



**FY17**

# **PSAP GRANT PROGRAM APPLICATION**





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### HOW TO APPLY/DEADLINE

The grant application is available and accessible from VITA ISP's website (<http://www.vita.virginia.gov/isp/default.aspx?id=8578>). Upon completion of the application, it is to be submitted to your Regional Coordinator. Any supporting documentation must also be submitted along with the application, including mandatory budgets for projects (if applicable).

After the close of the grant application cycle, a Grant ID and email receipt notification will be sent to the e-mail address listed on the application received.

All funding requests must be submitted using the grant application. Technical assistance is available from VITA's Public Safety Communications (PSC) staff throughout the grant process. The FY17 PSAP Grant Application Cycle starts July 1, 2015 and concludes on September 30, 2015 at 5:00 pm.

**ALL APPLICABLE SECTIONS MUST BE COMPLETED IN ITS ENTIRETY OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE AND NOT ACCEPTED FOR CONSIDERATION.**



## FY17 PSAP GRANT APPLICATION

### PROJECT TITLE

Region IV NG9-1-1 GIS Data Analysis & Workflow

### GRANT APPLICANT PROFILE/PROJECT CONTACT

PSAP/HOST PSAP NAME: Tazewell County 911

CONTACT TITLE: Director of 911 & Emergency Communications

CONTACT FIRST NAME: Derrick

CONTACT LAST NAME: Ruble

ADDRESS 1: 315 School Street

ADDRESS 2: Suite 9

CITY: Tazewell

ZIP CODE: 24651

CONTACT EMAIL: derrick.ruble@tcsova.org

CONTACT PHONE NUMBER: 276-385-1727

CONTACT MOBILE NUMBER: 276-979-6147

CONTACT FAX NUMBER: 276-988-5012

REGIONAL COORDINATOR: Tim Addington

### HOST PSAP AND PARTICIPATING PSAPS/LOCALITIES

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**Tazewell County 911**

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**Buchanan County 911**

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**Smyth County 911**

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**City of Bristol 911**

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**Washington County 911**

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**Wise County 911**

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**Scott County 911**

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**Dickenson County 911**

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**City of Norton 911**

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**Lee County 911**

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**Russell County 911**

### GRANT TYPE

Individual PSAP

Shared Services



**TIER**

- Out of Service
- Technically Outdated\*
- Not Applicable
- Non-Vendor Supported\*
- Strengthen

**If technically outdated or non-vendor supported, application MUST include age and/or version of hardware/software.**

VERSION:

# YEARS of HARDWARE/SOFTWARE:

**6 years in operation ESRI 10.0**

**PRIORITY/PROJECT FOCUS NG 9-1-1 GIS EQUIPMENT & SERVICES**

**If "Other" selected, please specify: 2T**

**FINANCIAL DATA**

Amount Requested: \$ 454,500

Total Project Cost: \$ 454,500



## STATEMENT OF NEED

This statement should reference the relationship to the current funding priorities established by the Grant Committee and include evidence of any financial need, along with additional information on the impact on operational services; consequences of not receiving funding; inclusion of project in a long-term or a strategic plan; and local sustainability:

We are requesting this as a regional grant under the NG 9-1-1 Equipment & Services - Shared Services –Multi-Jurisdictional Project. Successful accomplishment of this project will improve the participating PSAP's ability to respond to wireless and wireline calls within their area and in the other participating PSAPs. Additionally it will continue to prepare the region for NG9-1-1 GIS Data Successful accomplishment will also enable the participating PSAPs to have a reliable and sustainable catastrophic backup resource with surrounding primary PSAPs. In addition, this project will be performed taking maximum advantage of the statewide VBMP data products thus enabling the efficient data sharing with the State. Impact on Operational Services Participating PSAPs will benefit through the maintenance and establishment of a common geospatial landscape. Operationally, this will enable the continued automated update of roads, structures, addressing, parcels, ESZ's, flood hazard, mile markers, etc. in a near-real time environment. This would aid call takers and dispatchers to locate landline, wireless, VOIP and Text to 9-1-1 calls using current data within and outside their locality.

A primary goal of this grant request is for each locality to undergo a NG-911 Data Analysis and Workflow project that also includes data cleanup. In addition the group will conduct a Regional Data Analysis and Workflow to see how the region looks as a whole especially in border areas. Roads and addresses will be snapped and duplications removed. The Workflow will help each county understand better how to handle development and changes in border areas and avoid future issues or concerns for 911 and the future of NG-911. As part of this project each locality will work on their Borders/Boundaries with the goal of agreeing to a common use boundary to be used by 911 and Emergency Services. Some of this was done in the original MERG project with the initial 6 counties and will now be done with the rest of the MERG partners. The grant will also add the two last localities into MERG, Buchanan County and the City of Norton, thus creating a regional mapping database of the entire Southwest VA.

The secondary goal of the grant request is to help the MERG group with software and GIS support. The server, GIS software, and GeoProcessing models/programs have held up very well over the last 6 years. Support has been a big factor in this sustainability. We have learned from issues and improved areas as we have grown from 6 initial localities to now 17.

With limited GIS resources at the local level the MERG process greatly benefits the submission of data to VGIN when requested. VGIN uses MERG to download local county data as-needed for the 17 counties. This includes roads, addresses, parcels, and boundaries, etc.



Describe how the grant will be maintained and supported in the future, if applicable.

The counties of Tazewell, Washington, Smyth, Scott, Lee, Russell, Dickenson, Wise, Buchanan, and the cities of Bristol and Norton would like to continue to streamline the process of data sharing among each other and with the state by working to update our technically outdated processes and including jurisdictions that are not currently participating in the MERG repository.

The Data Analysis & Data Cleanup will help the localities progress to an effective level of GIS data management for the maintenance of their data. With current workloads on local staff it is difficult for them to see the issues they may have in their data and also difficult to work on the cleanup. This grant will help move them beyond this point to a level they can then maintain effectively. The workflow portion of the grant will help each locality develop best practices and understand the full process of maintaining accurate GIS data for 911 and NG-911.

The Regional Analysis and Workflow will be done once cleanup has taken place. This review will help identify issues between jurisdictions. The Workflow will help localities understand how they need to work and communicated with each other to avoid issues between them.

The grant will also help the MERG group maintain the MERG server and software into the future to keep the progress and success of MERG going forward. Having up-to-date software and GIS support is key and can be a tremendous advantage for NG-911 in terms of preparing regional spatial routing.

The MERG partners work well as a group having “by-laws” and “rules of procedures”. The group has been working now for over 6 years.



## COMPREHENSIVE PROJECT DESCRIPTION

Identify the longevity or sustainability of the project.

The MERG group has established a governance structure with by-laws and rules of procedures adopted by the group. This allows for the annual review of the project and the members to commit annual funding for assisting with the sustainability of the project.

Describe how this project supports the Virginia Statewide Comprehensive 9-1-1 Plan.

### **INCREASE SITUATIONAL AWARENESS THROUGH ENHANCED INCIDENT INFORMATION SHARING INITIATIVE(S)**

- Implement state wide standards and best practices to enhance incident information sharing
  - MERG increases situational awareness across jurisdictional boundaries by sharing various levels of GIS and incident data
  - MERG submits the local data to the State “on-demand” so that VGIN can maintain the Statewide RCL as well as other data layers such as addresses and parcels.
- Employ technology that allows for seamless automatic bidirectional communication of incident information between PSAPs
  - MERG poises itself to be a mechanism to be a major component of NG9-1-1 Spatial Interface (SI)
  - MERG also is used as a mechanism for training of PSAP personnel
  - **MERG will strongly meet goal 7 by leveraging GIS technology and data to better locate callers and improve response capabilities- across jurisdictional boundaries.**

### **SHARED SERVICES (if applicable)**



The relationship of the project to the participating PSAPs:

Each of the participating PSAPs and GIS departments borders each other and subsequently has the need for adjoining jurisdictional data. The governance structure is in place for the participants for continuity of MERG and many are using the data daily in their respective PSAPs. In addition the MERG process has saved jurisdictions considerable amount of money when implementing CAD projects.

Intended collaborative efforts:

Continued semi-annual meetings and as needed meetings will be scheduled for the group to validate their efforts and strive for improvements. Since the inception the MERG project has collaborated with the VGIN RCL analyst by giving them a one stop shop for their data needs. Additionally, work is being performed to provide access to the Virginia State Police Division IV dispatch to MERG data. This will vastly improve cross jurisdictional and cross departmental data sharing and response.

Resource sharing:

The data sharing that MERG accomplishes and will be continuing to improve upon has benefited multiple agencies outside of the PSAP, such as VGIN, VDEM, US Department of Agriculture, US Census Bureau, Virginia Game and Inland Fisheries, Virginia Department of Forestry, Department of Mines and Minerals, DEA, FBI, etc. The MERG data and concept has been utilized for security planning for dignitaries, search and rescue operations, tornado response & recovery across jurisdictional boundaries to mention a few. This is because the local data is the most accurate and by combining data across jurisdictional boundaries via MERG it is efficient and less labor intensive.



How does the project impact the operational or strategic plans of the participating agencies:

The project improves the data available in the PSAP and at the GIS departments by having up-to-date data available when needed. The GIS departments do not have to go to multiple localities to get their data to incorporate. It will now be available and utilized on the spot. The data and process helps in strategically planning for what is happening now and in the future by embracing coordinated efforts.

Provide a thorough, concise, and complete description of the project, including an outline of the goals and objectives, implementation strategy, and a work plan.

- Data Analysis & Cleanup for each locality
- Workflow Project for each locality
- Workshops on Locality jurisdiction borders
- Conduct NG-911 Data Analysis on a Regional level
- Conduct a Workflow Project on a Regional level
- Update MERG Server software and GIS support
- Update data transfer software between localities

To begin the project each county will submit their GIS 911 data/MSAG/ALI to be analyzed and reports of issues generated. Data cleanup will be done for each county up to the level of ALI address issues that relate to mis-addressed addresses or where field or phone checks are needed. So cleanup will involve topology corrections on roads and polygons layers, spelling issues, issues between the mapping and MSAG ranges, address point to road range issues, etc. Upon completion a Workflow project will be done to help localities develop an efficient and productive workflow of the 911 mapping and database maintenance process. A workflow document will be developed based on the recommendations as to the best fit for each locality's situation related to staff, equipment, and education. The workflow project is also intended to help educate all involved at the local level as to the importance of accurate and up to date 911 data. After or during this cleanup process a series of workshops will be done among the localities to work on a common use boundary that would be used for 911 and Emergency Services. Once agreed, other layers will be edited along these new boundaries to snap roads and polygon layers such as ESZ's. Once localities have had their data cleaned based on the data analysis, a regional analysis will be done to see how the regional data works together. A regional workflow will be developed to help localities understand the process of working through issues along boundary areas.

The GIS software on the MERG server will be upgraded to the latest version as well as SQL database. Support will be updated to allow the group to maintain software support for five years. In addition the MERG group utilizes GIS support for all the geoprocessing, data transfers, and also enhancements to the system. The GIS support will help the group add new layers to the regional database as-needed, updated geoprocessing with data schemas may change, update MERG schema when State standards are developed, how to use MERG data in PSAP mapping software as it may update or change. This GIS support will be maintained for five years. MERG will also be moving to a new data transfer software called DataAnywhere that will allow for lower maintenance costs from the private VPN system. This new system will be easier to maintain and is secure because the data storage is local on the MERG system.



**PROJECT TIMELINE FOR  
SHARED SERVICES & INDIVIDUAL PSAP APPLICATIONS:**

For each applicable phase of the project, indicate the estimated completion date. Sample activities for each phase are included.

PROJECT PHASE	ESTIMATED COMPLETION DATE
<input type="checkbox"/> <b>INITIATION</b> (Project approved by appropriate stakeholders)  Sample activities: project concept is documented, local board or governing authority approval or endorsement is received, PSAP grant application is filed, local budgets are obtained, appropriated grant funds are approved, and budgetary estimates are obtained	<b>06 / 10 / 15</b>
<input type="checkbox"/> <b>DESIGN/PLANNING</b> (Project, system, or solution requirements are developed)  Sample activities: requirements are documented, components to be purchased are identified, and general design is documented	<b>04 / 15 / 16</b>
<input type="checkbox"/> <b>ACQUISITION</b> (Selected system or solution is procured)  Sample activities: RFP (or other bid related processes) are drafted, proposals are evaluated, contract is signed, purchase orders are issued, and quotes are obtained	<b>07 / 15 / 16</b>
<input type="checkbox"/> <b>IMPLEMENTATION</b> (Selected system or solution is configured and installed)  Sample activities: purchased components are delivered and installed and training is performed	<b>09 / 15 / 16</b>
<input type="checkbox"/> <b>TESTING/COMPLETION</b> (Selected system or solution is tested and put in production)  Sample activities: performance of system/solution is validated and system/solution goes "live"	<b>03 / 30 / 18</b>



## BUDGET AND BUDGET NARRATIVE

List the planned expenditures to be made with grant funds. (NOTE: In lieu of a line item breakdown, an itemized cost schedule or detailed vendor prepared quote may be submitted as an attachment. However, budgetary quotes received from a particular vendor(s) during the application process do not commit the PSAP to use that vendor(s) once the grant is awarded.) Briefly explain the reason for each requested budget item and provide the basis for its cost. In addition, if contingency cost has been added, please identify the amount.

Project consists of 11 Jurisdictions

All pricing is inclusive of 5 years maintenance & support

DataAnywhere	\$1,000
ESRI ArcServer	\$32,500
GIS Support 10 jurisdictions	\$75,000
MERG Server and site updates and support	\$45,000
NG9-1-1 Data Analysis and Workflow Development (11 jurisdictions)	\$275,000
MERG Initial Setup for remaining jurisdictions	<u>\$ 6,000</u>
	\$409,500
Contingency	<u>\$20,000</u>
Total Project Budget	\$454,500

## EVALUATION



## How will the project be evaluated and measured for achievement and success:

Overall, this project's success will be measured by the amount of improvement in decision making and provision of emergency services resulting from improved local and regional data.

Successful project accomplishment will be based on achieving the following project milestones:

1. Hiring a geospatial consultant(s) to assist in project planning and execution
2. Receipt of a Functional Requirements Document that defines:
  - a. The current participating PSAP and GIS systems requirements to enable ESRI ArcGIS Server Replication
  2. Development of the work processes and geo-processing tools to:
    - a. Support the individual PSAP mapping / CAD systems (GeoComm) data input requirements.
    - b. Support regional data integration
    - c. Automate the data update in each locality and replication to the PSAP mapping systems.
  3. Provide replication between the PSAP and VITA.
  4. Procurement of necessary hardware and software to enable the successful project.
  5. System implementation including:
    - a. Training and documentation on the installation, setup, and configuration of any tasks and replication services.
    - b. Installation and setup.
    - c. Final acceptance and sign-off.



**CONSOLIDATION (Primary or Secondary) - (complete only if applicable)**

How would a consolidation take place and provide improved service:

N/A

How should it be organized and staffed:

N/A

What services should it perform:

N/A



How should policies be made and changed:

N/A

How should it be funded:

N/A

What communication changes or improvements should be made in order to better support operations:

N/A

Phase	MERG costs			Submitted w/ Grant - revised into project phases
1	<b>Add Buchanan &amp; Norton</b>			
	MERG initial setup			\$6,000
1	<b>NG-911 Data Analysis &amp; Cleanup</b>			
		\$25,000	11 jurisdictions	\$178,750
	Bristol			
	Buchanan			
	Dickenson			
	Lee			
	Norton			
	Russell			
	Scott			
	Smyth			
	Tazewell			
	Washington			
	Wise			
1	<b>MERG Server and Data Updates for space and memory</b>			
		\$1,200	5 years	\$6,000
<b>Total Phase 1</b>				<b>\$190,750</b>

2	<b>GIS Support</b>	\$15,000	5 years	\$75,000
	Bristol			
	Buchanan			
	Dickenson			
	Lee			
	Norton			
	Russell			
	Scott			
	Smyth			
	Tazewell			
	Washington			
	Wise			
2	<b>NG-911 Workflow Development &amp; Implementation</b>	\$25,000	11 jurisdictions	\$96,250
	Bristol			
	Buchanan			

Dickenson  
Lee  
Norton  
Russell  
Scott  
Smyth  
Tazewell  
Washington  
Wise

Total Phase 2 \$171,250

**3 Esri & Technology Support**

ArcServer & related support

\$14,500

5 years

\$72,500

Total Phase 3 \$72,500

Contingency not included above \$20,000

**Original MERG participants**

Bristol  
Lee  
Russell  
Scott  
Smyth  
Washington

**Subsequent MERG additions**

Dickenson  
Tazewell  
Wise

**Missing MERG jurisdictions to add**

Buchanan  
Norton