

**DATE:** 12/13/17  
**TO:** 911 Emergency Response Advisory Committee  
**FROM:** Rishma Khimji, Asst. Director, City of Reno Dept. of Information Technology  
[khimjir@reno.gov](mailto:khimjir@reno.gov), 775-334-2026  
**THROUGH:**  
**SUBJECT:** Request for reimbursement and technical resources supporting E911 GIS services for fiscal year 2018/2019 in an amount not to exceed \$168,999.

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### **SUMMARY**

The City of Reno is requesting reimbursement for salary and benefits of one E911 GIS Technician and one-half salary and benefits of a GIS Analyst position to support E911 GIS services relating to 911 Emergency Communications.

The City of Reno GIS Technician and GIS Analyst staff support E911 services in critical ways. The GIS Technician performs daily maintenance of E911 GIS data, weekly distribution of E911 GIS data to the Tiburon Computer-Aided Dispatch (CAD) System, and production of and monthly distribution of the map used on mobile devices in public safety vehicles. The GIS Analyst performs advanced quality assurance and quality control (QA/QC) audits of E911 GIS data and processes, analyzes complex errors in the CAD system to identify problems in

E911 GIS data or processes, and develops solutions to ensure accuracy and integrity of E911 GIS data and processes.

The requested funded positions perform the following duties:

1. Create and maintain the features (points, lines, polygons) and attributes of E911 GIS data, including:

- a. Street centerlines
- b. Address points
- c. Commonplaces
- d. Fire reporting districts and run cards
- e. Police reporting districts and beats
- f. Regions
- g. ESN zones
- h. Zip codes

2. Communicate and coordinate with staff in several departments in the City of Reno, City of Sparks, and Washoe County to facilitate GIS data maintenance.

- a. Obtain source maps and other reference documents for drawing and attributing new features (e.g., new street centerlines and addresses in a new subdivision).
- b. Access most up-to- date aerial photos and other data.

- c. Incorporate changes in addresses, address ranges, city annexations and zip codes.
  - d. Coordinate with other agencies’ GIS staff about editing features that span multiple jurisdictional boundaries.
  - e. For changes to boundaries of fire reporting districts and run cards or to boundaries of police reporting districts and beats:
    - i. Meet with appropriate public safety staff about redefining boundaries.
    - ii. Document requested changes and distribute for review.
    - iii. Analyze requested changes to identify any potential conflicts in the CAD System.
    - iv. When boundary changes have been finalized and approved by the appropriate chain of command, update appropriate E911 GIS data and notify appropriate staff.
3. Resolve problems with mapping unique locations (such as “Downtown” and “north side of Peavine” by creating “false features” to force the CAD system to verify these type of locations.
4. Perform E911 GIS data-to- CAD distribution.
- a. Run weekly process to convert GIS data to the CAD System servers.
  - b. Review errors reported during the distribution of data; correct as needed; and if needed notify appropriate staff/other agencies and submit problem to TriTech for resolution.
5. Create and distribute mobile map for use on mobile devices in public safety vehicles.
- a. Use Maverick Map to create map, incorporating requests by users for specific data layers, symbology, and layers.
  - b. Run monthly process to distribute the map and data to the appropriate servers.
  - c. Review errors reported during the distribution of the map and data; correct as needed; and if needed notify appropriate staff/other agencies and submit problem to TriTech for resolution.
6. Perform error research and correction
- a. Research and troubleshoot errors in address numbers, street names, commonplace names, and jurisdictional responses reported in the Tiburon CAD system by dispatch staff.
    - i. Verify location and attributes using a variety of techniques, including calling businesses, viewing Google StreetView, and conducting drive-by field verifications.
    - ii. Correct errors as needed.
    - iii. Notify appropriate staff of corrections.

7. Perform QA/QC of data and processes.

- a. Implement advanced GIS methods and processes to enforce accuracy during creation of and editing of E911 GIS data (e.g., attribute assistance, domains, coded values).
- b. Review data using advanced GIS tools and methods to identify errors requiring correction.
  - i. Use point-to-line diagramming process to identify inconsistencies between address points and ranges of associated street centerlines.
  - ii. Use analysis tools to summarize frequency of attributes to identify outlier values.
  - iii. Use analysis tools to identify problems with parity of centerline ranges.

**NRS APPLICABLE:**

NRS 244A.7645 Provides approval of costs associated with maintenance, upgrade and replacement of equipment necessary for the operation of the enhanced telephone system.

The following is a complete definition of the NRS 244A.7645, with applicable sections highlighted:

**NRS 244A.7645 Establishment of advisory committee to develop plan to enhance or improve telephone system; creation of special revenue fund; use of money in fund.**

1. If a surcharge is imposed pursuant to [NRS 244A.7643](#) in a county whose population is 100,000 or more but less than 700,000, the board of county commissioners of that county shall establish by ordinance an advisory committee to develop a plan to enhance the telephone system for reporting an emergency in that county and to oversee any money allocated for that purpose. The advisory committee must consist of not less than five members who:

- (a) Are residents of the county;
- (b) Possess knowledge concerning telephone systems for reporting emergencies; and
- (c) Are not elected public officers.

2. If a surcharge is imposed pursuant to [NRS 244A.7643](#) in a county whose population is less than 100,000, the board of county commissioners of that county shall establish by ordinance an advisory committee to develop a plan to enhance or improve the telephone system for reporting an emergency in that county and to oversee any money allocated for that purpose. The advisory committee must:

- (a) Consist of not less than five members who:
    - (1) Are residents of the county;
    - (2) Possess knowledge concerning telephone systems for reporting emergencies;
- and
- (3) Are not elected public officers; and

(b) Include a representative of an incumbent local exchange carrier which provides service to persons in that county. As used in this paragraph, "incumbent local exchange carrier" has the meaning ascribed to it in 47 U.S.C. § 251(h)(1), as that section existed on

October 1, 1999, and includes a local exchange carrier that is treated as an incumbent local exchange carrier pursuant to that section.

3. If a surcharge is imposed in a county pursuant to [NRS 244A.7643](#), the board of county commissioners of that county shall create a special revenue fund of the county for the deposit of the money collected pursuant to [NRS 244A.7643](#). The money in the fund must be used only:

(a) In a county whose population is 45,000 or more but less than 700,000, to enhance the telephone system for reporting an emergency, including only:

(1) Paying recurring and nonrecurring charges for telecommunication services necessary for the operation of the enhanced telephone system;

(2) Paying costs for personnel and training associated with the routine maintenance and updating of the database for the system;

(3) Purchasing, leasing or renting the equipment and software necessary to operate the enhanced telephone system, including, without limitation, equipment and software that identify the number or location from which a call is made; and

(4) Paying costs associated with any maintenance, upgrade and replacement of equipment and software necessary for the operation of the enhanced telephone system.

(b) In a county whose population is less than 45,000, to improve the telephone system for reporting an emergency in the county.

4. If the balance in the fund created in a county whose population is 45,000 or more but less than 700,000 pursuant to subsection 3 which has not been committed for expenditure exceeds \$1,000,000 at the end of any fiscal year, the board of county commissioners shall reduce the amount of the surcharge imposed during the next fiscal year by the amount necessary to ensure that the unencumbered balance in the fund at the end of the next fiscal year does not exceed \$1,000,000.

5. If the balance in the fund created in a county whose population is less than 45,000 pursuant to subsection 3 which has not been committed for expenditure exceeds \$500,000 at the end of any fiscal year, the board of county commissioners shall reduce the amount of the surcharge imposed during the next fiscal year by the amount necessary to ensure that the unencumbered balance in the fund at the end of the next fiscal year does not exceed \$500,000.

(Added to NRS by [1995, 1056](#); A [1999, 1686](#); [2001, 621, 2125](#); [2007, 561](#); [2009, 641](#); [2011, 1124](#))

### **STAKEHOLDER REVIEW(s)**

Stakeholders are the primary PSAP agencies including City of Reno Emergency Communications, City of Sparks Emergency Communications and Washoe County Emergency Communications.

### **PREVIOUS ACTION**

In fiscal year 2010/2011, 2011/1012, 2012/2013, 2013/2014, 2014/2015, 2015/2016, 2016/2017 and fiscal year 2017/2018, the E911 Board authorized reimbursement to the City of Reno for E-911 GIS services performed by the E911 GIS Technician and one-half salary and benefits for one GIS Analyst. The total authorized amount for fiscal years as follows:

2011/2012 - \$140,085      2012/2013 - \$139,410      2013/2014 - \$139,410  
2014/2015 - \$147,163      2015/2016 - \$147,163      2016/2017 - \$164,021  
2017/2018 - \$164,201

**FISCAL IMPACT**

Projected FY2016/2017 Salaries and Benefits for a E-911 GIS Technician and ½ of GIS Analyst are detailed below:

Position	Salary	Benefit
E911 GIS Technician	\$69,098	\$33,685
½ GIS Analyst	\$45,666	\$20,550

Total E911 Board reimbursement is \$168,999.

**RECOMMENDATION**

It is recommended that the E911 Emergency Response Advisory Committee approve the request for reimbursement and technical resources supporting E911 GIS services for fiscal year 2018/2019 in an amount not to exceed \$168,999.

**POSSIBLE MOTION**

Motion to approve funding for reimbursement and technical resources supporting E911 GIS services for fiscal year 2018/2019 in an amount not to exceed \$168,999.

**DATE:** January 9, 2018  
**TO:** 911 Emergency Response Advisory Committee  
**FROM:** Douglas Campbell, Sparks Police Department, Senior Systems Analyst,  
775-353-2241 ext. 5545, dcampbell@cityofsparks.us  
**THROUGH:** Brian Allen, Chief of Police  
**SUBJECT:** REQUEST FOR FUNDING FOR SALARY AND BENEFITS SUPPORTING  
E911 CITY OF SPARKS AND REGIONAL GIS SERVICES [For possible  
action] – A review, discussion and possible action to approve, deny or otherwise  
modify a request for funding for the costs associated with one GIS Public Safety  
Specialist at the City of Sparks Police Department for a cost not to exceed  
\$86,283.

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### **SUMMARY**

Request to approve 911 funding for GIS Public Safety Specialist within the Sparks Police Department to support E911 GIS Services relating to 911 Emergency Communications. This position has been authorized since July 2015 to provide GIS services in support of the Tiburon project. as so much of the system functioning is based on having updated and accurate GIS data.

### **NRS APPLICABLE:**

NRS 244A.7645 provides approval of costs associated with maintenance, upgrade and replacement of equipment necessary for the operation of the enhanced telephone system.

### **STAKEHOLDER REVIEW(s)**

Stakeholders are the Sparks Police Department Public Safety Answering Point.

### **PREVIOUS ACTION**

This board approved the initial funding for the GIS position May 7, 2015, then follow-up funding was approved on March 17, 2016 and January 31, 2017.

### **BACKGROUND**

The Sparks Police Department has signed a contract with Tiburon Inc. to provide it with the same dispatch system as is used by both the City of Reno and Washoe County. This move has required us to build up a set of GIS data that is required by Tiburon CAD not only for ourselves but as part of a regional effort with Washoe County and the City of Reno. This information is primarily used for the accurate dispatching of Police, Fire and EMS units by dispatch. The complexity involved in creating this data requires significant training and skill sets that are beyond the current staff of the Police Department and therefore we need a full-time GIS Public Safety Specialist. Their primary tasks would be:

- Support, along with the City of Reno and Washoe County GIS staffs, the regional E911 Dispatch system. This includes continual updates of the Street Centerlines, Regional Address Points, Common Places, and the other layers of data that are used by all Dispatchers and Police and Fire mobiles.
- Support Sparks Dispatch by providing level one support of GIS issues along with developing and maintaining GIS-based tools for both Dispatch and mobile computers.
- Support Sparks Police Department by supporting interfaces to other related systems and producing maps as needed.
- Support Sparks Fire Department by supporting fire risk analysis efforts along with updating Fire map books, Hydrant information and producing maps as needed.

### **FISCAL IMPACT**

The enhanced 911 Fund is a special revenue fund which receives revenue pursuant to NRS 244A.7643 in the form of telephone surcharges collected to support the emergency reporting system. Budget authority exists within the E911 Fund to the funding of a GIS Public Safety Specialist for a cost not to exceed \$86,283.

### **RECOMMENDATION**

It is recommended that the E911 Emergency Response Advisory Committee approve the request by the Sparks Police Department for funding for the costs associated with a GIS Public Safety Specialist for a cost not to exceed \$86,283.

### **POSSIBLE MOTION**

Move to approve the recommendation to fund the Sparks Police Department in the amount not to exceed \$86,283 for the funding of a GIS Public Safety Specialist.