON (Maintenance Schedule)

Agency notification of radio maintenance activities to their individual subscribers is at the discretion of their agency's designated representative.

4. Recommended Protocol/ Standard:

Maintenance activities, planned or unplanned, that could impact the subscribers usage of the system requires notification to the affected agency's radio representatives. Which this notification will take place by phone and posting on RIEMA's web page.

5. Recommended Procedure:

A reasonable advance notice shall precede preplanned maintenance activities that affect the agencies of the system. The notification methods shall be by phone, e-mail, radio, or any combination of the same. The notification will consist of:

- The type of planned maintenance activity
- When the maintenance will be conducted
- The amount of time anticipated to complete the activity

- The anticipated impact to the system and subsystems

If a known activity has a significant operational impact upon any specific agency, a confirmation of receipt of notification shall be obtained. It is the responsibility of RIEMA to ensure that all affected users are notified well in advance of any such operations.

Unanticipated maintenance or equipment failures affect the agencies on the system, and require notification to the affected agency's radio representative.

Whenever possible, these operations shall be scheduled for early morning hours when the normal radio traffic is slowest.

Prior to commencing the operation, personnel from RIEMA shall contact each dispatch center's supervisor, for a last minute situational briefing. At that time RIEMA personnel shall, as determined by the briefings, make the GO/NOGO decision.

Once maintenance operations begin, if dispatch operations recognize a need to terminate the operation, or if unexpected problems occur, a supervisor must call the RISCON System Manager to inform the technicians of the situation.

Once the operations are complete, RIEMA personnel shall contact the dispatch supervisors for an update and user feedback.

6. Management

Each agency's radio representatives are responsible for notifications within their respective agencies.

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Issued:	**Jan 6, 2014**	**Section:**	**4.0**	**MAINTENANCE**
Approved by:		**Sub-Section:**	**4.9**	**Outage Responsibility/Time Standard of Repairs**
Revised:				

1. Purpose or Objective
To define the system outage responsibilities.

2. Technical Background:
- **Capabilities**

RIEMA technicians are responsible for assessing the outage situation and determining the best course of action for resolution.

- **Constraints**

There are too many unknowns to define an actual recovery time period for an outage.

3. Operational Context:
RIEMA is responsible for the system.

4. Recommended Protocol/ Standard:
This process is initiated when there is a notification of system impairment.

RIEMA is responsible for monitoring the system on a 24-hour basis, whether it is by on site personnel or by an automated electronic monitoring and notification process.

If the system impairment does not impact subscribing agencies on the system, the resolution process is at the discretion of RIEMA.

5. Recommended Procedure:
Upon notification of an equipment outage, RIEMA technical staff is expected to:

- Determine the impact of the impairment to the operation of the system. A minor failure is something that either does not affect, or minimally affects user functionality, a major alarm is something that seriously affects or risks user functionality of the system.
- Determine if there are internal or external factors that alter the priority of system impairment, such as weather, subscriber loading, unique public safety activities or impending events, etc.
- Determine if manual intervention is required, a serious failure requires initiating repair processes regardless of the time of day, and minor failures can wait until normal business hours before repair. The determination is at the discretion of RIEMA, and shall be based on internal system functionality and external subscriber needs.
- Determine if additional external resources are required.
- Notification process is used as defined in Section 4.1 of this manual.

When requested by the ICC or the technical committee, the details of recovery processes may be reviewed for improvements.

6. Management
RIEMA Field Services is responsible for managing system and subsystem outages.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	4.0	MAINTENANCE
Approved by:		Sub-Section:	4.10	Electromagnetic Energy [EME] Awareness
Revised:				

1. Purpose or Objective

It is the policy of RIEMA and the ICC to ensure all persons requiring entry to any transmitter sites are made aware of potential hazards including electromagnetic energy and radio-frequency emissions that may exceed applicable limits.

2. Technical Background:

- **Capabilities**

State employees and sub-contractor exposure to radio-frequency emissions is subject to federal guidelines as defined in OSHA regulations, and FCC publication "OET Bulletin-65, Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields".

- **Constraints**

Failure to educate and train technical staff in the proper safety techniques, or inform untrained workers or visitors of the hazards associated with radio-frequency emissions increases the potential for unnecessary exposure, personal injury, and possible litigation.

3. Operational Context:

RIEMA maintains a comprehensive safety program, and trains workers so that all personnel are aware of the potential exposure to those hazards, and have the necessary intellectual and physical tools to control or mitigate their exposure.

4. Recommended Protocol/ Standard:

1. Any person requiring access in close proximity to antennas, or to areas with high power radio transmitters under repair, is required to provide verification to RIEMA of awareness of the hazard potential, and understand how to control exposure.

2. Any personnel requiring access in close proximity to the antennas should employ lock-out/tag-out procedures to isolate the radio-frequency source prior to equipment servicing.

3. Any persons with implanted medical devices (including cardiac pacemakers) shall consult a physician before entering any areas with radio-frequency emissions.

5. Management

RIEMA is responsible for managing this policy.

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Issued:	**Jan 6, 2014**	**Section:**	**4.0**	**MAINTENANCE**
Approved by:		**Sub-Section:**	**4.11**	**Lost and Stolen Radios**
Revised:				

1. Purpose or Objective

It is the policy of the RIEMA and the ICC to ensure RISCON's operational integrity and security by providing users with a procedure for responding to incidents of missing, lost or stolen radio units, and for the recovery of funds required to replace the radio equipment if obtained from RIEMA.

Damage radios beyond repair that are accounted for shall notify RIEMA within 48 hours of incident.

Each agency shall develop internal guidelines for dealing with incidents of lost, stolen or missing radio equipment.

2. Technical Background:

- **Capabilities**

The radio system's controller provides individual access to the radio system for each assigned radio, and also the ability to regroup or lock a specific radio to a specific talkgroup, or to disable the radio altogether with the 'Inhibit" feature.

- **Constraints**

The target radio must be turned on and affiliated with the radio system for the actions to be processed. If the target radio is not active, the requested action can be put into the passive mode, so when the target radio does attempt to affiliate with the radio system, the pending action is initiated.

3. Operational Context:

The individual radio user and/or agency must make immediate notification to RIEMA upon recognition or notification that an assigned radio is misplaced, lost, or stolen. Delay in providing notification could result in unauthorized persons causing interference and/or receiving confidential information.

4. Recommended Protocol/ Standard:

RIEMA shall be immediately notified of the situation by one of the methods described in Appendix 7. The agency or user is required to obtain and submit a police report to RIEMA within 1-day of the reported loss.

If the radio equipment is owned by RISCON and managed by RIEMA, the agency to which the lost or stolen radio is assigned shall be responsible for paying the replacement costs of that equipment to RIEMA.

5. Management

RIEMA is responsible for managing this policy.

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Issued:	**Jan 6, 2014**	**Section:**	**4.0**	**MAINTENANCE**
Approved by:		**Sub-Section:**	**4.12**	**Disaster Recovery**
Revised:				**Ongoing project expect plan completion by Feb 2014.**

1. Purpose or Objective

It is the policy RIEMA and the ICC to ensure that planning is in place and resources identified and available to expedite the recovery of RISCON and related components in the case of disaster or other major incident that affects operations of the system.

2. Technical Background: N/A

3. Operational Context:

RIEMA personnel will maintain a comprehensive plan for restoration of RISCON's radio communications systems during times of disaster. This plan should be presented to the ICC for review and comment. Procedures for the restoration of services should be addressed and personnel who will be involved in such a plan must be trained. RIEMA must ensure that all third party vendors are likewise trained in such procedures.

4. Recommended Protocol/ Standard:

The plan is maintained in the 'Disaster Recovery Planning Software' package that is utilized by RISCON for disaster planning. This plan contains contact information for all RIEMA, vendor, and contracted support personnel, and basic recovery processes.

5. Management

RIEMA will maintain s and manage the plan.

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Issued:	Jan 6, 2014	Section:	5.0	NON-GOVERNMENTAL USER ACCESS
Approved by:		Sub-Section:	5.1	Media Access
Revised:				Recommend removal

1. Purpose or Objective

To establish a policy that allows news media to access certain voice communications over RISCON if requested.

2. Technical Background:

- **Capabilities**

The system provides enhanced communication and interoperability using state-of-the-art technology for public safety users such as police, fire, EMS, and other governmental agencies.

- **Constraints**

Talk groups are the property of the requesting agency and they shall control access to them. Talkgroups _____ are used for interoperable communications among agencies, and are under the purview of RIEMA. Radio templates are also the property of the requesting agency, which can choose to release all, part, or none of the template. RIEMA controls access to templates used for any interoperability channels

Users of scanning radios and other scanning equipment shall comply with all Federal and Rhode Island statutes and rules regarding the use of scanning equipment.

At no time will access to encrypted communications be granted to personnel not directly authorized by the talkgroup owner.

3. Operational Context:

Members of the media who monitor public safety communications can monitor the communications of agencies who operate on RISCON using a radio programmed to scan selected talkgroups in a receive-only mode, however, access to encrypted communications and talk groups will not be granted.

4. Recommended Protocol/ Standard:

Media agencies monitoring the system shall purchase a radio that is compatible with RISCON. The radio can only be programmed by RIEMA staff. Before the radio is programmed the media agency must complete a signed agreement to abide by standards regarding use of the equipment, determined by RIEMA, including that the radio can only be used for receiving communications and shall not be reprogrammed for transmit. Violation of the agreement shall result in the user's radio being inhibited immediately, and removed from the system.

5. Recommended Procedure:

Each agency using RISCON shall submit to RIEMA a list of the talkgroups, if any, which are approved for media monitoring.

Media agencies wanting to operate a subscriber unit for purposes of monitoring communications on RISCON shall complete an agreement with ICC. The agreement includes terms and conditions for the use of radios on the system, requirement of compliance with state and federal law, and a list of the talkgroups monitored. These talkgroups shall be among those that the talkgroup owners have indicated may be monitored. The media agency can then purchase radios to be used for scanning

purposes only. Violation of the agreement shall result in the media agency's radios being immediately inhibited and removed from the system.

In the event there is a dispute as to which talkgroups shall be made available, the agency owning the talkgroups maintains the final authority.

The purchase cost of radio equipment for monitoring is the responsibility of the media agency. There is no fee charged for media scanning access to the system, however, media users are responsible for the actual costs associated with programming the radio to operate on the system. The talkgroups programmed are limited to those specified in the user agreement.

Radios can only be programmed with talkgroups that are authorized or released for monitoring by the respective agencies owning those talkgroups. A talkgroup used solely for communications to the news media shall not be created.

6. Management

RIEMA manages the media agreement process and maintains a list of users of radios for scanning purposes and talkgroups monitored.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	6.0	FINANCIAL POLICIES AND FEES
Approved by:		Sub-Section:	6.1	System Upgrades and Associated Costs
Revised:				To Be Develop

1. Purpose or Objective

The purpose of this standard is to set a procedure for determining the costs to be charged to RISCON agencies and/or others for changes or reconfiguration required to support additional capabilities on any part of RISCON. Upgrades or changes to the system that benefit all users shall be reflected in the monthly billing, however, any changes requested that only benefit a specific agency shall require those costs be paid by the requesting agency.

2. Technical Background:

- **Capabilities**

To ensure compatibility with existing equipment and systems, the entity shall coordinate all requests through and with the assistance of RIEMA.

- **Constraints**

Failure to coordinate the request through RIEMA shall result in denial of the request

3. Operational Context:

RIEMA determines the annual capital, operating, and administrative costs of the system, which is taken into consideration when determining the annual rate structure.

The fee schedule is reviewed annually as part of the annual budget preparation process and is submitted to RIEMA for approval.

4. Recommended Protocol/ Standard:

RIEMA notifies agencies of the annual fee structure.

5. Recommended Procedure:

Any agency requesting specific changes or additions to the system shall consult with RIEMA to develop a technical design plan to present to ICC. The technical committee shall review the plan and report back concerning any impacts on the system. If approved by ICC, the plan shall be included in the capital budget request by RIEMA for administration approval and funding.

6. Management

This procedure is managed by RIEMA staff.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	6.0	FINANCIAL POLICIES AND FEES
Approved by:		Sub-Section:	6.2a	User Fees
Revised:				To be Develop

1. Purpose or Objective

The purpose of this standard is to outline a procedure for determining costs of operation, administration, and maintenance of the radio system and for billing each agency its prorated share. The standard is governed by _____ , which grants RIEMA the power to assess user fees.

2. Technical Background: N/A

3. Operational Context:

_____ provides for RIEMA to assess each participating agency a user fee to cover the ongoing costs of administering, operating and maintaining the system. RIEMA responsibility as stated is to: "Determine the accurate maintenance and operating costs for the System and then recommend a plan to access each user a fair and proportionate share to recover these costs".

4. Recommended Protocol/ Standard:

RIEMA provides to all users an updated subscriber and access fee structure annually. The user fee structure is located in Appendix 5. RIEMA bills each agency on a monthly basis, based on the number of subscriber radios that agency has assigned on the system. For purposes of budgeting, each agency shall supply RIEMA with information concerning the entity's projected use of subscriber radios in the next fiscal year.

5. Recommended Procedure:

Each year, during the annual budget process, RIEMA staff prepares an estimate of the projected costs to be covered by user fees for the upcoming fiscal year. Administrative costs include salaries, benefits, office space, office supplies, postage, travel expenses, subscriptions, fees and dues; and services such as legal, financial, web site development and maintenance, insurance and intergovernmental relations.

Billing is prepared and submitted monthly.

6. Management

RIEMA is responsible for managing this procedure.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	6.0	FINANCIAL POLICIES AND FEES
Approved by:		Sub-Section:	6.2b	Fees for Interoperability Participants
Revised:				To Be Develop

1. Purpose or Objective

The purpose of this standard is to set a procedure for determining the costs to be charged to eligible agencies that apply for interoperability participation in RISCON.

4. Technical Background:

- **Capabilities**

The eligible agency shall acquire approved P25 radios capable of digital communication on assigned and licensed public safety land mobile channels.

- **Constraints**

All agencies shall comply with the interoperability plans and training requirements of ICC, and include the 'A Zone' in the radio programming template. RIEMA has final approval of all radio equipment allowed to access the system.

5. Operational Context:

It is the policy of RIEMA to encourage all eligible agencies to participate in RISCON for the purpose of seamless and immediate interoperable communications in the State.. Therefore, it is the policy of ICC to charge no fees for admittance to the system for the purposes of interoperable communications only.

4. Recommended Protocol/ Standard:

ICC determines the amount of fees to be charged to agencies applying for dedicated talkgroups, however there are no fees charged for access to the 'A Zone', or talkgroup access granted by a user agency for interoperable communications.

5. Recommended Procedure:

During the application process for interoperability participation in the system, an eligible agency shall submit a formal written request to ICC stating the specific talkgroups requested and justifications. The request shall be forwarded to the appropriate agency's radio representatives for consideration. After the request is reviewed, a formal vote from ICC is required to grant or deny the request.

6. Management

This procedure is managed by RIEMA staff.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	7.0	SYSTEM SECURITY
Approved by:		Sub-Section:	7.1a	Site Security
Revised:				RIEMA SOP

1. Purpose or Objective

The purpose of this standard is to outline security measures and procedures in place to provide security and protect the integrity of RISCON tower and equipment sites.

2. Technical Background:

- **Capabilities**

Security measures have the overall benefit of protecting the functionality, integrity and operation of the system.

- **Constraints**

Details of specific security measures cannot be placed within a public standard; otherwise measures used in monitoring and maintaining security are compromised.

3. Operational Context:

The physical security of equipment and structures making up the core of the radio system infrastructure is paramount to the reliability and availability of communications carried on the system. Each site is within a fenced, gated and locked compound, with shelter entry monitored and reported to a central monitoring point through the MOSCAD alarm and control system. A remote controlled camera system is installed at each site and is monitored by RISCON personnel for any unauthorized entry or security concerns.

4. Recommended Protocol/ Standard:

Access to the sites is tightly controlled and entry to those sites is granted only to those personnel with proper authorization from RIEMA. All personnel requiring unaccompanied site access must have passed an FBI background check prior to that access. Personnel without proper background clearance must be accompanied by RIEMA staff. Entry alarms for the remote sites are sent immediately to the RIEMA technical support staff.

5. Recommended Procedure:

Notification of RIEMA staff and/or General Services Security personnel is required of all agencies and vendors prior to gaining site access. Any person requiring access to the tower sites for any reason shall have full clearance from RIEMA, or be accompanied and monitored by a RIEMA technician while there. Local Police will be immediately notified and dispatched to any site with unexpected or unexplained alarms, or unidentified personnel viewed remotely from the camera systems.

6. Management

RIEMA is responsible for managing this procedure.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	7.0	SYSTEM SECURITY
Approved by:		Sub-Section:	7.1b	Infrastructure Security, Equipment and Sites
Revised:				RIEMA SOP

1. Purpose or Objective

The purpose of this section is to define specific security measures for system and subsystem equipment and to define site security policy.

2. Technical Background:

- **Capabilities**

Security measures have the overall benefit of protecting the functionality, integrity and operation of the system.

- **Constraints**

Details of specific security measures cannot be placed within a public standard; otherwise measures used in monitoring and maintaining security are compromised.

3. Operational Context:

Equipment and site security is an ongoing process.

4. Recommended Protocol/ Standard:

All items identified as 'Restricted Information' will be maintained in secure areas within the control of RIEMA, and is not available outside of RIEMA or ICC, except by formal written request. For sites that are privately owned a written request will have to be forward to the agency owning the property.

Technical information that can compromise system security is considered 'Restricted Information'.

The system network is protected from other data networks by isolation, or by using a properly configured firewall having the approval of RIEMA, and the system manufacturer.

All remote access points to the system are kept secure, and are coordinated with RIEMA.

RIEMA password protects system and subsystem equipment for the purpose of preventing unauthorized access to equipment.

User login accounts are protected with passwords, providing an appropriate level of protection. If a password is suspected of being compromised, it is immediately updated.

External devices (computers, modems, routers etc) are not connected to the system network without the approval of RIEMA.

Site access is not unreasonably denied to outside agency support staff, but is closely monitored and can require escort by RIEMA staff. Outside agencies requiring site access are required to coordinate all site visits with RIEMA staff during normal working hours. After hours access is tightly controlled and is generally discouraged unless it is emergency situation. Access to any site without first contacting RIEMA is prohibited, and shall result in disciplinary action against the offending agency and can result in removal of the agency's equipment and total site restriction.

All personnel not previously authorized for access to equipment locations and tower sites will be under the supervision of authorized staff.

Any agency or vendor with access to any tower site or equipment location shall make immediate notification to RIEMA of urgent issues such as discharged employees or cancelled contracts.

Any third party that may co-locate equipment on RISCON network must be advised of this procedure and all procedures related thereto.

5. Recommended Procedure:

All agencies and personnel that require access to RIEMA controlled sites must provide signed copies of the RIEMA Radio Site Access Agreement for each person that will access the sites. The agreement is found in Appendix 9.

System documentation is classified 'Restricted Information'.

6. Management

RIEMA and Providence is responsible for the equipment and site security for their respective portions of the system.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	7.0	SYSTEM SECURITY
Approved by:		Sub-Section:	7.1c	Infrastructure Security, Tower Sites – Co-Location
Revised:				RIEMA SOP

1. Purpose or Objective

The purpose is to define specific requirements for outside parties interested in co-locating on RISCON facilities.

2. Technical Background:

- **Capabilities**

Security measures have the overall benefit of protecting the functionality, integrity and operation of the system.

- **Constraints**

  - RIEMA must approve the use of, or access to RISCON shelters/buildings and towers.
  - Only those vendors, contractors, State and Local Government employees that have been approved by RIEMA are allowed access to RISCON Infrastructure.
  - Any internal agency requesting access to the RISCON shelters/buildings or towers are solely responsible for all costs related to the request, regardless to the outcome of the request.
  - At the discretion of RIEMA, internal use charges shall be accessed and billed to the interested party wishing to view a RISCON site.

3. Operational Context:

Equipment and site security is an ongoing process.

4. Recommended Protocol/ Standard: N/A

RIEMA will have the authority to access a monthly fee for any RISCON facility that may be used by a third party commercial carrier. A third party carrier must have qualified staff that can support the requirements outlined below.

5. Recommended Procedure:

Step 1: Any agency desiring access to RISCON shelters/buildings or towers shall make the request in writing to RIEMA.

All requests must include the following minimum information:

- Needs Justification
- Locations Desired
- Transmitter Frequencies
- Receiver Frequencies
- Transmitter Output Power
- Height and Orientation of Antennas
- Transmission line size
- Antenna Type and mounting details
- Antenna Wind Load Profile

- Equipment Size
- Equipment Power Requirements
- Equipment Heat / BTU information

All requests shall be in writing and addressed to RIEMA.

Step 2: RIEMA reviews the request, and if the request is deemed in the best interest of RISCON, RIEMA shall forward the request to ICC for pre-qualification. ICC can chose to take one of the following actions:

- Reject
- Pre-qualify
- Return to requester for further information.
- Refer to the technical committee for further review.

Step 3: Upon Pre-Qualification by ICC the applicant shall submit the following documents to the technical sub-committee for review and approval:

- Intermodulation study to the 9th harmonic
- Tower loading study stamped by a professional engineer
- Detailed design and installation plans
- Revised EME building studies
- Revised tower EME studies
- Revised power distribution drawings
- Power systems and back up
- Detailed installation plans
- Security measures and related equipment
- Grounding certification - ensure does not conflict with RISCON grounding standards

Step 4: Based on the documents provided in step 3 the technical committee will make a recommendation to ICC.

Step 5: ICC approves or rejects the request.

Conditions of Approval:

- All installations are in full accordance with current site installation and grounding standards and are subject to inspection by RIEMA upon completion.
- Any non-compliant installation items identified during annual inspections shall be corrected immediately at the applicant's cost to include the cost of re-inspection if required.
- Upon notification from RIEMA, any items not brought into compliance within 30 days shall be removed from RISCON structures at the applicants cost.
- RIEMA reserves the right to withdraw approval at any time with or without cause.
- If approval is withdrawn, the applicant is responsible for removing all equipment at no cost to State.

6. Management

RIEMA is responsible for the equipment and site security for their respective portions of the system.

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Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:	7.0	SYSTEM SECURITY
Approved by:		Sub-Section:	7.2	Software and Document Security
Revised:				RIEMA SOP

1. Purpose or Objective

The purpose of this standard is to outline security measures and procedures in place to protect the integrity of RISCON software and programming.

2. Technical Background:

The documentation, service and technical manuals, databases, spreadsheets and software of RISCON contain critical operational and technical information that could compromise the system if in the wrong hands, and is classified as 'Restricted Information' .

3. Operational Context:

The documentation and software of the system changes as the system evolves. Those changes and revisions must be documented and maintained in a central location for quick and easy access for the technical support crew.

4. Recommended Protocol/ Standard:

In the best interest of public safety, all documentation, service and technical manuals, databases, spreadsheets and software of the RISCON are considered 'Restricted Information.

5. Recommended Procedure:

All items identified as 'Restricted Information' will be maintained in secure areas within the control of RIEMA, and only shared with those who require a knowledge of it for operational purposes, and is not available to anyone outside of RIEMA or ICC, except by formal written request to ICC, and is not to be released to internal agency personnel who do not have a legitimate and appropriate need.

6. Management

RIEMA is responsible for managing this procedure.

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APPENDIX 1 – Executive Orders

Version:	**One**	**RISCON Standards, Protocols & Procedures**		
Issued:	**Jan 6, 2014**	**Section:**		**APPENDICES**
Approved by:		**Sub-Section:**	**A-1**	**Executive Orders**
Revised:				

1. Purpose

This appendix contains the Executive Orders that set forth the responsibilities and process of the Interoperable Communications Committee (ICC).

Insert ICC documents

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APPENDIX 2 – Sample Access Request Form

Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:		APPENDICES
Approved by:		Sub-Section:	A-2	Sample Access Request Form
Revised:				

Name of Agency, Department, or Organization:_____
Primary Address:_____
Primary contact information:_____
Contact Person:_____
Telephone Number: (Office)_____**(Cell)**_____
Email Address:_____

How many devices require access?

Portables _____ Mobiles _____ Control Points _____ Consoles _____

Please provide answers to the following questions as needed for your specific request.

☐ Are you requesting INTEROPERABILITY with RISCON network as a full time member?

Please explain why? _____

☐ Are you requesting INTEROPERABILITY with RISCON network as a part- time member?

Please explain why?_____

☐ Are you requesting INTEROPERABILITY with RISCON network as a limited user?

Please explain why?_____

☐ Do you require access to other agencies and user templates and/or do you have your own template. If you do not have a template RIEMA will assist you in creating one for your agency.

Please be prepared to submit your template.

NOTE: If you require interoperability with other agencies or User Groups please check the associated box and explain your need for this access for each group. Along with a letter of authorization from each additional agency and talk group or channels you find necessary of operations.

Please list every agency you wish to talk with in your request.

Before you send in your request please review the Interoperable Communications Systems Agreement. You must be willing to comply with the provisions of this document if you wish to participate regardless of membership level.

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- Interoperable Communications System Agreement

The parties to this Agreement shall be the State of Rhode Island and Providence Plantations thru the Rhode Island Emergency Management Agency (RIEMA) by _____and _____ , with its principle offices located at _____ (hereinafter "**User**").

Witnessed:

WHEREAS, The State of Rhode Island operates Rhode Island Statewide Communication Network (RISCON), which is headed by the director of RIEMA, who, is responsible for administering the operation of a state wide emergency communications; and

WHEREAS, the State of Rhode Island Statewide Communications Network is known as RISCON is an integrated system of equipment and facilities necessary for the provision of state-wide emergency communication services; and

WHEREAS, to provide for the safety and protection of the public and public safety responders, and to maintain the integrity of the RISCON system it is necessary to establish membership protocol for users of RISCON;

NOW, THEREFORE, in consideration of the benefits conferred and obligations incurred herein, the parties do mutually agree as follows:

1. **Purpose**: In order to implement cooperative use of Interoperable Radio Communications in times of emergency or other agreed cooperation, we believe that the ability for public safety agencies to communicate with one another during large-scale emergencies is in the best interests of the general public whose lives and property we are to protect, do hereby agree to the following: RISCON is a system for providing emergency communication services, coordinated and operated by the State of Rhode Island, which system includes, but is not limited to, communication towers, base stations, antennas, system controllers, equipment shelters, system frequencies, and subscriber radio equipment. The State hereby grants User access to RISCON for the purpose of providing emergency communication services, subject to the terms of this Agreement.

2. **Term**: This Agreement shall take effect on _____, 20___ and shall be for a term of five years. Thereafter, this Agreement shall be automatically renewed without further action of the parties for three additional five year terms. Either party may terminate this Agreement by providing written notice, as provided for herein, at least sixty (60) days prior to the end of any five year term. Either party may terminate this Agreement for cause at any time, provided, however, that the party seeking to terminate shall provide written notice stating the cause and shall provide the other party thirty days to cure. Upon termination of this Agreement, unless otherwise authorized by the RISCON System Manager, User agrees to remove any RISCON talk groups and frequencies from User's equipment at User's expense.

3. **Obligations of the Parties**:

3.1 - OWNERSHIP AND USE OF RADIO EQUIPMENT – The State hereby grants to User the rights to use, and operate the radio equipment as presented to the Rhode Island Emergency Agency (RIEMA) and as listed (hereinafter "State-assigned equipment"), attached hereto and made a part hereof. The State shall own such equipment for a period of two years from the date of purchase (_____, 2013) and upon the expiration of said two year

period; ownership shall transfer to User for equipment the State has provided. User agrees not to sell or transfer such equipment without prior approval of the RIEMA System Manager during the period of ownership. User agrees to repair and replace the State-assigned equipment under the terms of the warranty, as provided for in §3.3 of the Agreement. User agrees to repair and/or replace any broken or lost equipment at User's expense. If for any reason, User fails to use such equipment, User shall notify the RISCON System Manager and if requested by the RISCON System Manager, shall return such equipment to the State.

3.2 - **PAYMENT** – The State will provide equipment to the end user provided funds are available for that purpose. If no funds are available the end user may purchase such equipment as is necessary to operate on RISCON network. All such purchases must conform to the standards outline in SOP section 6.A (Financial Policies and Fees) equipment may be purchased by the end user, said equipment being used must comply with all of the operational standards outlined in this SOP. Approval of all equipment used on the RISCON system must be approved by the Director of RIEMA.

3.3 - **EQUIPMENT MAINTENANCE** - User is responsible for the operational integrity and compatibility of all State-assigned equipment, as well as any User-owned subscriber equipment (i.e. portables, mobiles, vehicular repeaters, and control stations) that interfaces with RISCON. User shall, at its own cost and expense, maintain all such equipment in proper working order in accordance with factory, FCC and RISCON specifications, and each agency will support replacements, hardware or software upgrades or modifications, and repairs to be timely made to any such equipment that interfaces with RISCON. To ensure system integrity, User shall use only a factory-authorized radio service shop(s), approved by the RISCON System Manager, to perform the maintenance, upgrading, modification, or repair of such equipment. With respect to State-assigned equipment, User agrees to provide for the repair and/or replacement of such equipment through the warranty to the extent covered by said warranty. Upon expiration of said warranty, User shall continue to maintain such equipment in full working order at User's expense for so long as such equipment remains a part of RISCON.

3.4 - **USE OF ADDITIONAL EQUIPMENT AND ACCESSORIES** - The RISCON System Manager shall maintain a list of approved subscriber equipment, required options and feature sets, and related peripheral accessories, and User agrees to use only approved equipment while accessing RISCON. User shall not assign new subscriber equipment to the network or add an accessory to an RISCON radio unless the make, model, options, and feature sets of the equipment/accessory have been approved by the Director of RIEMA with approval of the ICC. User may request that a particular radio or accessory be added to the list of approved equipment/accessories by providing the make and model number of the item as well as sufficient technical details to allow the Director RIEMA and the ICC to determine if the equipment is compatible with RISCON network and its critical operating features. User is advised that some RISCON feature sets (e.g. Advanced Digital Privacy encryption) may be proprietary to a particular vendor and may not properly interface with RISCON. User is further advised that the use of unapproved equipment or accessories may adversely affect RISCON system.

3.5 - **EQUIPMENT PROGRAMMING** – All programming information and parameters shall be considered CONFIDENTIAL and shall not be disseminated to any party not included in this Agreement without the express written permission of the respective Agencies.

3.7 - SYSTEM KEYS – System keys shall remain the property of RIEMA and will be treated as CONFIDENTIAL.

3.8. - **SYSTEM USE** - User agrees to use RISCON and maintain its State-assigned or User-owned radio equipment in accordance with FCC rules and regulations and in accordance with

RISCON policies and procedures. User agrees to use only those frequencies authorized by the State and further agrees to use RISCON in a professional manner for official business purposes only.

3.9 - **FAILURE TO COMPLY** – The RIEMA Director along with the ICC may, at their discretion, terminate User's address and remove the User-owned subscriber equipment from RISCON for failure to comply with the terms of this Agreement; and may reactivate User upon approval of the Director of RIEMA and the ICC after demonstration of compliance.

4. **Liability**: In no event shall the State be liable to User or to any third party who acts in reliance on User for any damages resulting from this Agreement, including indirect, incidental, special or consequential. This limitation includes damages attributed to any malfunction of RISCON system, regardless of the cause of action, arising out of or connection with a party's performance.

5. **System Governance:** The Director of RIEMA, ICC and the RISCON System Manager shall enforce policies and procedures for access to RISCON and for the operation of RISCON, which policies and procedures shall be adopted by the Director of RIEMA and after consultation with the ICC. The State agrees to make such policies and procedures available to User by mailing a written copy thereof and/or by posting them on its website. Users may request changes to RISCON policies and procedures by submitting such request to the RISCON System Manager and the chair of the ICC as outlined in SOP 1.5a. Final approval of such changes remains with the Director of RIEMA and the ICC.

6. **Assignment**: User agrees that it shall not assign, transfer, and convey any radio equipment or frequency access without the prior express written consent of the Director of RIEMA and the ICC.

7. **Statutory Compliance**: In acceptance of this Agreement, User agrees to comply in all respects with all Federal, State, and State laws and regulations that pertain to the services provided herein.

8. **Licenses and Permits**: User agrees that it will obtain at its own expense all licenses or permits necessary for the operation of its radio equipment prior to the commencement of its use of RISCON.

9. **Appropriations**: It is understood by and between the parties that this Agreement shall be deemed executory only to the extent of the monies appropriated and available for the purpose of this Agreement. No liability on account thereof shall be incurred by the State beyond funds appropriated and available for the purpose of this Agreement.

10. **Contract Modifications**: This Agreement represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations or agreements, whether written or oral. This Agreement may be amended only by written instrument signed by both parties, except as otherwise provided in this Agreement.

11. **Severability**: If any term or provision of this Agreement shall be held invalid or unenforceable, the remainder of this Agreement shall not be affected thereby and every other term and provision of this Agreement shall be valid and enforced to the fullest extent permitted by law.

12. **Clauses Required by Law**: The parties to this Agreement understand and agree that each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to have been inserted herein. If through mistake or

inadvertence, such provision is not inserted; such provision shall be deemed to have been inserted and shall have the full force and effect of law.

13. **Notices**: Notices provided for in this Agreement shall be delivered by mail to the following:

Acceptance and Approval of Authorizing Officials

APPLICANT AGENCY

I do hereby certify that all radio equipment listed above is the type accepted for use on the RISCON Systems and is suitable for use as public safety wireless device. I further agree that I will take out of service immediately any two-way radio equipment if it is found to be out of tolerance, causes any interference to other similar equipment and/or it is determined that it is not type accepted for use on the RISCON System.

I furthermore indicate that as the executive authority in this agency, all subordinate employees who are granted access to these frequencies have received, or will receive National Incident management System (NIMS) training prior to using these frequencies.

I, as executive authority to enter into formal agreement, and on behalf of the employees of my agency who have access to radios listed in this agreement, hereby accept and will abide by all terms contained within this agreement.

Applicant Agency Executive Authority-Name_____

Title of Executive Authority:_____

Signature:_____ Dated Signed:
_____

Approval Signatures

I as the Director of Rhode Island Emergency Management, I hereby grant permission for the applicant agency to transmit/receive on the frequencies

that have been authorized in accordance with the Standard Operating Procedures of the RISCON.

_____Date;_____

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APPENDIX 3 – Radio Zone Aliases

Version:	**One**	**RISCON Standards, Protocols & Procedures**		
Issued:	**Jan 6, 2014**	**Section:**		**APPENDICES**
Approved by:		**Sub-Section:**	**A-3**	**Radio Zone Aliases**
Revised:				**remove**

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APPENDIX 4 – Radio User Aliases

Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:		APPENDICES
Approved by:		Sub-Section:	A-4	Radio User Aliases
Revised:				

Agency	Zone Designation
Rhode Island State Police	
Rhode Island Airport Corporation	
Rhode Island College Police	
Rhode Island Emergency Management Agency	
Rhode Island Department of Environmental Management-Police	
Rhode Island Department of Environmental Management-Forestry	
Rhode Island Department of Transportation	
Rhode Island Medical Examiner	
Rhode Island Fire Marshalls	
Rhode Island Department of Health	
Rhode Island Health Care Association	
Rhode Island Health Center Association	
Rhode Island National Guard	
Rhode Island Public Transit Authority	
Rhode Island Red Cross	
Rhode Island Sheriff's Department	
Rhode Island Superior Court	
Rhode Island Turnpike and Bridge Authority	
University Of Rhode Island EMS	
University Of Rhode Island Public Safety	
Community College Of Rhode Island	
Brown University Public Safety	
Burrillville Police Department	
Central Coventry Fire Department	
Coventry Police Department	
East Providence Fire Department	
East Providence Harbor Master	
East Providence Police Department	
Gloucester Police Department	
Hopkinton Police Department	
Hospital Association of Rhode Island (HARI)	

Jamestown Police Department	
Johnston Police Department	
Kingston Fire District	
Little Compton Fire Department	
Little Compton Police Department	
Middletown Fire Department (MS)	
Middletown Police Department	
Narragansett Fire Department	
Narragansett Police Department	
Narragansett Department of Public Works	
Narragansett Indian Public Safety	
Narragansett School Administration	
Newport Fire Department (MS)	
Newport Police Department	
North Providence Department of Public Works	
North Providence Fire Department	
North Providence Police Department	
North Smithfield Emergency Management Agency	
North Smithfield Police Department	
Portsmouth Police Department	
Portsmouth Water Dept.	
Providence College	
Providence Department of Public Works	
Providence Emergency Management Agency	
Providence Fire Department	
Providence Parks and Recreation	
Providence Police Department	
Quonset Development Corp.	
Rhode Island School of Design Public Safety	
Roger Williams University Public Safety	
Scituate Police Department	
South Kingstown EMS	
South Kingstown Police Department	
St. George's School Public Safety	
Tiverton Police Department	
Westerly Police Department	
West Greenwich Police Department	
West Warwick Police Department	
West Warwick School Administration	
Woonsocket Police Department	

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RISCON NAMING PREFIXES

Remove

Alias	Agency	I.D. START	I.D. END
SPXXXXX P	Rhode Island State Police Portable	755728	760000
SPXXXXXX M	Rhode Island State Police Mobile	760001	800000
SPXXXXXCS	Rhode Island State Police Control Station		
	Example only		

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APPENDIX 5 – Radio User Fees

Version:	**One**	**RISCON Standards, Protocols & Procedures**		
Issued:	**Jan 6, 2014**	**Section:**		**APPENDICES**
Approved by:		**Sub-Section:**	**A-5**	**Radio User Fees**
Revised:				**To be Develop**

Service	Unit of Measure	Unit Cost
RISCON Access		
- Generic	Per Radio Per Mo.	$0.00
Subscriber Radios		$0.00
Installation/Removal		
- Radio Only	Per Install	$0.00
- Patrol Car	Per Install	$0.00
- Detective	Per Install	$0.00
- Covert	Per Install	$0.00
- Drug/Utility	Per Install	$0.00
- Motorcycle	Per Install	$0.00
- Fire w/ AVL	Per Install	$0.00
- EMS w/ AVL	Per Install	$0.00
- Removals	Per Removal	$0.00
- Swap-outs	Per Job	$0.00
Programming	Per Radio	$0.00
Maintenance Plan		
- Radio Only	Per Vehicle Per Mo.	$0.00
- Patrol	Per Vehicle Per Mo.	$0.00
- Detective	Per Vehicle Per Mo.	$0.00
- Covert	Per Vehicle Per Mo.	$0.00
- Drug/Utility	Per Vehicle Per Mo.	$0.00
- Motorcycle	Per Vehicle Per Mo.	$0.00
- Fire w/ AVL	Per Vehicle Per Mo.	$0.00
- EMS w/ AVL	Per Vehicle Per Mo.	$0.00
- Portable	Per Radio Per Mo.	$0.00
- Control Station	Per Sta Per Mo.	$0.00
Field/Custom Projects	Per Hour	$0.00

Parts	Percent Mark-Up	$0%

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APPENDIX 6 – In-Cabinet Repeat Channel Activation Priority List

Version:	**One**	**RISCON Standards, Protocols & Procedures**		
Issued:	**Jan 6, 2014**	**Section:**		**APPENDICES**
Approved by:		**Sub-Section:**	**A-6**	**In-Cabinet Repeat Channel Activation Priority List**
Revised:				**To Be develop**

Rhode Island Emergency Management Agency
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APPENDIX 7 – Contacting Radio Communications

Version:	**One**	**RISCON Standards, Protocols & Procedures**		
Issued:	**Jan 6, 2014**	**Section:**		**APPENDICES**
Approved by:		**Sub-Section:**	**A-7**	**Contacting Radio Communications**
Revised:				**To be develop**

Use one of the following methods to contact RIEMA personnel for service, access, equipment installation, and lost radio notification:

- During normal working hours, Monday – Friday, 7:30AM – 4:00PM
  call direct to _____
- Outside of normal working hours, or to make emergency service requests contact OEM Operations at _____

Physical Addresses:

Vehicle and Subscriber Maintenance

Field Services and System Operations

Mailing Address:

Other important numbers:

Vendor List

Contact information should be available 24x7 to authorized personnel, vendors, and other parties that are on or doing business with RIEMA and using RISCON.

APPENDIX 8 – Site Access Agreement

Version:	One	RISCON Standards, Protocols & Procedures		
Issued:	Jan 6, 2014	Section:		APPENDICES
Approved by:		Sub-Section:	A-8	Site Access Agreement
Revised:				

SAMPLE - RISCON Radio Communications
Tower Site Access Request Form

This form must be completed by all personnel and vendors requiring access to RISCON Radio Communications tower sites.

Name: _____ Date: ____/_____/_____

Company: _____

Department: _____

Reason for Access:

My signature on the line below indicates that I have read and completely understand the following, and will abide by these rules regarding access to any RISCON Radio Communications tower site.

1. Access to the sites is tightly controlled and entry to those sites is granted only to those personnel with proper authorization from RIEMA. Entry alarms at the remote sites immediately alert RIEMA personnel of any intrusions.

2. A tower site access list shall be maintained by RIEMA, and be kept up to date, including vendor support staff. The site access list will be closely monitored. A person will be denied unsupervised access to any site if that person is not identified on the access list.

3. Vendors must ensure their personnel are properly authorized and are on the current authorization list prior to dispatching someone to work at a tower site. An unauthorized technician will only be allowed access to a site when accompanied and supervised by one with the proper authorization. All unauthorized personnel at any tower site will be under the supervision of RIEMA authorized staff.

4. All personnel must pass a FBI background check before unsupervised access is granted to any RISCON Radio Communications facility.

5. Site access shall not be unreasonably denied to RISCON agency support staff, which is responsible for maintaining their agency's equipment located at that site.

6. External devices (computers, modems, routers etc) are not connected to the system network without the approval of RIEMA.

7. Site access is not unreasonably denied to outside agency support staff, but is closely monitored and can require escort by RIEMA staff. Outside agencies requiring site access are required to coordinate all site visits with RIEMA staff during normal working hours. After hours access is tightly controlled and is generally discouraged unless it is an emergency situation.

8. Access to any site without first contacting RIEMA is prohibited, and shall result in disciplinary action against the offending agency and can result in removal of the agency's equipment and total site restriction, or loss of contract privileges.

9. Any agency or vendor with access to any tower site or equipment location shall make immediate notification to RIEMA of urgent issues such as discharged employees or cancelled contracts.

10. The physical security of equipment and structures making up the core of the radio system infrastructure is paramount to the reliability and availability of communications carried on the system. Each site is within a fenced, gated and locked compound, with shelter entry monitored and reported to a central monitoring point through the MOSCAD alarm and control system. A remote controlled camera system is installed at each site.

11. Any person requiring access to the tower sites for any reason shall have full clearance from RIEMA, or be accompanied and monitored by a RIEMA authorized technician while there.

12. RIEMA reserves the right to dispatch law enforcement personnel at any time to ensure security of the tower sites.

I further signify that I understand and accept the risks involved with the possible exposure to radio frequency emissions, and all other personal hazards involved within the confines of the site, and I hereby release RISCON, its employees and officials from any and all liability from access to any tower site or structure, and any injuries that might occur from the same.

Signature: _____

Date: _____/_____/_____

Rhode Island Emergency Management Agency
RISCON
Standard Operating Procedures

Glossary- Definitions and Acronyms

Version:	One	RISCON Standards, Protocols & Procedures		
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Approved by:		Sub-Section:		Definitions and Acronyms
Revised:				

1. Purpose or Objective

To clarify some of the terms, acronyms, and abbreviations used throughout this manual.

2. Definitions (in alphabetical order)

The following definitions are provided to aid with understanding of the terms used throughout this manual, and denote to the way in which those terms are used within the context of this manual.

Alias – A common alphanumeric name used to identify a radio, talkgroup, site, etc. rather than referencing the assigned 6 digit ID number

Analog- Analog systems may communicate a single condition.

Channel – A pair of frequencies, transmit and receive, that are used for a single communications path

Channel Bank – A device that combines multiple data and/or audio inputs into TDMA format so that it can be transmitted over a T1 circuit and shared between transmitter sites

Codeplug – The firmware that holds the unique personality for a system, device, or radio unit, and can be reprogrammed to change operational parameters as needed.

Control Station – A fixed radio unit normally found at a desk or common work area indoors or directly connected to a console or other fixed transmitting location.

Console – A fixed radio operator position with multiple radio resources and features that can access any subset of talkgroups and/or conventional channels

Consolette – A mobile radio mounted into a case and converted for desk-top use

Conventional – non-trunked radio communication, either through a repeater system or radio-to-radio

Direct – Radio-to-radio transmission and reception on a single frequency

Duplex channel systems - transmit and receive on different discrete channels. The systems equipment cannot communicate without some infrastructure such as a repeater, base station or Talk-Through Base. Most common in the US is a repeater configuration where a base station is configured to simultaneously re-transmit the audio received from mobile units. This makes the mobiles, or hand-helds, able to communicate amongst one another anywhere within reception range of the base station or repeater.

Typically the base or repeater station has a high antenna and high power, which allows much greater range, compared with a ground vehicle or hand-held transceiver.

Duplex systems can be divided into two types. The term *half-duplex* refers to systems where use of a push-to-talk switch is required to communicate. *Full duplex* refers to systems like mobile telephones with a capability to simultaneously receive and transmit. Repeaters are by nature full duplex, most mobiles and almost all handhelds are half duplex.

- Advantage: duplex channels usually allow repeater operation which extends range (in most cases due to increased transmit power and improved aerial location / height) - especially where hand-held radios are in use.
- Disadvantage: If a radio cannot reach the repeater, it cannot communicate.

Eligible Agency – A local unit of government, emergency medical service provider, or special purpose government agency

Encryption – The intentional scrambling or coding of a radio signal to prevent unauthorized reception of secure communications, which requires all transmitting and receiving radios to contain the same code or 'key' with which to communicate with each other.

Failsoft – A fallback means of radio communications if a site or radio system can not perform normal trunking operations

Fleetmap – The master spreadsheet plan of the talkgroups, zones, Failsoft assignments, alias information and other pertinent system and radio programming

Gateway Device – A dispatch console, ACU-1000, or other audio device capable of electrically connecting any number of separate radio conversations to each other, also referred to as a 'radio patch'.

Infrastructure – All of the fixed electrical and mechanical equipment, towers and building structures, transmitters, controllers, antennas, microwave and ancillary equipment that comprise the operational backbone of the radio system

Interconnect – Also telephone interconnect, a radio option which provides mobile and portable radios the capability to connect to and place calls on an outside telephone network

Interoperability – The capability to communicate with units from other systems, other frequency bands, and other agencies as required with existing equipment

Logging – the act of recording radio conversations for replay as required

RISCON – Rhode Island Statewide Communications Network.

Mobile Radio – A vehicular mounted radio with an external power source and antenna

Microwave – A point-to-point, directed radio energy beam on which multiple radio signals or data streams are delivered between remote locations

Mission Critical - Those operations that is reliant upon a functioning two-way radio communications system which unavailability, degradation, delay or failure, partial or complete, would significantly impact and/or impair the successful delivery of vital services or missions

Multi-select - Electrically connecting two or more radio channels or talkgroups so that a dispatcher can monitor and communicate to those separate resources without users on those resources being able to communicate with each other

P25 – a suite of standards for digital radio communications for use by federal, state/province and local public safety agencies in North America to enable them to communicate with other agencies and mutual aid response teams in emergencies.

Patch – Electrically connecting two or more radio channels or talkgroups so that those users of those separate resources are able to communicate with each other

Pre-qualification – a review by ICC to determine if a specific request is valid and has enough merit to be considered fully by the committee, such as an agency requesting more data capacity, or a private company requesting system access

Portable Radio – A lightweight, completely self contained radio unit usually worn on the user's belt or other similar fashion

Public Safety – An agency, department, or individual directly involved with the health, safety, and/or security of the public including, but not limited to police, fire, emergency management, and medical personnel and responders

Public Service - An agency, department, or individual involved with providing non-emergency type services to the public including, but not limited to utilities, transportation, education, and other governmental services not critical to public safety

Radio User – The person or unit to which a radio is assigned and aliased

Rebanding – The term given to the process of reconfiguring and retuning public-safety 800MHz radio systems to mitigate harmful interference from the Nextel system, due to the close proximity of the 800MHz frequencies used in those systems

Repeater – a type of radio station in which subsequently retransmits any signal received on a different frequency

Subscriber – an individual radio of any type assigned and aliased on the system

Simplex channel systems - use a single channel for transmit and receive. Simplex systems are often legacy systems that have existed since the 1930s. The architecture allows old radios to work with new ones in a single network. In the case of all ships worldwide or all aircraft worldwide, the large number of radios installed, (the *installed base*,) can take decades to upgrade. Simplex systems often use *open architectures* that allow any radio meeting basic standards to be compatible with the entire system.

- Advantage: as the simplest system configuration, there is reliability since only two radios are needed to establish communication between them, without any other infrastructure.
- Disadvantages: The simplex configuration offers communication over the shortest range or distance because mobile units must be in effective range of each other. The available channel bandwidth limits the number of simultaneous conversations, since "dead" air time cannot be easily used for additional communication.

Simulcast – A type of trunking radio communications in which voice/data to be transmitted is sent to multiple sites and is transmitted simultaneously to provide wide area coverage

Site – The physical location of an antenna tower, equipment shelter and radio system infrastructure equipment that is electronically linked via microwave radio to the master and other satellite sites.

Storm Plan – A system function to re-group talkgroups for special situations, such as disasters, or crowd control

System Access – The ability to utilize the radio system for radio communication is divided in two categories: limited and full participation. Limited participation is normally defined as utilizing the system only for the purposes of interoperability with RISCON agencies, and/or for purposes of mutual aid.

Talkaround – A conventional mode of single frequency, point-to-point, radio-to-radio communications, also referred to sometimes as ‘direct’ mode

Technical Committee – A sub-committee of ICC that reviews and makes recommendations on all issues of a technical nature that affects operations of the radio system that comes before ICC.

Trunked/Trunking – The automatic and dynamic sharing of a number of communications channels between large numbers of radio users

Tactical Interoperable Communications Plan [TCIP] – was developed to promote quick and easily accessible mutual aid type communications between agencies within an area defined by the plan itself

Talkgroup – A unique trunked radio system resource normally representing or dedicated to a specific user agency or function, on which radio communications are conducted, similar in operation to a conventional radio channel. Talkgroups can contain an unlimited number of radio units.

Uninterruptible Power Source – a battery back-up device that provides emergency power to connected equipment by supplying power from a separate source when utility power is not available.

Zone – An area in the radio template containing positions for 16 individual talkgroups or conventional radio channels that is normally labeled by an acronym that closely represents the owner agency, as defined in Appendix 3.

3. Acronyms and Abbreviations

The following is provided to aid with understanding of the acronyms and abbreviations used throughout this manual, and denote to the way in which those terms are used within the context of this manual.

8CALL90 – International CALLing channel on 800 MHz

8TAC91-94 – International TACtical channel(s)

APCO – Association of Public-Safety Communications Officials

ATAC – AstroTac Comparator

AVL – Automatic Vehicle Location/Locator

CEB – Console Electronics Bank

CTCSS – Constant Tone Controlled Squelch Circuit, also called PL for Private Line

DIU – Digital Interface Unit

EME – Electro-magnetic energy or emission

EMS – Emergency Medical Service

ICR – Fall Back in Cabinet Repeat

FAA – Federal Aviation Administration

FCC – Federal Communications Commission

HR – Human Resources

ID – IDentification number or

IP – Internet Protocol

MHz - Megahertz

ICC – Interoperable Communications Committee

RIEMA – Rhode Island Emergency Management

MTUG – Motorola Trunked Users Group

NPSPAC – National Public-Safety Planning Advisory Committee

OJT – On-the-job Training

PCIA – Personal Communications Industry Association

PE – Professional Engineer

PL – See CTCSS

PSAP – Public-Safety Answering Point

PSWN – Public-Safety Wireless Network Program

PTT – Press-to-talk

RF – Radio Frequency

RSS – Radio Service Software

TC – Technical Committee

TDMA - Time Division Multiplex Addressing

TICP – Tactical Interoperable Communications Plan

UCALL – UHF CALLing channel

UHF – Ultra-High Frequency

UTAC41-43 – UHF TACtical channel(s)

VCALL10 – VHF CALLing channel

VHF – Very-High Frequency

VTAC11-14 – VHF TACtical channel(s)

Statewide Communications Interoperability Plan

Attachment 3

New User Agreement and Checklist

ATTACHMENT 3 – Access Request Form

Version:	One	RISCON Standards, Protocols & Procedures		
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Revised:	Oct 2013			

Name of Agency, Department, or Organization: _____

Primary Address: _____

Primary contact information: _____

Contact Person_____ _____

Telephone Number: (Office)_____(Cell)_____

Email Address: _____

How many devices require access?

Portables _____ Mobiles _____ Control Points _____ Consoles _____

Please provide answers to the following questions as needed for your specific request.

☐ Are you requesting INTEROPERABILITY with RISCON network as a full time member?

Provide a letter from your Agency's Senior Leadership (Chief, Division Manager or Department Head) explaining why your agency wishes to come on the 800 MHz system as a Level One User. **attached letter.**

☐ Are you requesting INTEROPERABILITY with RISCON network as a part- time member?

Please explain why?_____

☐ Are you requesting INTEROPERABILITY with RISCON network as a limited user?

Please explain why?_____

☐ Do you require access to other agencies and user templates and/or do you have your own template. If you do not have a template RIEMA will assist you in creating one for your agency. Please be prepared to submit your template.

NOTE: If you require interoperability with other agencies or User Groups please check the associated box and explain your need for this access for each group. Along with a letter of authorization from each additional agency and talk group or channels you find necessary of operations.

Please list every agency you wish to talk with in your request.

Before you send in your request please review the Interoperable Communications Systems Agreement. You must be willing to comply with the provisions of this document if you wish to participate regardless of membership level.

- Interoperable Communications System Agreement

The parties to this Agreement shall be the State of Rhode Island and Providence Plantations thru the Rhode Island Emergency Management Agency (RIEMA) by _____ and _____, with its principle offices located at _____ (hereinafter "User").

Witnessed:

WHEREAS, The State of Rhode Island operates Rhode Island Statewide Communication Network (RISCON), which is headed by the director of RIEMA, who, is responsible for administering the operation of a state wide emergency communications; and

WHEREAS, the State of Rhode Island Statewide Communications Network is known as RISCON is an integrated system of equipment and facilities necessary for the provision of state-wide emergency communication services; and

WHEREAS, to provide for the safety and protection of the public and public safety responders, and to maintain the integrity of the RISCON system it is necessary to establish membership protocol for users of RISCON;

NOW, THEREFORE, in consideration of the benefits conferred and obligations incurred herein, the parties do mutually agree as follows:

1. **Purpose**: In order to implement cooperative use of Interoperable Radio Communications in times of emergency or other agreed cooperation, we believe that the ability for public safety agencies to communicate with one another during large-scale emergencies is in the best interests of the general public whose lives and property we are to protect, do hereby agree to the following: RISCON is a system for providing emergency communication services, coordinated and operated by the State of Rhode Island, which system includes, but is not limited to, communication towers, base stations, antennas, system controllers, equipment shelters, system frequencies, and subscriber radio equipment. The State hereby grants User access to RISCON for the purpose of providing emergency communication services, subject to the terms of this Agreement.
2. **Term**: This Agreement shall take effect on _____ and shall be for a term of five years. Thereafter, this Agreement shall be automatically renewed without further action of the parties for three additional five year terms. Either party may terminate this Agreement by providing written notice, as provided for herein, at least sixty (60) days prior to the end of any five year term. Either

party may terminate this Agreement for cause at any time, provided, however, that the party seeking to terminate shall provide written notice stating the cause and shall provide the other party thirty days to cure. Upon termination of this Agreement, unless otherwise authorized by the RISCON System Manager, User agrees to remove any RISCON talk groups and frequencies from User's equipment at User's expense.

3. **Obligations of the Parties**:

3.1 - OWNERSHIP AND USE OF RADIO EQUIPMENT – The State hereby grants to User the rights to use, and operate the radio equipment as presented to the Rhode Island Emergency Agency (RIEMA) and as listed (hereinafter "State-assigned equipment"), attached hereto and made a part hereof. The State shall own such equipment for a period of two years from the date of purchase (_____, 2013) and upon the expiration of said two year period; ownership shall transfer to User for equipment the State has provided. User agrees not to sell or transfer such equipment without prior approval of the RIEMA System Manager during the period of ownership. User agrees to repair and replace the State-assigned equipment under the terms of the warranty, as provided for in §3.3 of the Agreement. User agrees to repair and/or replace any broken or lost equipment at User's expense. If for any reason, User fails to use such equipment, User shall notify the RISCON System Manager and if requested by the RISCON System Manager, shall return such equipment to the State.

3.2 - **PAYMENT** – The State will provide equipment to the end user provided funds are available for that purpose. If no funds are available the end user may purchase such equipment as is necessary to operate on RISCON network. All such purchases must conform to the standards outline in SOP section 6.A (Financial Policies and Fees) equipment may be purchased by the end user, said equipment being used must comply with all of the operational standards outlined in this SOP. Approval of all equipment used on the RISCON system must be approved by the Director of RIEMA.

3.3 - **EQUIPMENT MAINTENANCE** - User is responsible for the operational integrity and compatibility of all State-assigned equipment, as well as any User-owned subscriber equipment (i.e. portables, mobiles, vehicular repeaters, and control stations) that interfaces with RISCON. User shall, at its own cost and expense, maintain all such equipment in proper working order in accordance with factory, FCC and RISCON specifications, and each agency will support replacements, hardware or software upgrades or modifications, and repairs to be timely made to any such equipment that interfaces with RISCON. To ensure system integrity, User shall use only a factory-authorized radio service shop(s), approved by the RISCON System Manager, to perform the maintenance, upgrading, modification, or repair of such equipment. With respect to State-assigned equipment, User agrees to provide for the repair and/or replacement of such equipment through the warranty to the extent covered by said warranty. Upon expiration of said warranty, User shall

continue to maintain such equipment in full working order at User's expense for so long as such equipment remains a part of RISCON.

3.4 - **USE OF ADDITIONAL EQUIPMENT AND ACCESSORIES** - The RISCON System Manager shall maintain a list of approved subscriber equipment, required options and feature sets, and related peripheral accessories, and User agrees to use only approved equipment while accessing RISCON. User shall not assign new subscriber equipment to the network or add an accessory to an RISCON radio unless the make, model, options, and feature sets of the equipment/accessory have been approved by the Director of RIEMA with approval of the ICC. User may request that a particular radio or accessory be added to the list of approved equipment/accessories by providing the make and model number of the item as well as sufficient technical details to allow the Director RIEMA and the ICC to determine if the equipment is compatible with RISCON network and its critical operating features. User is advised that some RISCON feature sets (e.g. Advanced Digital Privacy encryption) may be proprietary to a particular vendor and may not properly interface with RISCON. User is further advised that the use of unapproved equipment or accessories may adversely affect RISCON system.

3.5 - **EQUIPMENT PROGRAMMING** – All programming information and parameters shall be considered CONFIDENTIAL and shall not be disseminated to any party not included in this Agreement without the express written permission of the respective Agencies.

3.7 - SYSTEM KEYS – System keys shall remain the property of RIEMA and will be treated as CONFIDENTIAL.

3.8. - **SYSTEM USE** - User agrees to use RISCON and maintain its State-assigned or User-owned radio equipment in accordance with FCC rules and regulations and in accordance with RISCON policies and procedures. User agrees to use only those frequencies authorized by the State and further agrees to use RISCON in a professional manner for official business purposes only.

3.9 - **FAILURE TO COMPLY** – The RIEMA Director along with the ICC may, at their discretion, terminate User's address and remove the User-owned subscriber equipment from RISCON for failure to comply with the terms of this Agreement; and may reactivate User upon approval of the Director of RIEMA and the ICC after demonstration of compliance.

4. **Liability**: In no event shall the State be liable to User or to any third party who acts in reliance on User for any damages resulting from this Agreement, including indirect, incidental, special or consequential. This limitation includes damages attributed to any malfunction of RISCON system, regardless of the cause of action, arising out of or connection with a party's performance.

5. **System Governance:** The Director of RIEMA, ICC and the RISCON System Manager shall enforce policies and procedures for access to RISCON and for the operation of RISCON, which policies and procedures shall be adopted by the Director of RIEMA and after consultation with the ICC. The State agrees to make such policies and procedures available to User by mailing a written copy thereof and/or by posting them on its website. Users may request changes to RISCON policies and procedures by submitting such request to the RISCON System Manager and the chair of the ICC as outlined in SOP 1.5a. Final approval of such changes remains with the Director of RIEMA and the ICC.

6. **Assignment**: User agrees that it shall not assign, transfer, and convey any radio equipment or frequency access without the prior express written consent of the Director of RIEMA and the ICC.

7. **Statutory Compliance**: In acceptance of this Agreement, User agrees to comply in all respects with all Federal, State, and State laws and regulations that pertain to the services provided herein.

8. **Licenses and Permits**: User agrees that it will obtain at its own expense all licenses or permits necessary for the operation of its radio equipment prior to the commencement of its use of RISCON.

9. **Appropriations**: It is understood by and between the parties that this Agreement shall be deemed executor only to the extent of the monies appropriated and available for the purpose of this Agreement. No liability on account thereof shall be incurred by the State beyond funds appropriated and available for the purpose of this Agreement.

10. **Contract Modifications**: This Agreement represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations or agreements, whether written or oral. This Agreement may be amended only by written instrument signed by both parties, except as otherwise provided in this Agreement.

11. **Severability**: If any term or provision of this Agreement shall be held invalid or unenforceable, the remainder of this Agreement shall not be affected thereby and every other term and provision of this Agreement shall be valid and enforced to the fullest extent permitted by law.

12. **Clauses Required by Law**: The parties to this Agreement understand and agree that each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to have been inserted herein. If through mistake or inadvertence, such provision is not inserted; such provision shall be deemed to have been inserted and shall have the full force and effect of law.

13. **Notices**: Notices provided for in this Agreement shall be delivered by mail to the following:

Acceptance and Approval of Authorizing Officials

APPLICANT AGENCY

I do hereby certify that all radio equipment listed above is the type accepted for use on the RISCON Systems and is suitable for use as public safety wireless device. I further agree that I will take out of service immediately any two-way radio equipment if it is found to be out of tolerance, causes any interference to other similar equipment and/or it is determined that it is not type accepted for use on the RISCON System.

I furthermore indicate that as the executive authority in this agency, all subordinate employees who are granted access to these frequencies have received, or will receive National Incident management System (NIMS) training prior to using these frequencies.

I, as executive authority to enter into formal agreement, and on behalf of the employees of my agency who have access to radios listed in this agreement, hereby accept and will abide by all terms contained within this agreement.

Applicant Agency Executive Authority-Name:_____

Title of Executive Authority: _____

Signature:_____ **Dated Signed:** _____

Approval Signatures

I as the Director of Rhode Island Emergency Management, I hereby grant permission for the applicant agency to transmit/receive on the frequencies that have been authorized in accordance with the Standard Operating Procedures of the RISCON.

_____**Date;**_____

RISCON New User Checklist

Welcome to the Rhode Island Statewide Communication Network (RISCON). This checklist will help you in becoming an active member of the premier Public Safety communication system in Rhode Island.

- **The benefits of RISCON**.

☐ Interoperability
☐ 95% statewide mobile coverage
☐ User Training
☐ System Maintenance included in maintenance fee.

- **Compare the RISCON coverage to your needs.**

☐ Statewide
☐ County
☐ City
☐ Town
☐ Buildings

- Identify your operational needs.

☐ Moblie
☐ Portables
☐ Speaker Mics
☐ Controls Stations
☐ Data (future)
☐ Dispatch consoles.

- **Coverage Tests**

☐ In coordination with RIEMA COMMs Staff, define your coverage area for testing.
☐ Also provide your redundant Comms System Type and support plan. (UHF/VHF)
☐ Indentify specific areas of concern.
☐ Indentify participants in the test.
☐ Schedule your tests when required. Contact system Administrator.
☐ Will additional infrastructure be required?

- **Sign the membership agreement.**

☐ A signed Membership Agreement is required. (copy forward to RIEMA & ICC)
☐ A completed Participation Application (copy forward to RIEMA and ICC)
☐ Agencies requesting the Level 1 interoperability templates must complete the Participation Application and Membership Agreement. Provide a letter signed by senior level representative stating the need to be level One.

- **Develop a communication plan and initial template design.**

☐ Contact RISCON personnel for assistance. Phone Number/WEBEOC/RIEMA Web page
☐ How do you communicate within your agency or department?
☐ Who do you want to communicate with in town or state?
☐ What are your communication plans for a disaster?
☐ Who is the point person for the templates?
☐ Develop your initial template(s).
☐ Discuss encryption as needed for operations (justification)

- **Obtain letters of concurrence.**

☐ A letter of concurrence documents giving permission to use another agency's talkgroup/frequencies
☐ The letter of concurrence must be on the authorizating agency's letterhead and list approved
☐ talkgroups and frequencies.
These are required prior to your finalizing your template and approval by RIEMA and ICC.

- **Finalize your template.**

☐ Review your communications needs again.
☐ Modify if needed to ensure success of your agency's users.
☐ RISCON administration approval of template.
☐ Select your service level consistent with the template and use of the radios:
  ☐ Level 1
  ☐ Level 2
  ☐ Level 3

- **Order your radios**.

☐ Verify your radio is compatible with RISCON.
☐ Verify the options you request are available in RISCON.
☐ Obtain a delivery date from the vendor.

- **Schedule training for your agency.**

- ☐ The success of your transition to RISCON is proportional to the participation level during training by users.
- ☐ A “Train the Trainer” course is available for larger organization. (?)

- **Radios programmed**

☐ Radios 800 MHz will be programmed solely by RIEMA COMMS technicians.
☐ Radios may be upgrade by authorized RISCON service companies with approval of RIEMA.

Statewide Communications Interoperability Plan

Attachment 4

Organizational Lists and Charts

Attachment 4.2- The Interoperability Communications Committee (ICC)

Member	Organization
Jamia McDonald, *Chairman*	Rhode Island Emergency Management Agency
Kevin R. McBride	Adjutant General, RI National Guard
Christopher Callahan	RI National Guard
Chief James McLaughlin	Rhode Island Fire Chief's Association/ Warwick Fire Department
Chief Sidney Wordell	Rhode Island Police Chief's Association/ Little Compton Police Department
Peter Ginaitt	Rhode Island Level 1 Trauma Center (Lifespan)
David Schnell	Rhode Island Level 1 Trauma Center (Lifespan)
Dawn Lewis	Hospital Association of RI (HARI)
Joseph DelGiudice	Providence Communications
Ralph K. Nahigian	RISCON- North Zone North Providence Communications
Chief Dean Hoxsie	RISCON South Zone Narragansett PD
LT Richard Altimari	RI State Police
Tom Crotty	RI State Police
Deputy Frank Floor	Rhode Island Department of Environmental Management
Joseph D. Baker	Rhode Island Department of Transportation
Gina Caruolo	Rhode Island Department of Corrections
Michael Scanlon	Rhode Island Department of Environmental Management
John Landers	Rhode Island Department of Information Technology (DoIT)
Tony Lupinacci	Rhode Island Department of Information Technology (DoIT)
Samuel Adams	Rhode Island Department of Health
Joseph Reppucci	Rhode Island Department of Health
Jamie Pereira	Rhode Island Public Transit Authority
James Swanberg	Rhode Island Turnpike and Bridge Authority
William Gasbarro	Rhode Island E-911
Gregory Scungio	Rhode Island E-911
Norma Sousa	Rhode Island E-911
Brian Glancy	Rep appointed by RIEMA Executive Director
Thomas Guertin	Rep appointed by RIEMA Executive Director
Acting Chief Antone Monroe	Narragansett Indian Tribal Police Department

Attachment 4.3- Metropolitan Providence Stakeholders

Agency Name	Primary Jurisdiction	Discipline
LOCAL		
Providence Police Department	City of Providence	Police
Providence Fire Department	City of Providence	Fire/EMS
Providence Communications Department	City of Providence	Dispatch
Providence Emergency Management Agency	City of Providence	EMA
Providence Public Works	City of Providence	Public Works
Providence Water Supply Board	State of Rhode Island	Water Supply
Providence Parks Department	City of Providence	Parks
Providence Housing Authority	City of Providence	Housing
Pawtucket Police Department	City of Pawtucket	Police
Pawtucket Fire Department	City of Pawtucket	Fire/EMS
Pawtucket Emergency Management Agency	City of Pawtucket	EMA
Pawtucket Public Works	City of Pawtucket	Public Works
Central Falls Police Department	City of Central Falls	Police
Central Falls Fire Department	City of Central Falls	Fire/EMS
Central Falls Emergency Management Agency	City of Central Falls	EMA
Central Falls Public Works	City of Central Falls	Public Works
West Warwick Police Department	Town of West Warwick	Police
West Warwick Fire Department	Town of West Warwick	Fire/EMS
West Warwick Emergency Management Agency	Town of West Warwick	EMA
West Warwick Public Works	Town of West Warwick	Public Works
East Providence Police Department	City of East Providence	Police
East Providence Fire Department	City of East Providence	Fire/EMS
East Providence Emergency Management Agency	City of East Providence	EMA
East Providence Public Works	City of East Providence	Public Works
Cranston Police Department	City of Cranston	Police
Cranston Fire Department	City of Cranston	Fire/EMS

Agency Name	Primary Jurisdiction	Discipline
Cranston Emergency Management Agency	City of Cranston	EMA
Cranston Public Works	City of Cranston	Public Works
Warwick Police Department	City of Warwick	Police
Warwick Fire Department	City of Warwick	Fire/EMS
Warwick Emergency Management Agency	City of Warwick	EMA
Warwick Public Works	City of Warwick	Public Works
North Providence Police Department	Town of North Providence	Police
North Providence Fire Department	Town of North Providence	Fire/EMS
North Providence Emergency Management Agency	Town of North Providence	EMA
North Providence Public Works	Town of North Providence	Public Works
Johnston Police Department	Town of Johnston	Police
Johnston Fire Department	Town of Johnston	Fire/EMS
Johnston Emergency Management Agency	Town of Johnston	EMA
Johnston Public Works	Town of Johnston	Public Works
STATE		
Rhode Island State Police	State of Rhode Island	Police
Rhode Island Fire Marshal's Office	State of Rhode Island	Fire
Rhode Island Emergency Management Agency	State of Rhode Island	EMA
Rhode Island Department of Transportation	State of Rhode Island	Public Works
Rhode Island Department of Environmental Management	State of Rhode Island	Police
Rhode Island Department of Health	State of Rhode Island	Health
Rhode Island Department of Corrections	State of Rhode Island	Corrections
Rhode Island Sheriff's Department	State of Rhode Island	Corrections
Rhode Island Airport Corporation	State of Rhode Island	
Rhode Island Capitol Police	State of Rhode Island	Police
Rhode Island National Guard	State of Rhode Island	Military

Agency Name	Primary Jurisdiction	Discipline
Rhode Island Public Transit Authority	State of Rhode Island	Transportation
NONPROFIT		
Rhode Island Red Cross	State of Rhode Island	Mass care
Rhode Island Salvation Army	State of Rhode Island	Mass care
Rhode Island Hospital		Medical
Women and Infants Hospital		Medical
Hasbro Children's Hospital		Medical
Roger Williams Hospital		Medical
Miriam Hospital		Medical
Veteran's Administration Hospital		Medical
Pawtucket Memorial Hospital		Medical
Fatima Hospital		Medical
St. Joseph's Hospital		Medical
Kent County Hospital		Medical
Butler Hospital		Medical
Bradley Hospital		Medical
Notre Dame Hospital		Medical
FEDERAL		
Wyatt Detention Facility	US Government	Corrections
FBI		
Coast Guard		
US Marshal's		
Secret Service		
Transportation Safety Authority		
FAA		
AMTRAK Police		Police
DEA		
ATF		
PRIVATE SECTOR		
Providence and Worcester Railroad		
SATERN Amateur Radio Group	City of Providence	Communications
ARIES Amateur Radio Group	State of Rhode Island	Communications

Attachment 4.4- All Response Agencies within Rhode Island

Barrington		
	Barrinton PD	
	Barrington FD	*Muni.*
	Hampton Meadows FD	*Vol.*
Bristol		
	Bristol PD	
	Bristol FD	*Vol.*
Burrillville		
	Burrillville PD	
	Harissville	*Dist.*
	Nasonville	*Dist.*
	Oakland/Mapleville	*Dist.*
	Pascoag	*Dist.*
	Wallum Lake	*Vol.*
Central Falls		
	Central Falls PD	
	Central Falls FD	*Muni.*
Charlestown		
	Charlestown PD	
	Charlestown Ambulance	
	Charlestown FD	*Dist.*
	Quonochontuag Central Beach	*Dist.*
	Shady Harbor	*Dist.*
Coventry		
	Coventry PD	
	Central Coventry	*Dist.*
	Coventry FD	*Dist.*
	Hopkins Hill	*Dist.*
	Western Coventry	*Dist.*
Cranston		
	Cranston PD	
	Cranston FD	*Muni.*
Cumberland		
	Cumberland PD	
	Cumberland Rescue Service	
	Cumberland FD	*Dist.*
	Cumberland Hill	*Dist.*
	North Cumberland	*Dist.*

	Valley Falls	*Dist.*
East Greenwich		
	East Greenwich PD	
	East Greenwich FD	*Dist.*
East Providence		
	East Providence PD	
	East Providence FD	*Muni.*
Exeter		
	Exeter FD	*Dist.*
	Exeter Rescue Corps	
Foster		
	Foster PD	
	Foster Ambulance Corps	
	Foster Center	*Vol.*
	Moosup Valley	*Vol.*
	South Foster	*Vol.*
Glocester		
	Glocester PD	
	Chepachet	*Dist.*
	Harmony	*Dist.*
	West Glocester	*Dist.*
Hopkinton		
	Hopkinton PD	
	Ashaway Ambulance	
	Ashaway	*Dist.*
	Hope Valley Ambulance	
	Hope Valley/Wyoming	*Dist.*
Jamestown		
	Jamestown PD	
	Jamestown EMS	
	Jamestown FD	*Vol.*
Johnston		
	Johnston PD	
	Johnston FD	*Muni.*
Lincoln		
	Lincoln PD	
	Lincoln Rescue	
	Albion	*Dist.*
	Lime Rock	*Dist.*
	Lonsdale	*Dist.*

	Manville	*Dist.*
	Quinville	*Dist.*
	Saylesville	*Dist.*
Little Compton		
	Little Compton PD	
	Little Compton FD	*Muni.*
Middletown		
	Middletown PD	
	Middletown FD	*Muni.*
Narragansett		
	Narragansett PD	
	Narragansett FD	*Muni.*
New Shoreham		
	New Shoreham PD	
	Block Island Rescue Squad	
	Block Island FD	*Vol.*
Newport		
	Newport PD	
	Newport FD	*Muni.*
North Kingstown		
	North Kingstown PD	
	North Kingstown FD	*Muni.*
North Providence		
	North Providence PD	
	North Providence FD	*Muni.*
North Smithfield		
	North Smithfield PD	
	North Smithfield Fire & Rescue	
Pawtucket		
	Pawtucket PD	
	Pawtucket FD	*Muni.*
Portsmouth		
	Portsmouth PD	
	Prudence Island FD	*Vol.*
	Portsmouth FD	*Muni.*
Providence		
	Providence PD	
	Providence FD	*Muni.*

Richmond		
	Richmond PD	
	Richmond/Carolina	*Dist.*
Scituate		
	Scituate PD	
	Scituate Ambulance Corps	
	Chopmist Hill	*Vol.*
	Hope Jackson	*Vol.*
	North Scituate	*Vol.*
	Potterville	*Vol.*
Smithfield		
	Smithfield PD	
	Smithfield FD	*Muni.*
South Kingstown		
	South Kingstown PD	
	South Kingstown EMS	
	Indian Lake Shores	*Dist.*
	Kingston	*Dist.*
	Union	*Dist.*
Tiverton		
	Tiverton PD	
	Tiverton FD	*Muni.*
	North Tiverton	*Dist.*
Warren		
	Warren PD	
	Warren FD	*Vol.*
Warwick		
	Warwick PD	
	Warwick FD	*Muni.*
West Greenwich		
	West Greenwich PD	
	Hianloland	*Vol.*
	Lake Mishnook	*Vol.*
	West Greenwich Rescue	
	West Greenwich FD	*Vol.*
West Warwick		
	West Warwick PD	
	West Warwick FD	*Muni.*

Westerly	Westerly PD	
	Bradford	*Dist.*
	Dunn's Corner	*Dist.*
	Misquamicut	*Dist.*
	Shelter Harbor	*Dist.*
	Watch Hill	*Dist.*
	Weekapaug	*Dist.*
	Westerly Ambulance Corps	
	Westerly FD	*Dist.*
Woonsocket		
	Woonsocket PD	
	Woonsocket FD	*Muni.*

	State Agencies	
	Medical Examiner's Office	
	RI Department of Corrections	
	T.F. Green Fire Dept.	
	T.F. Green Police Dept.	
	RI DEM	
	RI Department of Health	
	RI Sheriffs/Capital Police	
	RI State Fire Marshal	
	RI State Police	
	RI Emergency Management Agency	
	Other	
	Narragansett Indian Tribe	
	RI DMAT	
	RI USAR	
	Yagoo Valley SAR	
	Non-Municipal EMS	
	Acess Ambulance	
	Advanced Medical Transport	
	Alert Ambulance Service	
	American Ambulance Service	
	Blackstone Fire Dept.	
	Brown University EMS	
	Bryant University EMS	
	Coastline Ambulance Services	
	General Dynamics	

	Intercity Ambulance Service	
	Lifeguard EMS	
	Lifestar EMS	
	Med Care Ambulance	
	Med Star Ambulance	
	Med Tech Ambulance	
	Naval Station Fire Dept.	
	New England Ambulance	
	Paramedic Systems	
	RI DMAT	
	RI USAR	
	RISD Public Safety	
	Roger Williams Mobile Care	
	Roger Williams Univ EMS	
	Universal Ambulance Service	
	University of RI EMS	
	Yawgoo Valley SAR	

Attachment 4.5- List of MCCS and Specialty Vehicles in the State

(401)

Type I	RI Emergency Management Agency	946-9996	Gateway	Satellite Dish
Type I	Woonsocket Fire	766-1224	Gateway	Satellite Dish
Type II	Bristol Police	253-6900	Gateway	
Type III	Burrillville Police	568-2533		
Type III	Charlestown Police & SWAT Van	364-1212		
Type III	Cumberland Police	727-7411	Gateway	
Type III	East Greenwich Police	884-2244	Gateway	
Type III	Johnston Police	231-8100		
Type III	Middletown Police	846-1144		
Type III	Newport Police & SWAT Van	847-1306		
Type III	North Providence Police	231-4533		
Type III	Pawtucket Police	726-3911		
Type III	Providence Department of Communications	272-1111		
Type III	RI State Police	444-1111		
Type III	Westerly Police & SWAT Van	596-2022		
Type IV	RI Emergency Management Agency 1	946-9996		
Type IV	RI Emergency Management Agency 2	946-9996		

Mobile Communications Center (Mobile Emergency Operations Center [EOC]; Mobile Command Center; Continuity of Operations Vehicle)

A vehicle that serves as a self-sustaining mobile operations center capable of operating in an environment with little to no basic services, facilitating communications between multiple entities using an array of fixed and/or wireless communications equipment, providing appropriate work space for routine support functions, and providing basic services for personnel in short-term or long-term deployments.

Attachment 1.1 **(Statue Creating the Interoperable Communication Committee (ICC)**

Rhode Island General Laws 30-15-42. Committee created -- Purpose and composition

Rhode Island General Laws > Title 30 > Chapter 30-15 > § 30-15-42 - Committee created -- Purpose and composition

Current as of: 2009

(a) There is hereby created within the Rhode Island emergency management agency a committee consisting of twenty-one (21) members pursuant to the provisions of Â§ 30-15-2 of this chapter the interoperable communications committee (ICC) for the purpose of addressing the challenges associated with the statewide communications interoperability.

(b) The interoperable communications committee (hereinafter referred to as the "committee") shall consist of the following members who shall assemble no less than twelve (12) times annually or more often at the call of the chairperson or upon petition of a majority of its members:

(1) The adjutant general of the Rhode Island national guard or his/her designee;

(2) The president of the Rhode Island fire chief's association or his/her designee;

(3) The president of the Rhode Island police chief's association or his/her designee;

(4) The executive director of the Rhode Island emergency management agency or his/her designee;

(5) A representative from a Rhode Island Level 1 trauma center designated by the president of the facility;

(6) The chairperson of the hospital association of Rhode Island

(HARI) or his/her designee;

(7) The director of the city of Providence communications division or his/her designee;

(8) A representative of the Rhode Island statewide communications network (RISCON) system north zone appointed by the executive director of the Rhode Island emergency management agency;

(9) A representative of the Rhode Island statewide communications network (RISCON) system south zone appointed by the executive director of the Rhode Island emergency management agency;

(10) The colonel/superintendent of the Rhode Island state police or his/her designee;

(11) The director of the Rhode Island department of environmental management or his/ her designee;

(12) The director of the Rhode Island department of transportation or his/her designee;

(13) The director of the Rhode Island department of corrections or his/her designee;

(14) The director of the Rhode Island department of information technology or his/her designee;

(15) The director of the Rhode Island department of health or his/her designee;

(16) The director of the Rhode Island public transit authority or his/her designee;

(17) The director of the Rhode Island bridge and turnpike authority or his/her designee;

(18) The associate director of the Rhode Island E-911 system or

his/her designee;

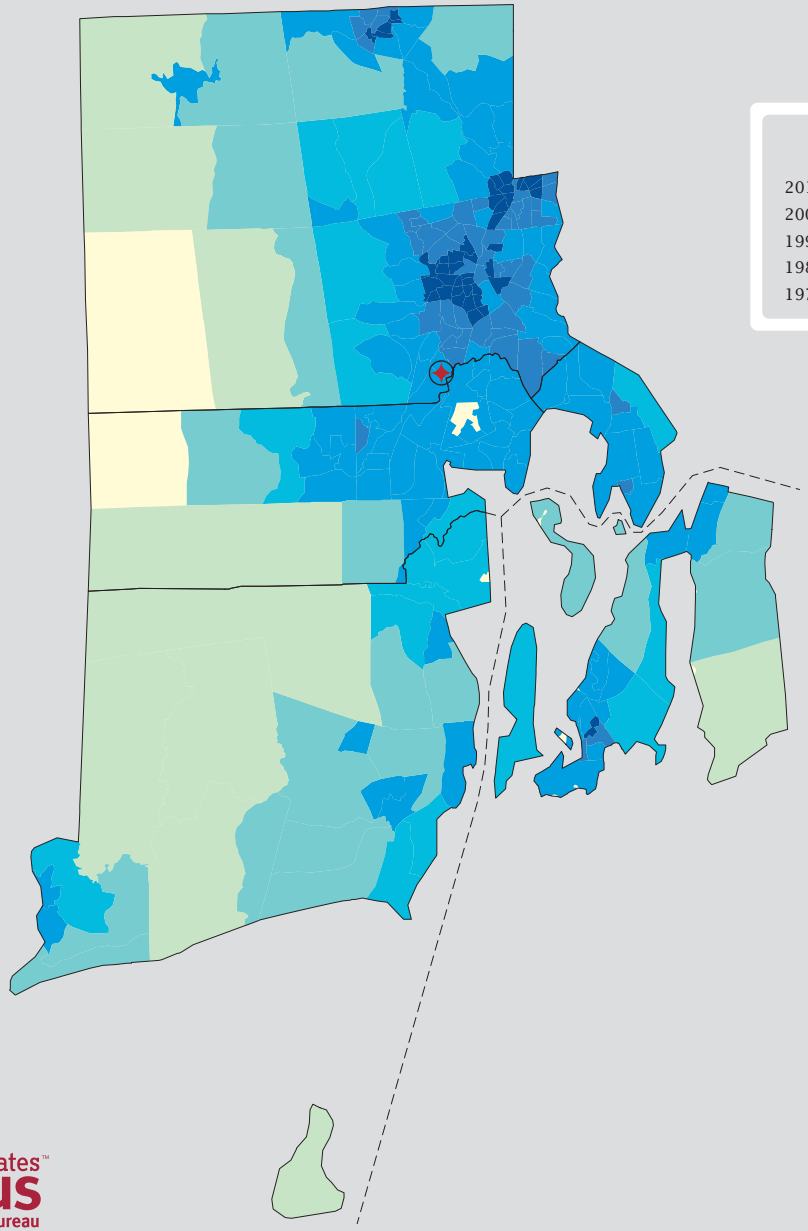
(19) Chief Sachem of the Narragansett Indian Tribe or his/her designee;

and two (2) members appointed by the executive director of the Rhode Island emergency management agency.

Each member of the committee may appoint a permanent designee to attend committee meetings in his/her absence. A quorum at meetings of the committee shall consist of a majority of its current membership.

2010 Census: Rhode Island Profile

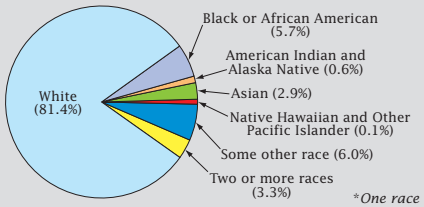
Population Density by Census Tract



Rhode Island Population 1970 to 2010

2010	1,052,567
2000	1,048,319
1990	1,003,464
1980	947,154
1970	946,725

State Race* Breakdown

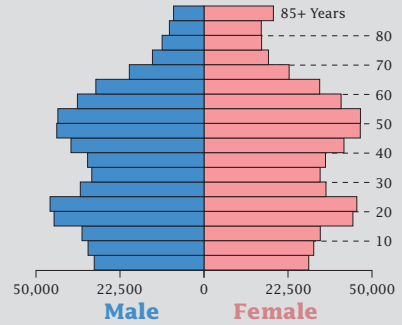


*One race

Hispanic or Latino (of any race) makes up **12.4%** of the state population.

Population by Sex and Age

Total Population: 1,052,567



Housing Tenure

Total Occupied Housing Units: 413,600

60.7% Owner Occupied	39.3% Renter Occupied

Average Household Size of Owner-Occupied Units: 2.59 people

Average Household Size of Renter-Occupied Units: 2.21 people

People per Square Mile by Census Tract

- 10,000.0 to 21,760.9
- 5,000.0 to 9,999.9
- 1,000.0 to 4,999.9
- 500.0 to 999.9
- 200.0 to 499.9
- 100.0 to 199.9
- Less than 100.0

U.S. density is 88.4

- County Boundary
- Rhode Island Mean Center of Population

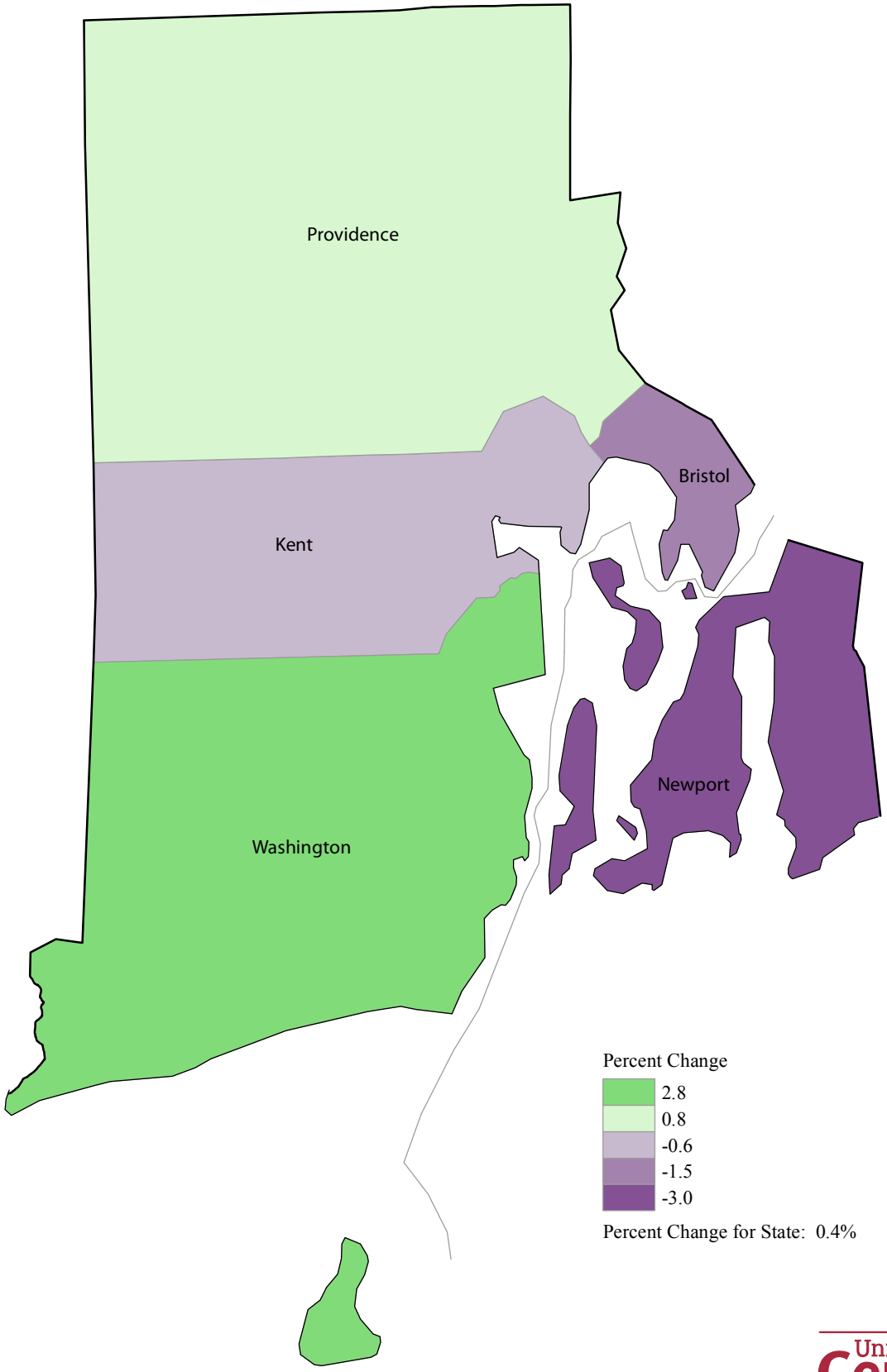
0 5 10 15 Kilometers

0 5 10 15 Miles

United States Census Bureau

RHODE ISLAND - 2010 Census Results

Percent Change in Population by County: 2000 to 2010

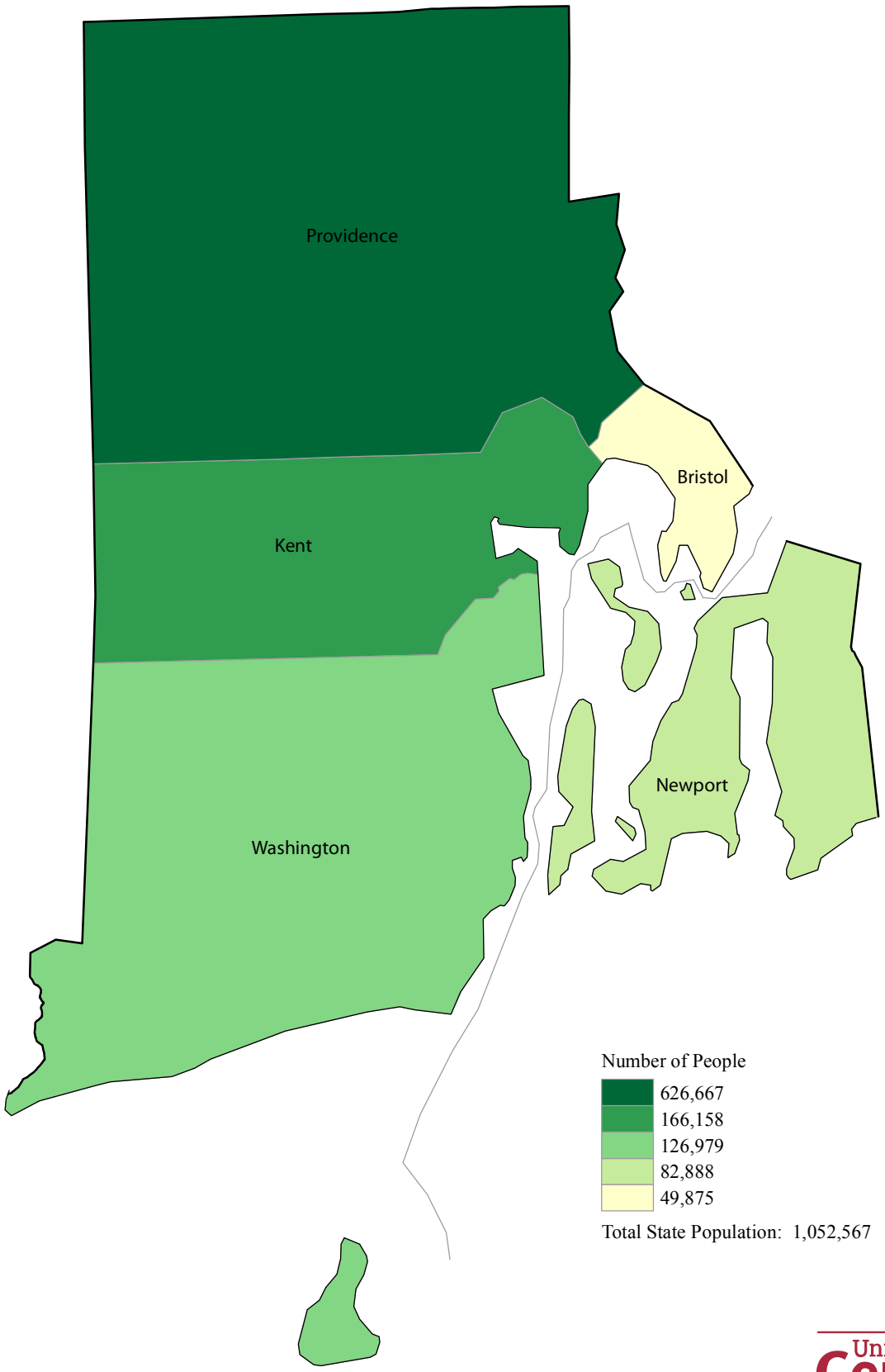


Source: U.S. Census Bureau, Census 2000 and 2010 Census Redistricting Data Summary File
For more information visit www.census.gov.

United States Census Bureau

RHODE ISLAND - 2010 Census Results

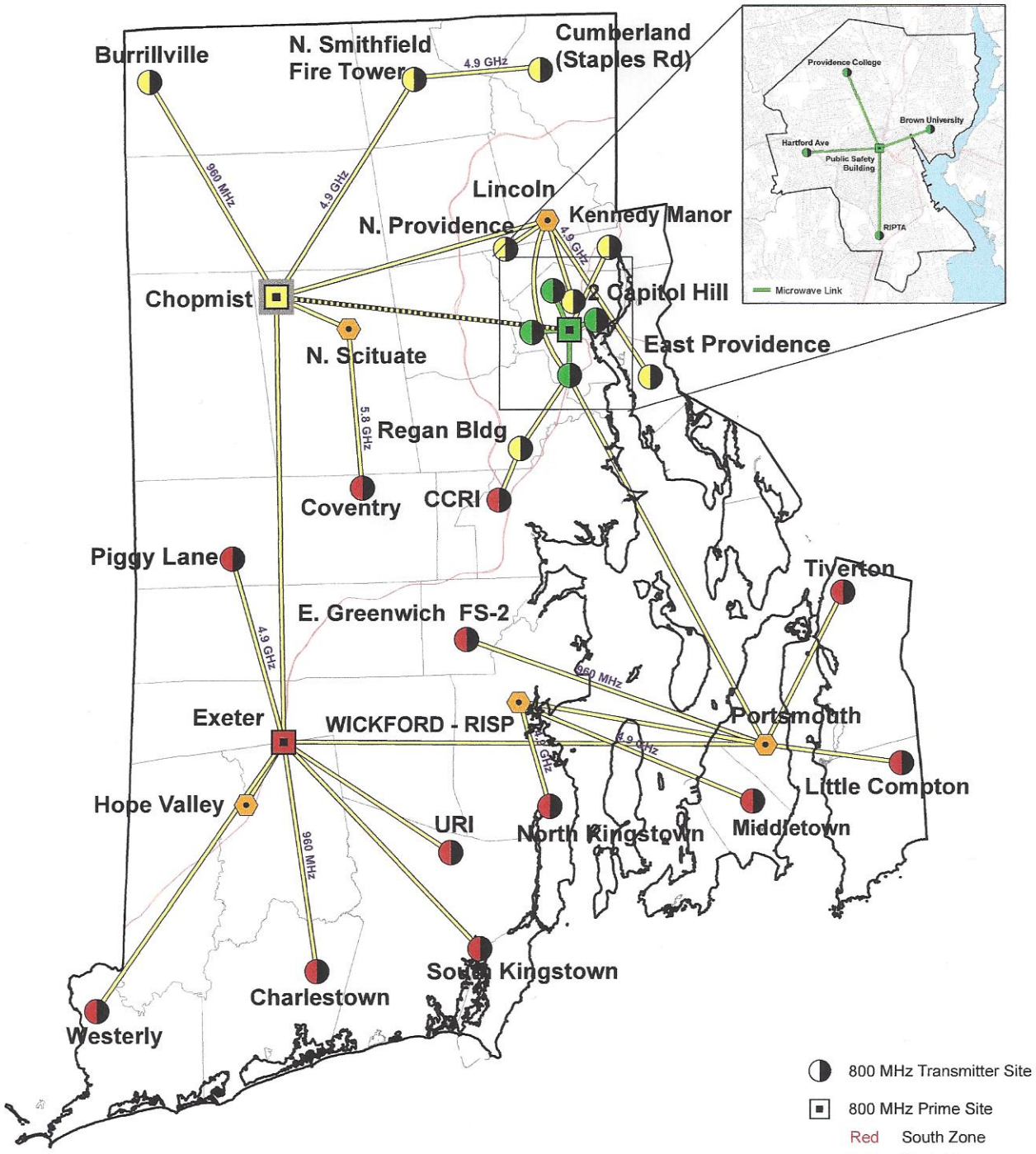
Total Population by County



Source: U.S. Census Bureau, 2010 Census Redistricting Data Summary File
For more information visit www.census.gov.

United States Census Bureau

RISCON
Rhode Island Statewide 800 MHz Interoperable Trunked Radio Network



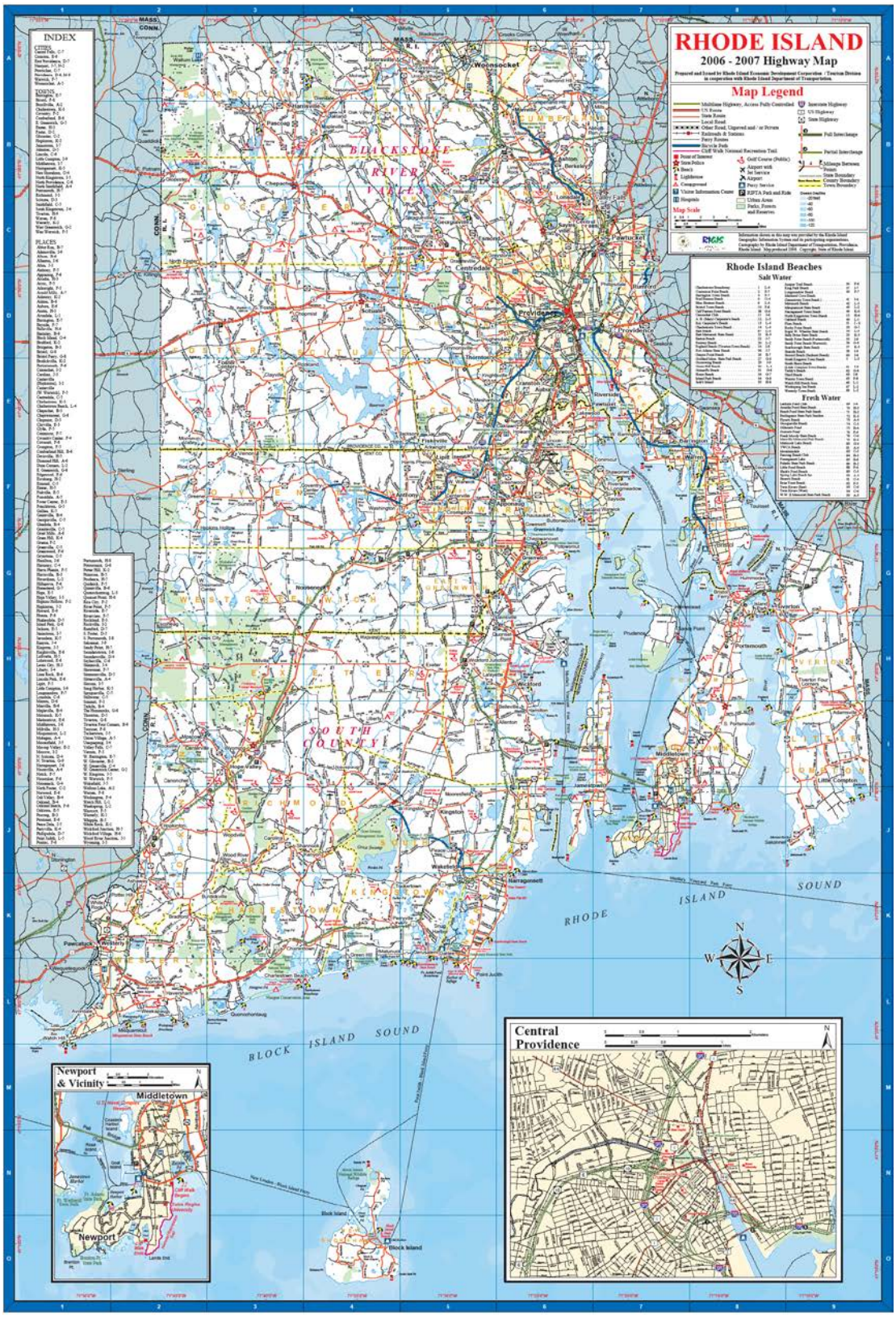
Map Produced by:
Office of Public Safety Commissioner
325 Washington St
Providence, RI 02903

RI State Plane Feet, NAD83
Data Sources:
City of Providence

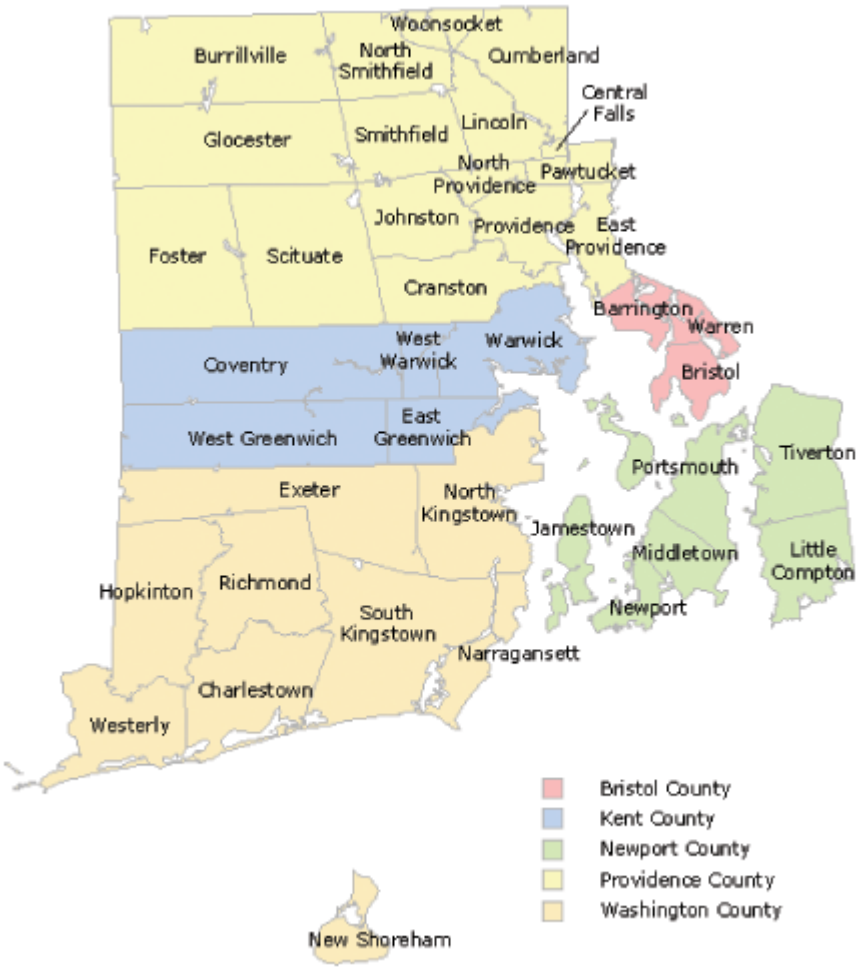
Angel Taveras, Mayor

July 18, 2012

MAP 5.1- Rhode Island Highways and Waterways



Map 5.2- Rhode Island County Map



Map 5.3 Towns Bordering Rhode Island