Virginia Information Technologies Agency

FY17

PSAP GRANT PROGRAM APPLICATION

VIRGINIA INFORMATION
TECHNOLOGIES AGENCY
Integrated Services Division

FY17 PSAP GRANT PROGRAM APPLICATION

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

MidPenRRCL Project

GRANT APPLICANT PROFILE/PROJECT CONTACT

PSAP/HOST PSAP NAME: King & Queen County, VA
CONTACT TITLE: Emergency Services Coordinator
CONTACT FIRST NAME: Greg
CONTACT LAST NAME: Hunter
ADDRESS 1: 242 Allens Circle, Suite L
ADDRESS 2: P.O. Box 177
CITY: King & Queen C.H.
ZIP CODE: 23085
CONTACT EMAIL: ghunter@kingandqueenco.net
CONTACT PHONE NUMBER: 804.785.5975
CONTACT MOBILE NUMBER: 804.769.5000
CONTACT FAX NUMBER: 804.785.5999
REGIONAL COORDINATOR: Sam Keys

HOST PSAP AND PARTICIPATING PSAPS/LOCALITIES

King & Queen County	**Mathews County**
Essex County	
Gloucester County	
Middlesex County	

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- ☒ Technically Outdated*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If technically outdated or non-vendor supported, application MUST include age and/or version of hardware/software.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

King and King, as well as the partnering localities, are proposing this project under the Technically Outdated Tier. Many localities within Virginia are already using this technology as a result of grant funding, thus the MidPenRRCL Region is technically outdated in NG911 preparation and mutual aid ability. Many localities participating in this grant application are lacking the tools to complete this type of analysis within their own jurisdictions independently, and do not have the licensing capability to share data in an effective, timely manner.

PRIORITY/PROJECT FOCUS NG 9-1-1

If "Other" selected, please specify: Click here to enter text

FINANCIAL DATA

Amount Requested: $ 445,160
Total Project Cost: $ 445,160

STATEMENT OF NEED

The Virginia Middle Peninsula area PSAPs, led by King and Queen County, have need to establish a seamless regional GIS repository to support NG911 and possible PSAP consolidations over the next several years. The needs of this grant are driven by mutual aid, and a desire by the localities to begin the process of regionalizing more public safety initiatives.

Not only is this project important for changes coming in NG911, but this project would lay the foundation for possible PSAP consolidations which are currently being evaluated in the area. The localities in this region face a great deal of financial hardship, and will be better prepared for all public safety concerns as they prepare for NG911 as a group. While these localities work diligently to maintain public safety standards, they are falling behind other regions in Virginia, and soon will not be able to provide the level of service that other regions in the state are providing to their citizens.

As a regional project, this project will build on the success of other regional projects that have been successfully completed, and will incorporate all of the standards recommended by the Virginia Geographic Information Network, NENA, and each localities' E911 vendor.

To improve upon the regional efforts that have been completed under this grant program to date, the MidPenRRCL Project will have a newer, cloud-based hosting environment as well as providing data analysis functions through the regional server, and not on the desktops of the localities. These changes will require less software licensing and staff time on behalf of the participating localities. Upon successful completion of the project, the MidPenRRCL is open to incorporating additional localities in the future, and will encourage their neighbors to become involved in the future to strengthen the safety of an increasing number of Virginia citizens.

Without grant funding, this important initiative will not go further than the initial planning stages. This in turn will further delay any additional regional efforts and consolidations. Without grant funding, these localities do not possess the GIS knowledge or staff to perform this project. Providing a regional data model and GIS repository is the foundation of many important future advancements in the region.

COMPREHENSIVE PROJECT DESCRIPTION

The Goal of this project is to create a regional GIS depository, and plan a new database for regional data sharing, following new standards established by VGIN and NENA in preparation for NG911 and mutual aid. Each locality will be able to upload data to the Regional Server and Data Reviewer checks will be performed on the Server rather than on each individual localities' machine, thus enabling cost savings to each locality. Data Reviewer will notify the users of the data's quality and issue warnings, This project will be completed in Phases:

Phase 1: Collect, Review and Assemble Locality Data.

- Data from all localities will collected and go through and initial review process using Esri's Data Reviewer
- Draft Regional Data Model
- Make any corrections necessary to the localities' datasets found through Data Review Process

Phase 2: Extract Transfer and Load Development

- Create the ETL process to automate data flow into the regional model
- Create the ETL process to automate data flow into the local model
- Quality control and assurance testing of automation tools

Phase 3: Geoprocessing Tool Development

- Develop Python Intake and Output Process
- Develop Reporting Tools

- Develop Notification Tools

Phase 4: Regional Server

- Configure server environment
- Configure ArcGIS Server
- Configure database
- Develop Exchange Portal
- Solution Deployment

The project, when completed will provide the region with the ability to exchange data using a Regional Server that will be hosted in the secure Amazon Web Services Cloud environment. Esri licensing purchased for this project will include Enterprise ArcGIS Standard Server and the Data Reviewer Extension for Server. Hosting services will be provisioned from AWS.

Click here to enter text

Identify the longevity or sustainability of the project.

As the guidelines allow, this grant includes 5 years of maintenance in the budget submitted within this application. The participating localities will continue working together and resolve to continue this program beyond the 5 year initial term. Should advances in technology change the Region's needs in the future, the Regional partnership will plan for continuing their partnership in the best format and commit to funding the longevity of the project collectively.

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

The first goal fulfilled by this project is the achieving the level of emergency dispatch services to the public: "When achieved, this goal will provide consistent 911 Emergency dispatch services to anyone residing or passing through the Commonwealth, at any time of day, and during any event. Consistent service means that all 911 centers can receive, process and dispatch calls in a dependable and repeatable manner." The second goal the project achieves is to continuously meet the public's expectations, which "when achieved, this goal will allow Virginia to keep up with the rapid pace of technology innovation and therefore the constant changes in customers' expectations."
This project lays the groundwork for NG911 as well as regional consolidation, which is what the public expects – to reach 911 by any means necessary when in need of help.

SHARED SERVICES (if applicable)

The relationship of the project to the participating PSAPs:
King and Queen County will act as the host locality for this application, as well as the licensing and hosting requirements from Amazon Web Services and Esri. Each County has signed an MOU pledging their participation in the project and this application.

Intended collaborative efforts:

The MidPenRRCL partners will meet on a continuous basis to ensure that all localities are part of the process as the project is planned, implemented, and maintained. The MidPenRRCL members are also open to sharing data with other localities that are not involved at this time, and are open to including more localities in the future.

This project will also work in full cooperation with VGIN to ensure that they are meeting the standards that Virginia sets, and are able to share their project lessons with each other to continue increasing the benefits of shared services projects to the Commonwealth.

Resource sharing:

King and Queen will host the Resources through Amazon Web Services and every locality participating will have equal access and ability within the regional dataset. The tools created will reside in the server environment, and not within one locality, giving each access to same technology and software.

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

This project will enable the partners of the MidPenRRCL initiative to improve operational efficiency and data sharing. It will also further the region's early planning processes for NG911 and consolidation.

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

The MidPenRRCL Work Plan is included below and finely details the procedures and goals of the project.

Task Name	Start	Finish	Predecessors
Initiation	**Wed 9/30/15**	**Wed 9/30/15**	
MidPenRRCL	**Fri 7/1/16**	**Mon 11/27/17**	
Design and Planning	**Fri 7/1/16**	**Fri 7/1/16**	
Contracting & Notice to proceed	Mon 7/4/16	Mon 7/4/16	
Project Kick-Off Meeting	Tue 7/5/16	Tue 7/5/16	4
Acquisition	**Wed 7/6/16**	**Mon 4/17/17**	
Data Tasks	**Wed 7/6/16**	**Mon 2/13/17**	**5**
Develop regional data model	Wed 7/6/16	Tue 7/26/16	4
Data Reviewer checks	**Wed 7/27/16**	**Tue 8/30/16**	**8**
Essex	Wed 7/27/16	Tue 8/2/16	8
Gloucester	Wed 8/3/16	Tue 8/9/16	10
King and Queen	Wed 8/10/16	Tue 8/16/16	11
Mathews	Wed 8/17/16	Tue 8/23/16	12
Middlesex	Wed 8/24/16	Tue 8/30/16	13
Initial corrections to GIS Data	**Wed 8/31/16**	**Mon 9/26/16**	**9**
Essex	Wed 8/31/16	Mon 9/5/16	9
Gloucester	Mon 9/5/16	Fri 9/9/16	16
King and Queen	Fri 9/9/16	Thu 9/15/16	17
Mathews	Thu 9/15/16	Tue 9/20/16	18
Middlesex	Wed 9/21/16	Mon 9/26/16	19
ETL process to Regional model	**Mon 9/26/16**	**Mon 10/31/16**	**15**
Essex	Mon 9/26/16	Mon 10/3/16	15
Gloucester	Mon 10/3/16	Mon 10/10/16	22
King and Queen	Mon 10/10/16	Mon 10/17/16	23
Mathews	Mon 10/17/16	Mon 10/24/16	24
Middlesex	Mon 10/24/16	Mon 10/31/16	25
ETL process to locality model	**Mon 10/31/16**	**Mon 12/5/16**	**21**
Essex	Mon 10/31/16	Mon 11/7/16	21
Gloucester	Mon 11/7/16	Mon 11/14/16	28
King and Queen	Mon 11/14/16	Mon 11/21/16	29
Mathews	Mon 11/21/16	Mon 11/28/16	30
Middlesex	Mon 11/28/16	Mon 12/5/16	31
Testing of Tools	**Mon 12/5/16**	**Mon 2/13/17**	**27**
Essex	Mon 12/5/16	Mon 12/19/16	9
Gloucester	Mon 12/19/16	Mon 1/2/17	34
King and Queen	Mon 1/2/17	Mon 1/16/17	35
Mathews	Mon 1/16/17	Mon 1/30/17	36

Middlesex	Mon 1/30/17	Mon 2/13/17	37
Geoprocessing	**Mon 2/13/17**	**Mon 4/17/17**	**7**
Python intake/output process	**Mon 2/13/17**	**Mon 3/20/17**	**7**
Essex	Mon 2/13/17	Mon 2/20/17	7
Gloucester	Mon 2/20/17	Mon 2/27/17	41
King and Queen	Mon 2/27/17	Mon 3/6/17	42
Mathews	Mon 3/6/17	Mon 3/13/17	43
Middlesex	Mon 3/13/17	Mon 3/20/17	44
Reporting tools	Mon 3/20/17	Mon 4/3/17	40
Notifications tools	Mon 4/3/17	Mon 4/17/17	46
Implementation	**Tue 7/5/16**	**Mon 5/22/17**	
Server	**Tue 7/5/16**	**Mon 2/27/17**	**4**
Configure server environment	Tue 7/5/16	Mon 7/11/16	4
Configure ArcGIS Server	Tue 7/12/16	Mon 7/25/16	50
Configure SDE Database	Mon 2/13/17	Mon 2/27/17	7,51
MidPenRRCL Exchange Portal	**Fri 3/3/17**	**Fri 5/19/17**	**52**
Session 1	**Mon 3/13/17**	**Mon 3/27/17**	**56**
Session 2	**Wed 3/15/17**	**Wed 3/29/17**	**62**
Session 3	**Wed 3/29/17**	**Wed 4/12/17**	**66**
Session 4	**Wed 4/12/17**	**Wed 4/26/17**	**70**

While the work plan above details the activities that will be completed to successfully achieve, our Goals are set through our Milestone Phase Achievements:

Phase 1: Collect, Review and Assemble Locality Data.

- Data from all localities will collected and go through and initial review process using Esri's Data Reviewer
- Draft Regional Data Model
- Make any corrections necessary to the localities' datasets found through Data Review Process

Phase 2: Extract Transfer and Load Development

- Create the ETL process to automate data flow into the regional model
- Create the ETL process to automate data flow into the local model
- Quality control and assurance testing of automation tools

Phase 3: Geoprocessing Tool Development

- Develop Python Intake and Output Process
- Develop Reporting Tools
- Develop Notification Tools

Phase 4: Regional Server and Deployment

- Configure server environment
- Configure ArcGIS Server
- Configure database
- Develop Exchange Portal
- Solution Deployment

Our team will follow the work plan outlined and mark milestones by phases throughout completion. The Partnership intends to work with a vendor to ensure to complete this project.

PROJECT TIMELINE FOR
SHARED SERVICES & INDIVIDUAL PSAP APPLICATIONS:

Task Name	Start	Finish
Initiation	**Wed 9/30/15**	**Wed 9/30/15**
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Data Tasks	**Wed 7/6/16**	**Mon 2/13/17**
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Data Reviewer checks	**Wed 7/27/16**	**Tue 8/30/16**
Initial corrections to GIS Data	**Wed 8/31/16**	**Mon 9/26/16**
ETL process to Regional model	**Mon 9/26/16**	**Mon 10/31/16**
ETL process to locality model	**Mon 10/31/16**	**Mon 12/5/16**
Testing of Tools	**Mon 12/5/16**	**Mon 2/13/17**
Geoprocessing	**Mon 2/13/17**	**Mon 4/17/17**
Implementation	**Tue 7/5/16**	**Mon 5/22/17**
Server	**Tue 7/5/16**	**Mon 2/27/17**
MidPenRRCL Exchange Portal	**Fri 3/3/17**	**Fri 5/19/17**
Session 1	**Mon 3/13/17**	**Mon 3/27/17**
Session 2	**Wed 3/15/17**	**Wed 3/29/17**
Session 3	**Wed 3/29/17**	**Wed 4/12/17**
Session 4	**Wed 4/12/17**	**Wed 4/26/17**
Completion	**Fri 6/30/17**	**Fri 6/30/17**

BUDGET AND BUDGET NARRATIVE

Task	Task Total
Project Coordination and Management	*Included*
Data Design, Quality and ETL Processes	
Develop Regional Data Model	*$17,263*
Data Reviewer Checks For All Localities	*$7,031*
Initial Corrections to GIS Data	*$11,247*
Extract Transfer Load Process to Regional Model	*$42,494*
Extract Transfer Load Process to Local Model	*$21,903*
Quality Control and Assurance of Tools	*$24,903*
Geoprocessing Tools	
Python Intake and Output Process	*$56,744*
Reporting Tools	*$17,463*
Notification Tools	*$17,463*
Regional Server	
Configure Server Environment	*$11,903*
Configure ArcGIS Server	*$10,751*
Configure Database	*$7,291*
Exchange Portal	
Requirements Definition	*$6,911*
Design Mock Up and Wireframe	*$3,616*
Development Testing Plan	*$3,536*
Development	*$30,983*
Deployment	*$23,023*
Hardware, Software, and Maintenance Requirements	
Esri Enterprise Standard Server	$18,000
Esri Enterprise Standard Server Data Reviewer Extension	$9,000
Esri Enterprise Standard Server Maintenance 5 Years	$25,750
Esri Enterprise Standard Server Data Reviewer Extension Maintenace 5 Years	$12,875
AWS Reserved Instances Fee (Windows on m4.xlarge)	$2,775.00
AWS Reserved DB Instances Fee (PostgreSQL on db.m3.xlarge)	$2,105.00

AWS Monthly Services				
	DEB			
	Volumes	$8.00	12 Months	$96.00
	Elastic Load Balancer	$18.30	12 Months	$219.60
	Elastic Load Balancer Data Processing	$0.08	12 Months	$0.96
	S3 AMI Storage	$15.00	12 Months	$180.00
	RDS Storage	$4.03	12 Months	$48.36
	RDS Backups	$95.00	12 Months	$1,140.00
Complete AWS Solution Maintenance 5 Years				$28,448.60
Website Portal and Database Maintenance 5 Years				$30,000.00
			Project Total	**$445,160**

EVALUATION

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

The success of the project will be measured by the milestones we reach upon completion of Each Phase:

Phase 1: Collect, Review and Assemble Locality Data
Phase 2: Extract Transfer and Load Development
Phase 3: Geoprocessing Tool Development
Phase 4: Regional Server

Localities will all report their individual progress with King and Queen County on a regular basis. Weekly meetings will be conducted throughout the project with the stakeholders from each partner to ensure that successful completion of the project and the ultimate benefits provided by this opportunity are achieved.

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

How would a consolidation take place and provide improved service: Not Applicable

How should it be organized and staffed: Not Applicable
What services should it perform: Not Applicable

How should policies be made and changed: Not Applicable
How should it be funded: Not Applicable
What communication changes or improvements should be made in order to better support operations: Not Applicable

MEMORANDUM OF UNDERSTANDING

FY17 Grant Application for the Proposed Middle Peninsula Data Sharing Project

The Counties of King and Queen, Gloucester, Middlesex, Mathews, and Essex are interested in pursuing a shared services grant through the FY17 VA PSAP Grant Program for the provisioning of regional GIS data to support mutual aid routing and data sharing of other essential E911 and future NG911 feature data. The desired solution would follow the guidelines of previously successful projects around the state while in compliance with VITA / VGIN standards for sharing data across localities. This MOU serves as the official intent of each of the four jurisdictions to participate jointly in submitting and supporting this shared services request.

The Hosting Locality for this grant shall be King & Queen County and thus will be making the official funding request. King and Queen will be the fiscal agent for receipt and disbursement of grant funds, and will provide overall coordination to ensure that each participant fulfills the grant requirements.

King and Queen County, VA:

Printed Name	Title	Signature	Date
Gregory Hunter	911Coordinator		9/26/15

Gloucester County, VA:

Printed Name	Title	Signature	Date

Middlesex County, VA:

Printed Name	Title	Signature	Date

Essex County, VA:

Printed Name	Title	Signature	Date

Mathews County, VA:

Printed Name	Title	Signature	Date

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King and Queen County, VA:

Printed Name	Title	Signature	Date

Gloucester County, VA:

Printed Name	Title	Signature	Date
Allen S. Varner	Director of IT		9/24/15

Middlesex County, VA:

Printed Name	Title	Signature	Date

Essex County, VA:

Printed Name	Title	Signature	Date

Mathews County, VA:

Printed Name	Title	Signature	Date

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King and Queen County, VA:

Printed Name	Title	Signature	Date

Gloucester County, VA:

Printed Name	Title	Signature	Date

Middlesex County, VA:

Printed Name	Title	Signature	Date
MATT L. WALKER	COUNTY ADMINISTRATOR		9-30-15

Essex County, VA:

Printed Name	Title	Signature	Date

Mathews County, VA:

Printed Name	Title	Signature	Date

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King and Queen County, VA:

Printed Name	Title	Signature	Date

Gloucester County, VA:

Printed Name	Title	Signature	Date

Middlesex County, VA:

Printed Name	Title	Signature	Date

Essex County, VA:

Printed Name	Title	Signature	Date
A. Reece Peck	County Administrator	A. Reece Peck	9/25/15

Mathews County, VA:

Printed Name	Title	Signature	Date

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Printed Name	Title	Signature	Date

Gloucester County, VA:

Printed Name	Title	Signature	Date

Middlesex County, VA:

Printed Name	Title	Signature	Date

Essex County, VA:

Printed Name	Title	Signature	Date

Mathews County, VA:

Printed Name	Title	Signature	Date
Melinda Conner	County Administrator	Melinda Conner	9/25/15