

## PSAP Grant Program Grant Ranker

# View Application--123--Southwest Virginia GIS Data Sharing

**Grant Period:** 2010

**Tier:** Strengthen current equipment and service delivery capability by upgrading existing wireless E-911 related equipment or services (**STRENGTHEN**)

**Grant Program:** Continuity and Consolidation **Grant Type:** Regional Initiative

**Priority:** GIS: high priority (refer to GIS-related Grant Request Prioritization Matrix for a description of GIS projects that would have a high funding priority) (**GIS HIGH PRIORITY**)

**Primary PSAP Applicants:** Bristol 9-1-1 Communications  
Lee County  
Russell County  
Scott County  
Smyth County 9-1-1  
Washington County

**Jurisdictions Served:** Abingdon, Town of  
Bristol, City of  
Castlewood, Town of  
Chilhowie, Town of  
Clinchco, Town of  
Clinchport, Town of  
Damascus, Town of  
Duffield, Town of  
Dungannon, Town of  
Gate City, Town of  
Haysi, Town of  
Honaker, Town of  
Jonesville, Town of  
Lebanon, Town of  
Lee, County of  
Marion, Town of  
Nickelsville, Town of  
Russell, County of  
Scott, County of  
Smyth, County of  
Washington, County of  
Weber City, Town of

**Project Director:**

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**Project Description:****Total Project Cost** \$775,000.00**Amount Requested:** \$775,000.00**Statement of Need:**

We are requesting this as a regional grant under the Continuity and Consolidation Program. 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. Successful accomplishment will also enable the participating PSAPs to have a reliable and sustainable catastrophic backup resource. 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 establishment of a common geospatial landscape. Operationally, this will enable the automated update of roads, structures, addressing, etc. in a near-real time environment. This would aid call takers and dispatchers to locate wireless calls using current data within and outside their locality. In addition, this project will simplify the loading of data updates into the PSAP mapping systems through the use of standard adaptors. These data adaptors provide the mapping update data in the specific format and content necessary to be consumed by the mapping system. Consequences of not receiving funding This project is reliant upon the award of the grant funding described in the budget section below. Should grant funding not be awarded or is significantly reduced from the requested amount, this project will not be undertaken. Inclusion of project in a long-term or a strategic plan This project supports our regional long-term plan and commitment to enhance emergency services to our citizens and businesses within the region. This project improves our ability to share data and resources within the participating localities and with the state.

**Comprehensive Project Description:**

The counties of Washington, Smyth, Scott, Lee, Russell and the City of Bristol would like to streamline the process of data sharing among each other and with the state by establishing a Southwest Virginia GIS Repository. The repository will be adaptable to potentially include the additional counties of Wise, Dickenson, Buchanan, Tazewell and the City of Norton as future projects. Through the use of an ArcGIS Server geodata replication services, localities can efficiently share data with the state VITA VBMP program. In addition, any disparate data sets can be consolidated using geoprocessing (GP) tasks, facilitating the consumption of these layers into the PSAP's mapping system. This grant project will enhance the PSAPs ability to assist each other with mutual aid, provide effective regional response, backup each other's critical data, and provide backup emergency dispatch capability. This can occur with near-real time on demand geospatial updates of critical infrastructure and address layers using ArcGIS Server Replication or ESRI Compatible as an alternative solution. Prior to enabling replication in the participating PSAP's, software systems and capabilities of those involved will be evaluated and upgraded where necessary. Evaluation will include ESRI versions and licensing, mapping display capabilities and conformance, and mapping display rendering assistance. Upgrades in versions, licensing, and mapping will also fall into this category. Goals and Objectives 1. To efficiently and effectively share data between neighboring jurisdictions for use in dispatch mapping applications. 2. To develop a standard database layout for various GIS layers that will be shared. 3. To create an automated geoprocessing routine that merges data layers from each locality with little or no user interfacing and to do this on a daily basis. 4. To create an "on-demand" data downloading process. a. To further create a custom "on-demand" download program that allows localities to choose which data layers and localities they need. 5. To ultimately link our regional data server to other data servers in the region and state. 6. To have as little impact on local mapping, GIS, and IT applications and processes as possible. 7. To keep new monthly maintenance costs at a similar or minimal increase. Implementation Strategy and Work plan We anticipate this project will include: 1. Securing a geospatial consultant(s) to assist in project planning and execution 2. Assessment of the current PSAP and GIS systems and requirements to enable ESRI ArcGIS Server Replication or ESRI Compatible as an alternative solution for participating PSAPs. 3. Assessment of the current networking infrastructure and establishment of a secured network to enable the replication of data among the regional participants. 4. Data standardization to support the individual PSAP mapping / CAD systems (GeoComm) data input requirements. 5. Development of work processes required to automate the data update in each locality and

replication to the PSAP mapping systems 6. Configuration of a Geodata service providing one or two way replication between participating PSAPS 7. Configuration of a Geodata service providing replication between the PSAP and VITA 8. Procurement of necessary hardware and software to enable the successful project 9. Training and documentation on the installation, setup, and configuration of any tasks and replication services Project Timeline (days from grant award) • 90 – Contract with consultant • 120 – Complete current PSAP and GIS systems and requirements assessment and specification • 260 – Complete data standardization and development of work processes. Procurement of necessary hardware and software. • 330 – Implementation at PSAPs • 340 – Project closeout and report Project Sustainability It is anticipated that the automated process will remain in place unless there is a significant industry change. The sustainability of the project will remain a central focus of the project participants by the driving force of need for up-to-date geospatial data. All entities involved are prepared to request funding for long-term changes of the collaborative system in the event of upgrades or product changes.

### **How will the equipment purchased will support future technologies for PSAP readiness?:**

Equipment and services purchased as part of this grant effort will provide the necessary upgrades to the participating localities' GIS to enable them to take advantage of the data sharing, integration, and distribution capabilities of GIS. This includes the integration of GIS with the PSAP mapping and sharing regional data. Mapping, integration and sharing data enhancements will improve decision making and regional response in the participating PSAPs.

### **Budget and Budget Narrative:**

The grant funding request budget is shown below. This budget estimate is based on information provided by a vendor with experience in performing similar projects and hardware / software licensing information provided by ESRI under their latest pricing agreement with the Commonwealth of Virginia. Site Review and Implementation Planning \$67,910 Assessment Site Specific Design Documentation Development and Approval Replication design setup and models \$131,490 Replication model design GIS to each PSAP Replication model design host to VITA Replication each set up (locals to each local) Replication each set up (Host to locals) Data workflows Geoprocessing model to PSAP Applications Development \$145,220 Replications tools locals Incoming QC/QA application ETL Tool Development Interface for Geoprocessing tools to PSAPs Outgoing QC/QA application Hardware / Software Licensing \$268,550 Implementation \$104,760 Testing Training Documentation \$57,070

### **Evaluation:**

Overall, this project's success will be measured by the amount of improvement in decision making and provision or 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 or ESRI Compatible as an alternative solution for participating PSAPs. b. The current networking infrastructure and requirements to establish a secured network to enable the replication of data among the regional participants. 3. 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 4. Configuration of a Geodata services to a. Provide one or two way replication between participating PSAPS and host. Depending on their requirement. b. Provide replication between the PSAP and VITA 5. Procurement of necessary hardware and software to enable the successful project 6. 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

### **Attachments**