

SCHOOL MLTS & 9-1-1 COMPLIANCE GRANT PROGRAM

Status Report – January 2017

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Part 1: School MLTS Status

In the spring of 2016, the Enhanced 9-1-1 Board resumed its work of assessing the capabilities of telecommunications systems in Vermont's schools. The assessment focused on whether existing multi-line telephone systems (MLTS) in schools were capable of sending accurate and specific location information to Vermont 9-1-1. The project was broken down into multiple steps:

Step 1: Re-establish Connections with Vermont Schools

Step 2: Test and Verify Self-Reported Information Received from Schools

Step 3: Analyze Test Call Results

Step 4: Follow Up with Schools for Next Steps

As a reminder, "accurate and specific location information" means that when a 9-1-1 call is placed from the school's phone system, the 9-1-1 call-taker can see not only the physical address of a school building, but also the unique phone number in use and the specific location (room number, floor number, etc.) of the caller within the school. The ability of a call-taker to see this information, and pass it on to emergency responders, is critical in events where a caller is unable to speak or does not know their specific location or phone number.

Step 1: Re-establish Connections with Vermont Public Schools

In 2013, the Enhanced 9-1-1 Board began a similar project related to school MLTS compliance. Some information about the capabilities of the schools' telecommunications systems was obtained, however the data did not provide a clear picture of the statewide needs for compliance with 9-1-1 requirements. No work had been undertaken on the project since January of 2015. A summary of the 2013 – 2015 project was presented to the Senate Committee on Institutions in February 2016 along with potential next steps for continuing the work. This presentation provided an opportunity for the 9-1-1 Board to confirm its understanding of the Committee's intentions for the scope and direction of the project. With that understanding, work on the needs assessment project began again.

The first step in the assessment project was to re-establish productive connections with Vermont schools. To that end, the Enhanced 9-1-1 Board partnered with the Vermont Agency of Education to help reopen the lines of communication. The Agency of Education generously allowed the 9-1-1 Board to include several "9-1-1 compliance" related questions on the Agency's annual technology survey. The survey was conducted throughout the month of June 2016 and final results were delivered to the 9-1-1 Board in late July. There was a 100% response rate to our survey questions.

The technology survey responses allowed the 9-1-1 Board to establish a baseline of information about the capabilities of existing telecommunications systems. In addition, updated contact information was obtained for each school. This survey information allowed Board staff to effectively prepare for the next step in the needs assessment project; the testing and verification of the school survey results.

Step 2: Test and Verify Self-Reported Information Received from Schools

Following the analysis of the school survey responses, Board staff began the work of testing and verifying the information received from the schools. Each school was instructed to contact the 9-1-1 Board to arrange for a series of 9-1-1 test calls to determine if the expected information was being delivered to the 9-1-1 call-taker. During the approximately ten-week test call window, over 800 test calls were placed to 9-1-1 by 267 schools. Thirty-seven schools did not complete the test calls as requested (see Figure 1).

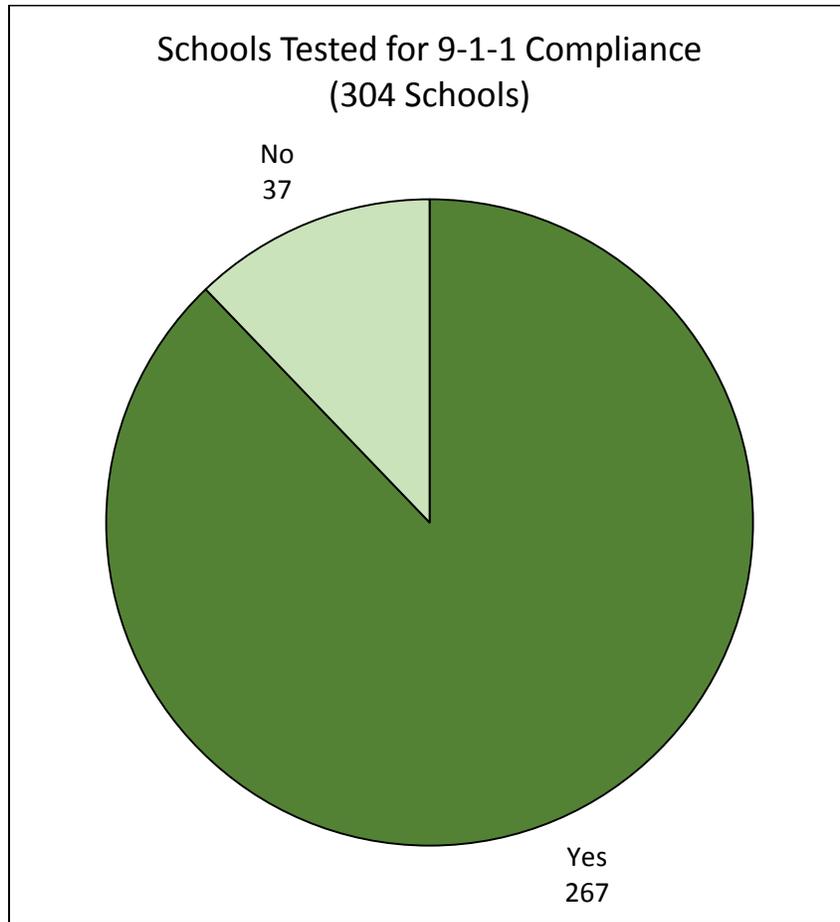
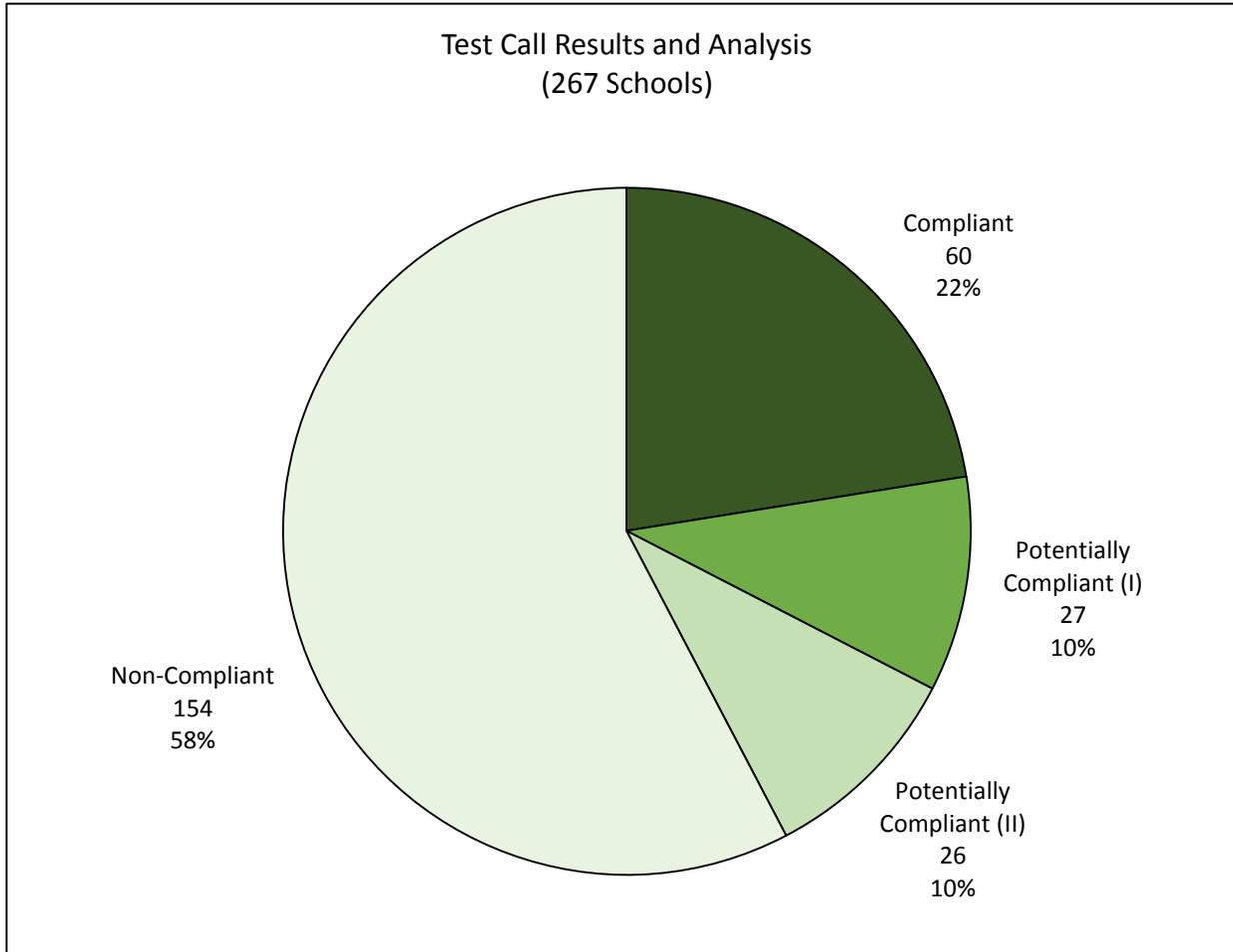


Figure 1. Schools Tested for 9-1-1 Compliance

Step 3: Analysis of Test Call Results

As schools completed their test calls, the Board’s Data Integrity Analyst carefully evaluated each result to determine the level of compliance with the 9-1-1 requirements. Test calls completed through January 11, 2017 are included in Figure 2 on the following page.



Legend:

Category/Classification	Definition
 Compliant - all ANI, ALI & Location info correct	ALL Test calls appear to indicate the school's phone system is compliant
 Potentially Compliant (I) – but with ANI/ALI or Location Discrepancies	Phone system appears capable of sending unique ANI, however discrepancies existed in test calls with either ANI and/or ALI and/or Location info-discrepancies have been reported.
 Potentially Compliant (II) - Correct ANI & ALI - no location info	One or more of the school's test calls appeared to contain correct ANI and ALI, but lacked any location info. Further info on telephone system required to determine capability.
 Non-Compliant - appears default ANI/ALI being sent -regardless of caller's location	One or more of the school's test calls appear to be sending a main TN (and associated address) by default - regardless of the caller's location within the facility

Figure 2: 9-1-1 Test Call Results and Analysis

Over 99% of test calls provided the 9-1-1 call-taker with an accurate physical address of the school building. While the correct physical address is a crucial first step in identifying the location of an emergency, additional information is required for 9-1-1 compliance and to ensure the caller's safety. To meet the 9-1-1 requirements, the phone system must also be capable of sending the unique phone number being used to make the 9-1-1 call and the specific location within the facility.

The test call results showed that approximately 22% of the schools that completed test calls are fully compliant with 9-1-1 requirements. A "compliant" test result means the unique phone number, correct physical address, and specific location information within the school were delivered to the 9-1-1 call-taker.

"Potentially compliant" test call results were divided into two categories:

1. Potentially Compliant (I): 10% of the test calls show the phone system appears capable of sending all required information, however discrepancies existed in the test call data with the phone number, address, or specific location information provided. These discrepancies have been reported and will be researched and appropriate steps taken to resolve the errors.
2. Potentially Compliant (II): 10% of the test calls show the phone system appears to provide correct phone number and address; however specific location information was missing. Further information about the phone system capabilities is needed to determine if the provision of specific location information is possible.

Approximately 58% of the 267 schools that conducted test calls showed results that indicated the phone system was "non-compliant" with 9-1-1 requirements for MLTS phone systems. These schools provided the correct physical address of the school building, but did not provide the unique phone number being used, nor the specific location within the school building.

The remaining thirty-seven schools did not respond to requests to conduct test calls.

Step 4: Follow Up with Schools for Next Steps

Each school and supervisory union will be provided with this document as well as a report on their specific test call results. In all cases, follow up with schools will include information about the availability of 9-1-1 Compliance Grant Funds. More detail about the Grant Funds is included in Part 2 of this report.

- Compliant Schools: Will be reminded that a data maintenance plan is critical to ensuring all data remains current.
- Potentially Compliant (I) Schools: Board staff will ensure that all reported discrepancies are resolved. Additional testing may be arranged to confirm all corrections have been made.
- Potentially Compliant (II) Schools: These schools will be directed to their phone system providers who will be able to explain the capabilities and/or limitations of the system in providing specific location information.
- Non-Compliant Schools: These schools will be directed to their phone system providers who will be able to explain the capabilities and/or limitations of the system in providing the required unique phone number and specific location information.

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- **Unknown/Did Not Test Schools:** These schools will again be provided with instructions for arranging test calls to 9-1-1 and reminded that 9-1-1 Compliance Grant Funds will be awarded only to schools that have completed test calls.

Board staff will carefully monitor changes that affect the needs assessment project and will provide updated information to the legislature as requested.

END PART 1

Part 2: Enhanced 9-1-1 Compliance Grant Program

The Enhanced 9-1-1 Compliance Grant Program was created by Act 160 of the 2016 legislative session. This new Building Communities grant is intended to provide financial assistance and incentive to Vermont schools to support the identification and implementation of needed changes to the school's telecommunications technology so accurate address and location information (i.e., specific call back number, building name/number, floor number, room number, etc.) is provided to Vermont 9-1-1 in the event of an emergency. Grants are awarded competitively and the program is authorized to award matching grants of up to \$25,000.00 per project. It is important to recognize that each school may have a different starting point on the path to compliance with 9-1-1 location requirements. While the goal is to have all schools provide the required information, this grant program will support schools in taking any needed steps along the path toward compliance. Examples of projects that will be considered for these grants include but are not limited to: fees/costs for consultation services to identify current telecommunications system capabilities; fees/costs associated with consultation services to understand available options and/or obstacles related to improving the quality of information sent to 9-1-1; fees associated with improving a school's ability to maintain accurate location data; and/or costs for replacing or upgrading existing telecommunications technology to allow for more accurate location information.

Enhanced 9-1-1 Compliance Grant Program – Fall 2016

The first application period for the 9-1-1 Compliance Grant program opened in early October 2016. Fifteen applications from schools in three supervisory unions were received. An application evaluation committee made up of four members of the 9-1-1 Board staff reviewed and approved all applications. As of January 2017, \$78,787.50 has been awarded from the 9-1-1 Compliance Grant Fund of \$200,000.00

Grant agreements have been distributed for review and signature by the grantees as detailed in the table on the following page.

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Supervisory Union	Grant Applicant	Project Scope	Total Project Cost	Grant Amount Approved
Caledonia North SU	Burke Town School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 18,300.00	\$ 9,150.00
Caledonia North SU	Lyndon Town School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 26,500.00	\$ 13,250.00
Caledonia North SU	Millers Run School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 17,400.00	\$ 8,700.00
Caledonia North SU	Newark Street School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 8,400.00	\$ 4,200.00
Caledonia North SU	Sutton School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 18,400.00	\$ 9,200.00
Rutland Northeast SU	Barstow Memorial School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 11,247.00	\$ 5,623.00
Rutland Northeast SU	Leicester Central School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 4,391.00	\$ 2,195.50
Rutland Northeast SU	Lothrop Elementary School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 11,248.00	\$ 5,624.00
Rutland Northeast SU	Otter Valley Union School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 26,221.00	\$ 13,110.50
Rutland Northeast SU	Sudbury Country School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 2,938.00	\$ 1,469.00
Rutland Northeast SU	Whiting Elementary School	Complete system upgrade to allow compliance w/9-1-1 requirements	\$ 2,938.00	\$ 1,469.00
Washington West SU	Fayston Elementary School	Network system upgrade in preparation for new VoIP system	\$ 2,399.00	\$ 1,199.00
Washington West SU	Moretown Elementary School	Network system upgrade in preparation for new VoIP system	\$ 2,399.00	\$ 1,199.00
Washington West SU	Waitsfield Elementary School	Network system upgrade in preparation for new VoIP system	\$ 2,399.00	\$ 1,199.00
Washington West SU	Warren Elementary School	Network system upgrade in preparation for new VoIP system	\$ 2,399.00	\$ 1,199.00
TOTALS	15 schools		\$ 157,579.00	\$ 78,787.50

Figure 3: 9-1-1 Compliance Grant Awards – Fall 2016

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A second application period will be opened January 2017 to make the remaining grant funds available to qualifying schools. Award notifications are expected by late April 2017. An updated Grant Program report will be provided in April.

9-1-1 Compliance Grant Program – Potential Needs and Increased Outreach

All schools remain eligible for assistance from the 9-1-1 Compliance Grant Program provided they meet the criteria outlined in the Grant Application Packet. The 9-1-1 Board will increase its outreach to schools to ensure awareness of the grant program and encourage applications.

The Board anticipates a continued need for this grant program as demonstrated by the fact, shown in Figures 4 and 5, that 39% of available grant funds were awarded to just 5% of eligible schools in the Fall of 2016.

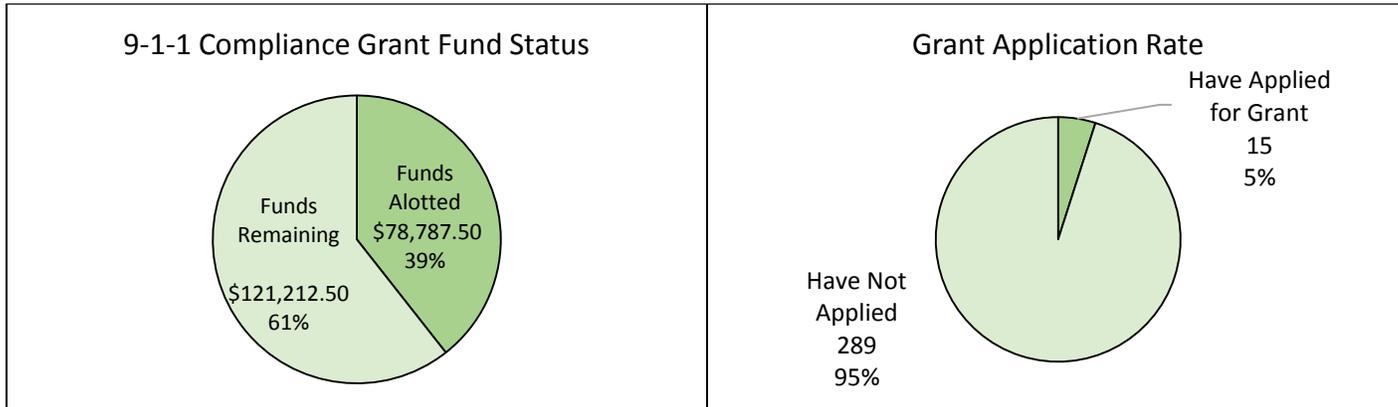


Figure 4: Grant Fund Status Fall 2016

Figure 5: Grant Application Rate Fall 2016

Conclusion

The work over the past year has resulted in the 9-1-1 Board successfully reestablishing connections with Vermont schools and has allowed for the development of a “baseline of information” about school compliance with 9-1-1 requirements for Multi-Line Telephone Systems. Board staff will continue to monitor the status of Vermont schools’ compliance with the requirements and will continue with outreach efforts to ensure an awareness of the availability of 9-1-1 Compliance Grant funds.

We look forward to continuing to work with Vermont schools on this important issue and appreciate the opportunity afforded by the 9-1-1 Compliance Grant program to assist schools in improving their ability to provide accurate and specific phone number and location information to 9-1-1. The work being done is critically important to improving the ability to quickly locate and assist 9-1-1 callers in times of emergency.

END OF REPORT