

PSAP Grant Program Grant Ranker

View Application--30--Replication

Grant Period: 2010

Tier: Replacement of technically outdated wireless E-911 equipment or service to enable primary PSAP to maintain current service levels to the general public (**TECHNICALLY OUTDATED**)

Grant Program: Continuity and Consolidation **Grant Type:** Individual PSAP

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: Bath County

Jurisdictions Served: Bath, County of

Project Director:

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Project Description:

Total Project Cost \$65,000.00

Amount Requested: \$65,000.00

Statement of Need:

Evidence of Financial Need Successful accomplishment of this project will improve our ability to provide current and reliable information to the PSAP from the GIS. Successful accomplishment will also enable the PSAP to have a reliable and sustainable catastrophic backup resource. We do not have the financial or technical resources to successfully develop and implement this project. We intend to hire a consultant to perform this work. Impact on Operational Services The PSAP will benefit through the better quality and timeliness of data for mapping and CAD. This project 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 data models. These data models provide the mapping update data in the specific format and content necessary to be consumed by the mapping system. With the utilization of an offsite backup in the format of a replicated database, a backup is readily available in a consumable format in the case of any catastrophic events. Inclusion of Project in PSAP Planning Improved integration of the PSAP and GIS data is a key planning goal for us. This grant will enable us to achieve that goal.

Comprehensive Project Description:

Project Description The PSAP would like to implement a project that will streamline the process of sharing data between the GIS and the PSAP. This can occur with near-real time geospatial updates of critical

infrastructure and address layers using ArcGIS Server Replication. In addition, any disparate data sets can be consolidated using geoprocessing (GP) tasks and will be provided in a standardized format with a pre-defined schema, facilitating the consumption of these layers into the PSAP's mapping system. As part of the replication process, an off-site, bi-directional replica will be maintained. This replica will serve as an emergency backup and will allow rapid re-instatement of any data that may be lost or corrupt. This grant project will assist the PSAP with the automation of some necessary database maintenance tasks. The automation of these tasks will ensure that the latest edits are getting transferred to the PSAP through replication, and will also help to maintain database integrity. This grant project will also enhance our PSAP's ability to provide backup emergency dispatch capability due to the quality control processes that will be run on the data during the replication process. A series of quality control tasks will be run to ensure the data integrity is maintained throughout the process – from the initiation of the replication to the final output product. The entire process will be logged to ensure that all criteria and tasks are met. Any critical issues will be delivered to the PSAP and GIS center staff to alert them of any problems that may have occurred during the process. The quality control process will evaluate the data structure and geometry, and ensure that all data that is processed meets pre-defined guidelines. The data structure will be evaluated on all replica databases to ensure that field name, field size, and field type are all the same. These checks are critical because of the stringent data requirements for the PSAP mapping system. The geometric integrity will also be evaluated, to ensure that the data is topologically correct and within the correct projection. All features will be evaluated to ensure that the number of records is also within a pre-determined threshold. Any inconsistencies will be flagged by the logging process and provided to the locality and PSAP. Goals and Objectives Goal The goal of this project is to establish an automated process that will streamline the sharing data between the GIS and the PSAP and improve the PSAP data quality and timeliness. Project Objectives 1. Determine the GIS and PSAP system requirements. 2. Develop geo processing tools and work processes to support the automate of the process of data sharing 3. Implement the tools and processes 4. Acquire the training necessary to operate and maintain the automated sharing Implementation Strategy and Work plan We anticipate this project will include: 1. Securing a geospatial consultant to assist in project planning and execution 2. Assessment of the current PSAP and GIS systems and requirements to enable ESRI ArcGIS Server Replication 3. Data standardization to support the PSAP mapping / CAD systems 4. Development of work processes required to automate the data update from the locality, utilizing replication to the PSAP mapping systems 5. Procurement of necessary hardware and software to enable the successful project 6. Training and documentation on the installation, setup, and configuration of any GP tasks and replication services 7. Configuration of a Geodata service providing two way replication between the PSAP and an off-site storage location (e.g., VITA, other). Project Timeline (days from grant award) • 20 – Contract with consultant • 30 – Complete current PSAP and GIS systems and requirements assessment and specification • 45 – Complete data standardization and development of work processes. Procurement of necessary hardware and software. • 60 – Develop and Test solution • 90 - Implementation at PSAP / Locality • 100 – 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.

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

How will Equipment purchased support future technologies for PSAP readiness? The equipment and services purchased under this grant establishes the framework used to improve the quality of PSAP mapping data and enable the PSAP to add new data to the CAD and mapping system as changes are made to the data in GIS.

Budget and Budget Narrative:

Budget submitted as attachment.

Evaluation:

Evaluation data will be collected throughout the project as specific milestones are achieved. The data sources will include regular project status reports, milestone testing and acceptance documents, and final project acceptance documents. Project milestones and status reports will follow our specific tasks and phases: 1. Securing a geospatial consultant to assist in project planning and execution 2. Assessment of the current PSAP and GIS systems and requirements to enable ESRI ArcGIS Server Replication 3. Data standardization to support the PSAP mapping / CAD systems 4. Development of work processes required to

automate the data update from the locality, utilizing replication to the PSAP mapping systems 5. Procurement of necessary hardware and software to enable the successful project 6. Training and documentation on the installation, setup, and configuration of any GP tasks and replication services 7. Configuration of a Geodata service providing two way replication between the PSAP and an off-site storage location (e.g., VITA, other). As part of the overall project, a Project Management Document shall be developed that incorporates each stage of the project, and provides an audit trail associated with final outcomes, final project metrics, and achievement of specific project deliverables.

Attachments

Bath_Replication_Budget.pdf

Budget and Budget Narrative Section

Budget and Budget Narrative - Purpose

List the planned expenditures to be made with grant funds. In lieu of a line item breakdown, an itemized cost schedule or detailed vendor.

Task	Fee
Project Management	\$10,000
Site Review and Implementation Planning	\$6,000
Assessment	
Site specific design	
Documentation development and approval	
Replication Workflow Designs and Set-up / Models	\$17,500
Replication Model Design (GIS to PSAP)	
Replication Model Design (GIS to VITA))	
Data Workflows GeoProcessing Model to PSAP	
Applications Development	\$15,000
Replication Tools (Locals)	
Incoming QA / QC Application	
ETL Tool Development	
Interface for GeoProcessing Models to PSAP	
Outgoing QA / QC Application	
Implementation	\$10,300
Testing, Training, and Documentation	\$6,200
Total Project	\$65,000