

# CENTRAL REGION

## 800 MHz Trunked Regional Public Safety Radio System Standards, Protocols, Procedures

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Procedure Title:	<b>Prioritization of CCGW Port Utilization</b>	
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### **1. Purpose or Objective**

To establish prioritization for use of CCGW (Conventional Channel Gateway) ports on the ARMER system.

### **2. Technical Background**

There is a 700 channel limit of RF resources per zone. This includes RF trunking repeaters & CCGW ports, which are used to access conventional resources. In system version 7.11 this limit changes to 1000.

### **3. Operational Context**

Managing CCGW resources in several zones on the ARMER system can be especially challenging, due to the number of counties, sites, channels, and conventional resources that must be accessed. In order to maintain CCGW capacity for necessary functions, careful oversight of this resource is necessary.

### **4. Recommended Protocol/ Standard**

The following lists the functional uses of CCGW ports, with a brief description. The categories are listed in general priority order:

1. System Trunking RF Sites  
*These are ARMER sites installed as part of the statewide roll out and includes sites owned by both state and local jurisdictions. Channels at the sites consume CCGW resources.*
2. Fire Paging and Outdoor Warning Sirens  
*Some local conventional resources are especially critical to public safety. Fire paging systems and outdoor warning siren systems, when interfaced to some ARMER consoles, consume CCGW resources.*
3. Private Trunking RF Sites  
*These are ARMER sites that are accessible only to the owner - an example is sites owned and used exclusively by the Department of Corrections. The sites are essential for their communications.*
4. InterOp Usage CCGW ports  
*Certain interoperability resources, available on a regional / statewide basis, consume CCGW resources. An example would be the 109 site statewide VHF "overlay" system.*

5. Unassigned Trunking RF Sites and Consoles.

*When site additions are planned, the appropriate number of CCGW ports must be allocated in advance for the site to operate on ARMER. This category is reserved for sites that are funded and approved, but not yet implemented. This same category applies to necessary upgrades of dispatch consoles to MCC-7500s, which typically requires additional CCGW usage for conventional resource access.*

6. Agency Specific CCGW Ports

*This includes all sub-categories of local CCGW port consumption not listed above. When dispatch centers using MCC-7500 consoles require access to a conventional audio source, and that audio is to be brought through the console, a CCGW port is required.*

*There are many potential uses of CCGW resources under this category; some examples would be to access a VHF base station that is locally owned, or to accomplish certain voice logging solutions, or to access intercom systems, or to control the audio from a control station used for site trunking.*

It is important that as state radio regions expand and plan for the use of CCGW resources that they carefully manage usage, especially under category 6; the other 5 categories are necessary for fundamental system operation, and should not be pre-empted to provide for agency specific usage.

## **5. Recommended Procedure**

The seven state radio regions are responsible for managing finite system resources. When CCGW resources are needed for a necessary function, it will be the responsibility of the regional radio board to determine how port allocations are made.

The regional radio board may choose to delegate the responsibility for planning port assignments to a technical or operational committee.

If previously assigned CCGW ports are to be repurposed to a higher priority function, the change must be approved by the regional radio board. The original user of the repurposed CCGW port will have the right to appeal this action to the Statewide Radio Board.

There are some strategies that can be used to help conserve CCGW resources, however resolutions to competing demands will always involve a discretionary decision by the regional radio board. See the attached appendix for some CCGW management best practices.

## **6. Management**

CCGW usage must be defined in local participation plans, and are subject to review and approval by MnDOT and the Statewide Radio Board. The final authority on CCGW port allocations will be the Statewide Radio Board.

## **Appendix**

### **CCGW Strategies and Considerations**

- When providing console access for VHF resources, consider the Statewide Cross Spectrum overlay system instead of using local VHF base stations, when possible. This approach does not consume additional CCGW ports. Utilizing Motobridge provides additional alternatives to using CCGWs to bring audio into consoles.
- When planning for site trunking solutions, consider utilizing the statewide site trunking talk group for this purpose, rather than locally created talk groups or dispatch mains. Using the statewide talk group can, if implemented properly, require fewer audio paths to be interfaced to consoles.
- Whenever possible, consider providing dispatcher access to control stations that are being used as a backup for key talk groups in "standalone" mode, rather than console interfaced.
- Consider alternatives to using control stations integrated with dispatch consoles to provide for voice logging.
- Although it is not always cost effective, simulcast systems generally consume fewer ports in a zone than multi-cast sites.
- Carefully consider the need before adding channel capacity to existing sites.
- Local use ports should be clearly defined as to their use. Regional radio boards must have accurate information on how each port is used, so they can make fair decisions when priorities must be set.
- Ports should not be held for any extended period of time in reserve, when legitimate immediate uses exist.