



**Division of State Patrol
Policy and Procedure**

Number

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Subject

ON-CALL WISCOM TECHNICIAN ASSIGNMENTS

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1. POLICY

It is the policy of the Division of State Patrol (DSP) to assign qualified on-call Wisconsin Interoperable System for Communications (WISCOM) technicians within the Bureau of Network Engineering and Data Infrastructure (BNEDI). On-call WISCOM technicians shall follow memorandums of understanding, BNEDI expectations, technical methods of procedure, and industry-accepted practices while performing duties related to monitoring and maintaining the WISCOM radio and network infrastructure during the on-call shift.

2. BACKGROUND

Through the DSP, the Wisconsin Department of Transportation (WisDOT) administers, operates, and maintains WISCOM, a statewide interoperable two-way radio communications system. WISCOM is owned by the Wisconsin Department of Military Affairs (DMA) and co-administered by the DSP and WisDMA's Office of Emergency Communications.

3. OBJECTIVE

- 3.A Establish clear expectations for on-call WISCOM technicians.
- 3.B Establish a process by which on-call WISCOM technicians receive, analyze, evaluate, resolve, communicate, and document WISCOM radio system outages.
- 3.C Establish a work group where BNEDI subject matter experts can discuss system outages, identify root causes, analyze how to troubleshoot issues, evaluate multiple solutions, select the best courses of action, and review lessons learned and best practices.

4. DEFINITIONS

The following definitions will apply to the development of the Division of State Patrol doctrine for the performance of on-call WISCOM technician duties:

- 4.A **Memorandum of Understanding (MOU)** – an agreement between two or more parties outlined in a formal document.
- 4.B **Mobile Radio** – the same definition found in P&P 5-8 for mobile radio.
- 4.C **Netwatch** – a system monitoring tool designed to detect disruptions in network traffic and relay pertinent information to staff.
- 4.D **Network Management System (NMS)** –the Atlas network management system is a web-based NMS that provides centralized network management functionality for all EF Johnson radio infrastructure.
- 4.E **Office of Emergency Communications (OEC)** – the administrative, programmatic, and support agency to WISCOM at the Wisconsin Department of Military Affairs.
- 4.F **On-Call Shift** - seven days beginning on Monday at 7:00 a.m. and running until the following Monday, ending at 7:00 a.m.
- 4.G **OPTO22/OPTO GROOV** – an industrial-grade remote monitoring and control system comprised of controllers, I/O modules, solid-state relays, software, and a mobile device application.
- 4.H **Portable Radio** – the same definition found in P&P 5-8 for portable radio.
- 4.I **Ticket** – A record bearing a sequential tracking number utilized to track the lifecycle of a WISCOM radio system outage from initial notification to resolution.
- 4.J **Weekdays** – a period of time beginning on a Monday at 7:00 a.m. and ending on the following Friday at 10:00 p.m.
- 4.K **Weekend** – a period of time beginning on a Friday at 10:00 p.m. and ending on the following Monday at 7:00 a.m.
- 4.L **Wisconsin Department of Military Affairs (WisDMA)** – parent state agency to the Office of Emergency Communications
- 4.M **Wisconsin Interoperable System for Communication (WISCOM)** – A statewide, trunked VHF/700/800 interoperable two-way radio communication system and network infrastructure.

- 4.N **WISCOM On-Call Ticket System (WOCTS)** – a web-based platform from which WISCOM system outages can be logged, managed, tracked, and documented.
- 4.O **WISCOM Technician** – A Wisconsin State Patrol Network Communications System Analyst responsible for the operation and maintenance of WISCOM.

5. MEMORANDUMS OF UNDERSTANDING

- 5.A The policies and procedures set forth do not supersede any MOUs between the WisDOT and other agencies. Instead, these policies and procedures augment those MOUs and help establish clear definitions, provide additional details, clarify Bureau expectations, and encourage industry-accepted best practices for the on-call WISCOM technicians.
- 5.B Since MOUs may be renegotiated, this policy intends to define the policies, procedures, and guidelines in a way that endures those negotiations.
- 5.C Should the need arise to update the policies or procedures, the MOUs shall be reviewed in parallel for consistency. Any document changes shall be incorporated into the regular review cycle with all involved agencies. Likewise, if an MOU is updated, the companion policy or procedure shall be reviewed and updated as appropriate.

6. ON-CALL WISCOM TECHNICIAN(S)

- 6.A Selection
 - 6.A.1 Technicians selected for on-call WISCOM duties shall:
 - 6.A.1.a be full-time employees of the DSP and in good standing.
 - 6.A.1.b not be a probationary employee.
 - 6.A.1.c have a minimum of one (1) year of experience and be able to demonstrate a comprehensive working knowledge of all facets of WISCOM operation and maintenance.
- 6.B Training
 - 6.B.1 WISCOM technicians selected for on-call WISCOM duties shall attend and participate in periodic bureau training and updates on the administration, operation, and maintenance of WISCOM.

- 6.B.2 WISCOM technicians shall be familiar with the terms of the MOU with WisDMA, the radio vendor's procedure for troubleshooting radio system issues, the radio vendor's service manuals for the radio system components, the WISCOM On-Call Ticket System (WOCTS), and industry-accepted practices for resolving radio system outages.
- 6.C Scheduling
 - 6.C.1 WISCOM technicians performing on-call duties shall serve an on-call shift of seven (7) days.
 - 6.C.2 The on-call shift shall begin on Monday at 7:00 a.m. and run until 7:00 a.m. the following Monday.
 - 6.C.3 The on-call schedule shall be color-coded by employees and entered, updated, and managed by program staff using an enterprise-shared calendar designated by the BNEDI Director or their designee in Microsoft Outlook and the WOCTS.
 - 6.C.4 Should the need arise, the on-call WISCOM technician shall be responsible for finding a trained and approved, per 6.A and 6.B of this policy, technician to fill in for on-call coverage if they cannot fulfill any part of their designated shift. The details of this substitution shall be emailed to the other on-call WISCOM technicians, the BNEDI management team, and the State Frequency Coordinator. The change shall also be updated in the WOCTS.
- 6.D Communications Technology and Situational Awareness
 - 6.D.1 At all times during the on-call shift, the on-call WISCOM technician shall:
 - 6.D.1.a carry their WisDOT-issued cellular telephone and be available to respond. The cellular phone shall be configured to access the WISCOM shared email mailbox. The cellular telephone shall also have Microsoft Teams and any other applications identified by the BNEDI Director or their designee necessary to utilize the WOCTS.
 - 6.D.1.b have access to their WisDOT-issued computer and cellular hotspot device for communications, coordination, research, and troubleshooting.
 - 6.D.1.c have access to a mobile radio, a portable radio, and other resources to facilitate service restoration.
 - 6.D.1.d be aware of the threat of severe weather, including any National Weather Service (NWS) alerts (tornado watches/warnings, the likelihood of hail, winter storm watches/warnings, straight-line winds, ice storms, etc.), the anticipated path of the weather, and any sites that may be impacted.

If severe weather develops, the on-call WISCOM technician shall also monitor systems like OPTO22/OPTO Groov, Netwatch, the NMS, etc., to assess whether the weather has impacted (or is likely to affect) any of the sites and to provide as much warning of a system outage to the technicians in the impacted region.

- 6.D.2 During weekdays of the on-call shift, the on-call WISCOM technician shall periodically check their WisDOT-issued cellular telephone to see if they have received any calls, voicemail messages, SMS messages, or emails. While traveling into and out of areas where cellular coverage may be spotty, the on-call WISCOM technician shall check the above for any notice of a WISCOM outage or issue.
- 6.D.3 During the weekend of the on-call shift, the on-call WISCOM technician shall check the system twice daily on Saturday and Sunday. The on-call WISCOM technician shall check the systems once between 6:00 a.m. and 11:00 a.m. and again between 2:00 p.m. and 6:00 p.m. This policy does not preclude the on-call WISCOM technician from frequently checking if the situation dictates. These checks shall include checks of the following:
 - 6.D.3.a the WISCOM shared mailbox
 - 6.D.3.b the NMS
 - 6.D.3.c connectivity alerts detected by the Netwatch
- 6.E Personal Travel
 - 6.E.1 The DSP recognizes the need for employees to balance their work and personal life. This policy also attempts to provide on-call WISCOM technicians with the most discretion and flexibility possible.
 - 6.E.2 The on-call WISCOM technician may travel during an on-call shift. The on-call WISCOM technician shall complete all the duties and responsibilities regardless of location. The on-call WISCOM technician shall find a replacement to cover their shift if their travel precludes them from performing their on-call duties.
 - 6.E.3 Generally, the on-call WISCOM technician shall not use their assigned fleet for personal travel. The BNEDI Network & Communications Section Chief, or designee, may authorize the on-call WISCOM technician to utilize their assigned fleet vehicle for personal travel while on-call to ensure business continuity and rapid response to a radio system outage. Any authorization shall be considered case-by-case and authorized for limited durations.

7. PROCEDURES

- 7.A On-Call Outage Notification

- 7.A.1 WISCOM-radio-system-users shall utilize the following means to access technical support for a WISCOM radio system outage:
 - 7.A.1.a Telephone number: 1-608-2WISCOM (1-608-294-7266)
 - 7.A.1.b Email address: wiscomtech@dot.wi.gov
 - 7.A.1.c Web Portal: WISCOM On-Call Tech/Outage System Site <https://wi-state-patrol.atlassian.net/servicedesk/customer/portal/21>
- 7.A.2 The primary means of communication will be the telephone number. The telephone number will be forwarded to the on-call WISCOM technician's WisDOT-issued cellular telephone. The on-call WISCOM technician shall be expected to answer calls on their WisDOT-issued cellular. If a call is received but missed and a voicemail is left, the on-call WISCOM technician shall retrieve the message and return the call within one (1) hour of the time it was left.
- 7.A.3 The on-call WISCOM technician is expected to monitor emails and texts related to WISCOM radio system outages except from 10:00 p.m. to 7:00 a.m. on weekdays. During those times, WISCOM radio system users will be instructed to call rather than email or text. If an email or text is received but missed between 7:00 a.m. and 10:00 p.m., the on-call WISCOM technician shall retrieve the email or text and return the message within one (1) hour of the time it was sent. If an email or text is received but missed between 10:00 p.m. and 7:00 a.m., and the WISCOM radio system users made no telephone call, the on-call WISCOM technician shall retrieve the email or text and return the message before 8:00 a.m. of that day.
- 7.A.4 The on-call WISCOM technician's WisDOT-issued cellular telephone or computer shall not be silenced or the ringtone audio subdued in any way at any time during the on-call shift.
- 7.A.5 In the event the on-call WISCOM technician is notified of an outage, they shall:
 - 7.A.5.a notify a BNEDI technician in the region where the WISCOM radio system outage occurred.
 - 7.A.5.b if the on-call WISCOM technician cannot reach a technician in the region with the outage, they shall contact the BNEDI supervisor who oversees that region.
 - 7.A.5.c when contact is made, the on-call WISCOM and region technician will develop a plan to restore service and coordinate the response.

- 7.A.5.d continue to coordinate with the appropriate BNEDI technician(s) in the region(s) where the WISCOM radio system outage occurred until service is restored.
- 7.B WISCOM On-Call Ticketing System
 - 7.B.1 The on-call WISCOM technician shall utilize the Division-supplied system outage ticketing solution called WISCOM On-Call Ticketing System (WOCTS).
 - 7.B.2 WOCTS shall be internet-based and accessible via the DSP's mobile data computer network (MDCN) and the technician's WisDOT-issued cellular telephone.
 - 7.B.3 WOCTS shall be accessed via web browser and multi-factor authentication. The use and management of information in the WOCTS shall be documented in a separate user reference guide and incorporated into this policy in Appendix A.
 - 7.B.4 Utilizing WOCTS, the on-call WISCOM technician shall track any system outages reported during their on-call shift. Outages shall be tracked by the on-call WISCOM technician regardless of location. Tracking shall occur until the issue is resolved or the service is restored. This includes system issues turned over to a vendor, subscriber agency, or other service provider. The on-call WISCOM technician shall provide relevant and timely updates to the ticket in the WOCT regarding the outage investigation or service resolution.
- 7.C On-Call Outage Analysis and Troubleshooting
 - 7.C.1 The on-call WISCOM technician shall utilize various tools to assess, diagnose, and resolve the WISCOM radio system outage. Those tools include, but are not limited to:
 - 7.C.1.a Netwatch network monitoring,
 - 7.C.1.b the WISCOM radio network management system (NMS),
 - 7.C.1.c the dispatch console log files,
 - 7.C.1.d the Opto22 radio and tower infrastructure monitoring system, and
 - 7.C.1.e the Eventide dispatch voice recording system.
- 7.D On-Call Outage Reporting
 - 7.D.1 The on-call WISCOM technician shall summarize reported WISCOM radio system outages and resolutions during the BNEDI statewide technician conference calls hosted on Monday mornings.

- 7.D.2 The on-call WISCOM technician shall also summarize reported WISCOM radio system outages and resolutions during the OEC/BNEDI weekly technician conference calls hosted on Friday mornings. The on-call WISCOM technician shall reference those outages by WOCTS ticket number.
- 7.D.3 When requested, the on-call WISCOM technician shall also provide updates to BNEDI or DSP management concerning any WISCOM radio system outages.
- 7.E On-Call Outage Coordination
 - 7.E.1 In addition to the reporting WISCOM-radio-system-users and the BNEDI regional technicians, the on-call WISCOM technician may coordinate externally with other agency radio system administrators, law enforcement dispatchers, commercial radio service vendor representatives, commercial radio vendor representatives, or other officials while analyzing and resolving a WISCOM radio system outage.
 - 7.E.1.a The on-call WISCOM technician shall be familiar with agencies that operate their own radio systems, how those systems interconnect with WISCOM (if applicable), who the radio administrators are in those agencies, and who the agencies contract for radio services. In many cases, the on-call WISCOM technician will forward the system outage information and coordinate with the vendor of record for the agency to support the restoration of the radio service.
 - 7.E.2 Internally, the on-call WISCOM technician may consult with other BNEDI technicians, BNEDI supervisors, Bureau of Field Operation staff, the BNEDI Statewide Frequency Coordinator, or other subject matter experts to analyze and resolve a WISCOM radio system outage.
- 7.F On-Call Resources
 - 7.F.1 Resources for the on-call WISCOM technicians can be located on the Bureau's share drives, the Bureau's SharePoint page, the WisDMA website, and other locations maintained by the technicians.

8. REFERENCES

Interagency Agreement Between the Wisconsin Department of Military Affairs and the Wisconsin Department of Transportation for Ownership, Operation, and Maintenance of the Share Statewide Public Safety Interoperable Communications System (WISCOM)
Wis. Stat. 85.12(1)
Wis. Stat. 85.12(3)
Wis. Stat. 323.29