

The VIPER Semi-Annual Newsletter

(Jul. 2020 - Dec. 2020)

As part of our communications effort to keep everyone informed of our progress, we will be distributing a semi-annual newsletter via email and posting a copy of it on the VIPER website at <http://www.ncdps.gov/Our-Organization/Law-Enforcement/VIPER>. If you would like to contact us, you can email us at VIPER@NCSHP.ORG or call 1-888-92-VIPER.

What is the VIPER staff doing?

- Continuing with new site acquisition and builds.

Critical Upcoming VIPER Upgrades

- **Microwave Upgrade:** VIPER will need to upgrade our microwave paths from the Alcatel 8000 to the Nokia MPR 9500. The upgrade is critical because the current microwave radios are obsolete, therefore we are no longer able to obtain repair parts. This upgrade will enable us to reroute any microwave path that goes down to provide continuous coverage and enable us to use features available from the GTR Upgrade such as TDMA. This project was outlined in the 2018 General Assembly Program Evaluation Division (PED) report as a critical need.

Quick Facts

- 241 total sites planned for statewide coverage; 233 sites constructed and on-the-air.
- \$2,837,764 for Construction in SFY2020-2021; normally \$7,000,000.
- \$7.5M O&M needed at completion of build-out
- Challenges
 1. No budget was passed in SFY19-20 with no budget starting SFY2020-2021.
 2. In moving forward with construction of new tower sites, the challenge will be to get fully executed leases prior to site construction, as well as identify feasible locations for the remaining sites.
 3. Lack of an exemption for State owned property has now become a significant challenge since local governments are now able to veto the state's use of its own land.

Tower Construction Updates

- Hayesville (Clay Ct): Pending DENR review
- Anson WT (Anson Ct): Pending Structural upgrade
- Aho (Watauga Ct): Engineering phase
- Charlotte (Mecklenburg Ct): Pending electrical upgrade of site
- Hot House (Cherokee County): Engineering phase
- High Top (Buncombe County): Engineering phase

Radio reprogramming

- Please ensure that you make every effort to update your current radio code plug to include the latest control channel list so that your equipment performs at the optimum level. When updating the control channel list, you must ensure that the Full Spectrum Scan option is also activated in your radio code plug. Note that during the GTR conversion in 2020, many sites have had their frequency sets reconfigured, often shifting from 800 MHz channels to 700 MHz channels. It is imperative that you are updating your control channel lists when you update programming. As of January 2021, we are still seeing radio code plugs where the number of

control channels in the list is set to ONE! If you have any questions about the control channel update, please send an email to VIPER-activate@ncshp.org.

- The new VIPER Mandatory Statewide Template was approved by the SIEC and distributed in Q4 2020. This includes significant changes in the DPR plan, the total number of state event talk groups, the inclusion of LE Only talk groups as well as the removal of roamer and pool talk groups.

VIPER ID status

- VIPER POCs should maintain their inventory and are required to submit an annual “true-up” document to VIPER in January of each year. The “true-up” document for 2021 is due Friday, January 29th and should be sent to VIPER-activate@ncshp.org.

VIPER approved radios

- For 2021 we continue to approve multiple radio vendors and products for use on the VIPER system. Currently Motorola, EF Johnson, Kenwood, Harris, Tait and BK Relm all have approved products for use on the VIPER system. **New radios from vendors for consideration are due no later than 30 September of each year** so that testing and evaluations can be completed prior to the start of the new calendar year.
- **Please read the following notice carefully regarding radio additions to the VIPER System effective 1 January, 2020 and beyond.**
- **Effective 1 January, 2020, VIPER will no longer allow current or new VIPER end user agencies to activate non TDMA capable radios on the system. This would include all models from the below list of manufacturer radios;**
 1. **Motorola – XTS1500, 2500 and 5000 portable radios**
 2. **Motorola – XTL1500, 2500 and 5000 mobile radios**
 3. **EF Johnson – 51SL/51ES portable radios**
 4. **EF Johnson – 53SL/53ES mobile radios**
- Effective 1 July, 2022 all radios being added to the VIPER system must be ready to receive TDMA programming. It is extremely important that our end users understand exactly what this means. Many manufacturers radios may be capable of TDMA operation but were not ordered with the “feature” enabled from the factory. These radios will need to be modified in the field to add the TDMA feature, so as to be **ready** for a transition to TDMA in the future.
- Effective 1 July, 2025 all radios currently **active** on the VIPER system, along with all future additions to the system shall be ready to receive TDMA programming. VIPER respects that these dates may represent challenges to our end users, especially in the area of funding since replacement radios or upgrades to existing radios will be necessary. However, it is also important to consider that the system continues to grow and in order to maintain VIPER’s current level of system availability, that a move to TDMA operation would be the most cost effective manner to address future growth and system health. VIPER would strongly recommend that as soon as feasibly possible, that end user agencies consider purchasing new radios **with the TDMA operation already included** in the radios features, so that it is not necessary to have to revisit radios to add the TDMA feature in advance of the above listed dates. VIPER has created a new email address specifically for TDMA related questions regarding this memorandum and any other VIPER TDMA related items. Please utilize vipер-tdma@ncshp.org for any TDMA related inquiries.
- Please also note that any radio previously removed from the approved radio list is also no longer permitted on the system. We have seen several requests to add Motorola XTS3000 radios to the system in the past few months and these radios are not only incapable of TDMA operation but also do not include the 700 MHz spectrum.

System Health

- The System Health is a section that we plan to provide with each newsletter to update our stakeholders, users and partners as to how the VIPER system is doing. These statistics are taken directly from the system.
 1. System count

Users (actual radio IDs, consoles not incl.)	140,364
Trunked channels	1,784
Conventional channels	731
Talk groups	4,307
Comm centers tied directly to VIPER	447

2. Busies: The percent of busies compares the number of busies vs. the number of PTTs on the system. Acceptable industry standard is 3% busies for a system. Below is VIPER's system health as it relates to the percentage of busies that we get on the system.

	PTT average	% Busy
Daily average	288,000	0.01%
Monthly average	8,500,000	0.01%

