

# Fund 40090: E-911

## Mission

To provide and maintain highly professional and responsive 9-1-1 emergency and non-emergency communication services to the citizens of Fairfax County, City of Fairfax, Town of Herndon, Town of Vienna, Fort Belvoir, those that work in and visit Fairfax County and to the Fairfax County Police, Fire and Rescue, and Sheriff departments in a collaborative and supportive work environment that utilizes highly trained and qualified staff. To deliver emergency and non-emergency communications utilizing state-of-the-art technology through a variety of systems integrated to provide 9-1-1 telephone, computer-aided dispatch, multi-channel trunked radio and wireless data networks in a cost-effective, sustainable, reliable and technologically innovative manner; and to utilize industry accepted best policies, practices and standards in an efficient and cost-effective manner.

## Focus

The activities and programs in Fund 40090, E-911, provide support to the operations of the Department of Public Safety Communications (DPSC) and various other public safety information technology projects. DPSC is designated as the primary 9-1-1 Public Safety Answering Point (PSAP) for all 9-1-1 calls originating within Fairfax County as well as the city and towns therein. The agency also provides Emergency Medical Dispatch (EMD)/Pre-Arrival Instruction (PAI), which is an emergency medical service (EMS) intervention program where DPSC call takers provide emergency medical instructions over the telephone until fire-rescue-EMS units arrive on the scene of an emergency incident. Due to the vital, mission-critical, and time-sensitive service provided by DPSC personnel, they are, for many reasons, recognized as the "First of the First Responders." Additionally, DPSC receives all commercial and residential security, fire and medical alarm requests for service calls from private alarm service providers. Some examples of non-emergency services provided include responding to police non-emergency calls received; reporting of towed vehicles and private vehicle impounds; calls for Animal Control Unit services, a subsidiary of the Fairfax County Police Department (FCPD); and responding to non-emergency calls for service for fire and rescue assistance and information. DPSC also provides National Crime Information Center (NCIC) and Virginia Criminal Information Network (VCIN) teletype operations related to property (e.g., stolen guns and vehicles), people (e.g., protective orders and missing persons), events (e.g., fatal accidents and security matters), and queries (e.g., wanted persons/warrant confirmation). These operations ensure criminal and investigative information is shared with the appropriate authorities within the County and on a regional, state, and federal level. Additionally, DPSC serves as the official custodian of approximately 8,700 hours of audio recordings of all telephone calls and radio traffic pertaining to public safety as required by law and approximately 88,000 hours of Computer-Aided Dispatch (CAD) records. DPSC receives and responds to court subpoenas and Freedom of Information Act (FOIA) requests for audio transmissions and data records. Audio and data recordings are also maintained per national standards for investigative, quality assurance and training purposes. The Department of Information Technology (DIT) supports the telephony, radio, CAD, and audio-visual infrastructure and maintenance within Fund 40090.

### Information Technology (IT) Projects

In FY 2021, IT Projects funding totals \$8.51 million, no change from the FY 2020 Adopted Budget Plan level. Funding is provided for four specific projects in FY 2021. For detailed descriptions of each project, please see the Information Technology Project Details which follow the FY 2021 Funding Adjustments.

### Revenues

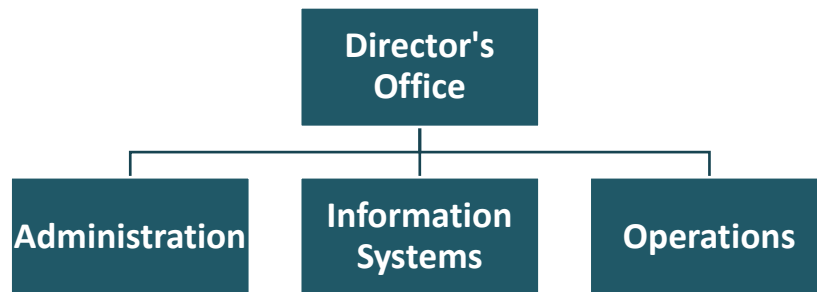
There are four main revenue categories in the E-911 Fund: Communications Sales and Use Tax (CSUT), State Wireless E-911 Reimbursement, Interest Income and Other Revenue. All communications taxes are remitted to the state for distribution to localities based on the locality's share. Fairfax County's share is currently 18.89 percent.

The CSUT revenue represents the statewide tax of 5 percent on telephone services to include landlines, post-paid wireless, internet, long distance calling and cable/satellite television and radio services. The Cable Franchise Fee portion of the CSUT is directed to Fund 40030, Cable Communications. The projected FY 2021 CSUT revenue total for Fund 40090 is \$47.7 million.

The Wireless E-911 Revenue category is derived from a monthly \$0.75 surcharge on all wireless/cellular telephones and is distributed to localities as part of the Wireless E-911 State Reimbursement. Disbursements are based on a formula that is fixed for five years and will be recalculated in 2023 (potentially impacting FY 2024 revenues).

Other Revenue reflects annual revenue from the City of Fairfax for dispatch services, FOIA fees, and reimbursement from Nextel to cover County expenses related to the Nextel 800 MHz re-banding initiative.

**Organizational Chart**



**Budget and Staff Resources**

Category	FY 2019 Actual	FY 2020 Adopted	FY 2020 Revised	FY 2021 Advertised
<b>FUNDING</b>				
<b>Expenditures:</b>				
Personnel Services	\$25,284,030	\$29,944,531	\$29,944,531	\$32,021,241
Operating Expenses	12,753,585	14,133,728	18,111,302	14,133,728
Capital Equipment	66,486	0	20,744	0
IT Projects	8,119,166	8,507,552	16,696,669	8,507,552
<b>Total Expenditures</b>	<b>\$46,223,267</b>	<b>\$52,585,811</b>	<b>\$64,773,246</b>	<b>\$54,662,521</b>
<b>AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)</b>				
Regular	205 / 205	215 / 215	216 / 216	222 / 222

**FY 2021 Funding Adjustments**

The following funding adjustments from the FY 2020 Adopted Budget Plan are necessary to support the FY 2021 program:

**Employee Compensation** **\$1,382,809**  
 An increase of \$1,382,809 in Personnel Services includes \$603,799 for a 2.06 percent market rate adjustment (MRA) for all employees and \$54,256 for performance-based and longevity increases for non-uniformed merit employees, both effective July 2020, as well as \$724,754 for FY 2021 merit and longevity increases (including the full-year impact of FY 2020 increases) for uniformed employees awarded on the employees' anniversary dates.

**Increased Personnel Requirements** **\$588,666**

An increase of \$588,666 is associated with 5/5.0 FTE new positions to increase 9-1-1 call capacity as a result of changing the dispatch model to single dispatch with the opening of the new South County Police Station and the greater demand on dispatching as a result of the Next Generation 9-1-1 telephony system.

**Diversion First** **\$105,235**

An increase of \$105,235 and 1/1.0 FTE new position is included to support the County's Diversion First initiative. Diversion First is a multiagency collaboration that aims to reduce the number of people with mental illness in the County jail by diverting low-risk offenders experiencing a mental health crisis to treatment rather than bring them to jail. This position will perform data analytic services to better connect individuals to behavioral health resources, as well as conduct outreach as part of the Community Response Team to provide training and education for the Diversion First program.

**IT Projects** **\$0**

Funding of \$8,507,552, the same level as the FY 2020 Adopted Budget Plan, has been included for IT Projects. Of this total, \$3,531,352 supports the replacement of the existing fleet of mobile and portable subscriber radios in public safety agencies, \$1,616,200 is included to support mobile computer terminal (MCT) replacement, a program designed to replace one-fifth of the public safety fleet each year, \$2,180,000 is included to continue a multi-phase effort to transition core 9-1-1 services into a more robust and technologically up-to-date operating environment, and \$1,180,000 is included to continue an ongoing replacement cycle for all the equipment that supports the computer-aided dispatch (CAD) system.

## Information Technology Project Details

### 2G70-056-000, Public Safety Communications Wireless Radio

**IT Priorities:**

- Improved Service and Efficiency
- Enhanced County Security

FY 2019 Expenditures	FY 2020 Revised Budget Plan	FY 2021 Advertised Budget
\$3,525,417	\$3,709,685	\$3,531,352

**Description:** This project was established in FY 1995 (along with Project 2G70-059-000) to replace and upgrade the County's critical Public Safety Communications Network (PSCN) and its various component systems. The network's component systems are vital for ensuring immediate and systematic response to emergencies, and replacement and enhancement is necessary to maintain performance, availability, reliability, and capacity for growth due to increases in County population and demand for public safety services. The PSCN supports emergency communications for the DPSC, Police, Fire and Rescue, and Sheriff's departments. This includes public safety call taking (E-911, Cellular E-911, non-emergency calls for service), dispatching, and all affiliated communications support for public safety agencies.

This specific project supports the replacement of the existing fleet of mobile and portable subscriber radios in public safety agencies. The FCC mandated public safety radios had to meet the 700 MHz narrowband requirement by the end of December 2016 (FY 2017). The purchase of the mobile and portable radio equipment for Fairfax County met this 700 MHz narrow banding requirement and preserved regional interoperability.

FY 2021 funding of \$3.5 million reflects the eighth of eight payments on a lease purchase to replace the existing fleet of mobile and portable subscriber radios in public safety agencies. Replacement radios were purchased in mid FY 2014 and a funding schedule was developed using existing project balance in FY 2014 as the initial payment, and then splitting the remaining cost of \$24.7 million over seven years, starting in FY 2015. It is anticipated that funding will be required in FY 2022 for the next generation of mobile/radio technology in a rapidly changing environment.

**Return on Investment (ROI):** The return on investment for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replaced and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support. Upgraded technology preserves the investments in technology that have been made and allows increased functionality, performance, and reliability to be achieved to facilitate responses to, and management of, emergencies. It mitigates the need for extraordinarily large additions of personnel that would be necessary to provide the same level of service and results without this technology. The increased access to important information, improvements to maintenance and reliability, increased capacity for growth, and enhanced functionality for users now and in the future builds upon past investments, responds to critical existing requirements, and sets the stage for the next generation of public safety communications technology.

**2G70-059-000, Mobile Computer Terminal Replacement**

**IT Priorities:**

- Improved Service and Efficiency
- Enhanced County Security

<b>FY 2019 Expenditures</b>	<b>FY 2020 Revised Budget Plan</b>	<b>FY 2021 Advertised Budget</b>
<b>\$1,600,426</b>	<b>\$2,821,043</b>	<b>\$1,616,200</b>

**Description:** This project was established in FY 1995 (along with Project 2G70-056-000) to replace and upgrade the County's critical Public Safety Communications Network (PSCN) and its various component systems, which are vital for ensuring immediate and systematic response to emergencies. Replacement and enhancement are necessary to maintain performance, availability, reliability, and capacity for growth due to increases in County population and demand for public safety services. This includes public safety call taking (E-911, Cellular E-911, non-emergency calls for service), dispatching, and all affiliated communications support for public safety agencies.

Funding of \$1,616,200 supports Mobile Computer Terminal (MCT) replacement, a long-standing program designed to replace one-fifth of the public safety fleet each year to keep technology up to date. This equipment supports field personnel by granting them access to the CAD system, Virginia Criminal Information Network, County Enterprise System, and a host of other remote databases required in their daily functions. This mandated functionality supports the DPSC, Police, Fire and Rescue, and the Sheriff's Office. Current equipment will not support existing public safety access to available remote systems due to a lack of connectivity ports and devices in the vehicle. If ports and additional power to connect devices to these units are not provided, a risk of non-compliance to regulation and an inability to access criminal information systems could occur. Docking stations that support connectivity of MCT units to the CAD and other systems are purchased on an as needed basis, older units are breaking on a regular basis due to age and are rapidly becoming obsolete. Funding will move towards accomplishing a complete replacement cycle with the updated technology needed to maintain a rapidly changing mobile fleet environment.

**Return on Investment (ROI):** The ROI for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replacement and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support. Upgraded technology preserves the investments in technology that have been made and allows increased functionality, performance, and reliability to be achieved to facilitate responses to, and management of, emergencies. It mitigates the need for extraordinarily large additions of personnel that would be necessary to provide the same level of service and results without this technology. The increased access to important information, improvements to maintenance and reliability, increased capacity for growth, and enhanced functionality for users now and in the future builds upon past investments, responds to critical existing requirements, and sets the stage for the next generation of public safety communications technology.

**3G70-078-000, E-911 Telephony Platform Replacement**

**IT Priorities:**

- Improved Service and Efficiency
- Enhanced County Security
- Maintaining a Current and Supportable Technology Infrastructure

FY 2019 Expenditures	FY 2020 Revised Budget Plan	FY 2021 Advertised Budget
<b>\$623,511</b>	<b>\$6,435,601</b>	<b>\$2,180,000</b>

**Description:** The Fairfax County Public Safety Answering Point (PSAP) 9-1-1 network is operating on an end-of-life technology platform under a contract services arrangement with Verizon that expired on January 1, 2017. Verizon is no longer continuing to dedicate its business resources (and by extension its subcontracted services and equipment with other vendors) on the existing technology. Fairfax County has begun a multi-phase effort to transition its core 9-1-1 services into a more robust and technologically up-to-date operating environment. Widespread adoption of rapidly advancing technologies like text, video, Voice over Internet Protocol (VoIP) and the saturation of high-speed broadband access has raised the expectations of 9-1-1 services for the citizens of Fairfax County. Improvements are needed to support new requirements and expectations. The upgrades will allow the County to migrate to NG9-1-1 as that technology matures. NG9-1-1 will provide the ability to accept multimedia data (e.g. text, video and photo) and improve interoperability, call routing, PSAP call overflow, and location accuracy. NG9-1-1 will strengthen system resiliency and reliability, as well as increases opportunities to potentially achieve fiscal and operational efficiency through cost-sharing arrangements.

An overview of 9-1-1 today with NG9-1-1 is shown below:

9-1-1 Today	Full NG9-1-1
Primarily voice calls via telephone handsets	Voice, text, or video information available from many different types of communication devices sent over IP networks
Most information transferred via voice	Advanced data sharing is automatically performed (e.g. telematics)
Callers to 9-1-1 routed through legacy selective routers, limited forwarding / backup ability	Enhanced backup capabilities provided as calls can be routed to different PSAP locations more dynamically (if required)
Routing is based on phone number / Master Street Address Guide (MSAG)	Ability to route "calls" more accurately (routing is based on GIS coordinates)

Funding of \$2.18 million is included in FY 2021 to continue this transition process. It is anticipated this level of funding will be required through at least FY 2022 and then depending on the available NG9-1-1 technology in the future, additional funds will likely be required.

**Return on Investment (ROI):** The ROI for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replaced and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support. Upgraded technology preserves the investments in technology that have been made and allow increased functionality, performance, and reliability to be achieved to facilitate responses to, and management of, emergencies. It mitigates the need for extraordinarily large additions of personnel that would be necessary to provide the same level of service and results without this technology. The increased access to important information, improvements to maintenance and reliability, increased capacity for growth, and enhanced functionality for users now and in the future builds upon past investments, responds to critical existing requirements, and sets the stage for the next generation of public safety communications technology.

**3G70-079-000, Public Safety CAD Hardware Refresh**

**IT Priorities:**

- Improved Service and Efficiency
- Enhanced County Security
- Maintaining a Current and Supportable Technology Infrastructure

FY 2019 Expenditures	FY 2020 Revised Budget Plan	FY 2021 Advertised Budget
\$1,284,150	\$3,394,465	\$1,180,000

**Description:** Funding of \$1,180,000 is included to maintain an ongoing five-year cycle to refresh and update the hardware/software environment that supports the CAD system. The CAD System supports all of Fairfax County Public Safety in their mission to keep Fairfax County and its citizens safe. The CAD System is the primary dispatch records system that is used 24/7/365 by DPSC call-takers to process all calls for service received on 9-1-1 and other emergency and non-emergency lines. With this system, they are able to efficiently process over 5,000 calls for service each day, and document each event with full details of the activities associated with the incident from the time the call is received to dispatch of the call and on through to unit arrival, clearing the call for service and then transfer of the information to the associated records management system where the responding unit(s) can retrieve data to complete an incident report.

Call information is downloaded to the CAD System, added comments are inserted and then the call for service is routed to the appropriate DPSC dispatcher(s) who then use the same CAD system to identify the closest appropriate field units for the event, and dispatch and track those units responding to the event and documenting services provided. Through the CAD System interfaces, users have instant access to records from a diverse collection of other systems like Virginia Criminal Information Network, National Crime Information Center, Geographic Information Systems (GIS), Virginia Hospital & Healthcare Association status tracking system, agency specific Record Management Systems, Sheriff's Information Management System, to name a few. The field units can also use the CADs in their vehicles to provide them directions to any location within and immediately surrounding the County.

**Return on Investment (ROI):** The ROI for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replaced and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support. Upgraded technology preserves the investments in technology that have been made and allow increased functionality, performance, and reliability to be achieved to facilitate responses to, and management of, emergencies. It mitigates the need for extraordinarily large additions of personnel that would be necessary to provide the same level of service and results without this technology. The increased access to important information, improvements to maintenance and reliability, increased capacity for growth, and enhanced functionality for users now and in the future builds upon past investments, responds to critical existing requirements, and sets the stage for the next generation of public safety communications technology.

**Changes to  
FY 2020  
Adopted  
Budget Plan**

The following funding adjustments reflect all approved changes in the FY 2020 Revised Budget Plan since passage of the FY 2020 Adopted Budget Plan. Included are all adjustments made as part of the FY 2019 Carryover Review, and all other approved changes through December 31, 2019.

**Carryover Adjustments** **\$12,187,435**

As part of the FY 2019 Carryover Review, the Board of Supervisors approved funding of \$12,187,435, including carryover of Information Technology (IT) projects and IT project encumbrances of \$11,100,944 and \$1,086,491 in encumbered carryover.

**Reclassification of Non-Merits Benefits Eligible Positions to Merit** **\$0**

As part of an ongoing Board-directed review of the County's use of limited-term staffing, 1/1.0 FTE new merit position is included due to the reclassification of a non-merit benefits-eligible position to merit status. This is part of a total of 235 positions that were identified in the FY 2019 Carryover Review across all County agencies as candidates for possible conversion based on the tasked performed by each position and the hours worked by incumbents. No additional funding has been included as the work hours of this position are expected to remain largely unchanged.

**Cost Centers** **Department of Public Safety Communications**

The Department of Public Safety Communications cost center table below reflects all positions in the department and all expenditures except for IT Projects funding. In FY 2021, IT Projects funding totals \$8,507,552.

Category	FY 2019 Actual	FY 2020 Adopted	FY 2020 Revised	FY 2021 Advertised
<b>EXPENDITURES</b>				
Total Expenditures	\$38,104,101	\$44,078,259	\$48,076,577	\$46,154,969
<b>AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)</b>				
Regular	205 / 205	215 / 215	216 / 216	222 / 222

**Position Detail**

The FY 2021 Advertised Budget Plan includes the following positions:

DEPARTMENT OF PUBLIC SAFETY COMMUNICATIONS - 222 Positions			
1	Director	1	Financial Specialist III
1	PSTOC General Manager	1	Financial Specialist II
2	Assistant Directors	1	Financial Specialist I
5	PSC Squad Supervisors	1	Info. Tech. Program Manager I
20	PSC Asst. Squad Supervisors	1	Info. Tech III
171	PSCs III [+5]	1	Human Resources Generalist III
1	PSC Records Analyst	1	Human Resources Generalist II
1	Programmer Analyst III	1	Geog. Info. Spatial Analyst III
2	Management Analysts IV	1	Geog. Info. Spatial Analyst II
1	Management Analyst III	1	Network/Telecomm Analyst III
2	Management Analysts II	3	Administrative Assistants IV
2	Management Analysts I [+1]		
+	Denotes New Position(s)		



## Performance Measurement Results

In FY 2019, with a 91 percent rate, DPSC met the National Emergency Number Association (NENA) standard of 90 percent of 9-1-1 calls answered within 10 seconds. With a 95 percent rate, DPSC met the NENA standard of 95 percent of 9-1-1 calls answered within 20 seconds. While the agency did see some improvement, staff vacancies continued to be a challenge in FY 2019 due to the difficulty with hiring sufficient numbers of qualified applicants, the long lead time of training newly hired public safety communicators, retaining trainees, and facing the reality of experienced public safety communicators retiring from the agency. While successfully maintaining a prudent and disciplined management of financial resources, the agency was still required to meet minimum operational staffing using overtime expenditures. DPSC anticipates making progress in FY 2021 with retaining staff and training new public safety communicators to reduce its dependence on overtime and improve the cost efficiency of its operations.

Indicator	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate/Actual	FY 2020 Estimate	FY 2021 Estimate
Percent 9-1-1 calls arriving at DPSC answered within 20 seconds	96%	93%	95%/95%	95%	95%
Percent 9-1-1 calls arriving at DPSC answered within 10 seconds	94%	89%	90%/91%	90%	90%

A complete list of performance measures can be viewed at  
<https://www.fairfaxcounty.gov/budget/fy-2021-advertised-performance-measures-pm>

**FUND STATEMENT**

Category	FY 2019 Actual	FY 2020 Adopted Budget Plan	FY 2020 Revised Budget Plan	FY 2021 Advertised Budget Plan
<b>Beginning Balance</b>	<b>\$16,727,726</b>	<b>\$3,128,879</b>	<b>\$18,737,744</b>	<b>\$4,507,021</b>
<b>Revenue:</b>				
Communications Sales and Use Tax	\$44,450,304	\$46,986,272	\$46,986,272	\$49,062,982
State Reimbursement (Wireless E-911) <sup>1</sup>	3,467,848	3,396,251	3,396,251	3,396,251
Other Revenue <sup>2</sup>	147,707	150,000	150,000	150,000
Interest Income	167,426	10,000	10,000	10,000
<b>Total Revenue</b>	<b>\$48,233,285</b>	<b>\$50,542,523</b>	<b>\$50,542,523</b>	<b>\$52,619,233</b>
<b>Total Available</b>	<b>\$64,961,011</b>	<b>\$53,671,402</b>	<b>\$69,280,267</b>	<b>\$57,126,254</b>
<b>Expenditures:</b>				
Personnel Services	\$25,284,030	\$29,944,531	\$29,944,531	\$32,021,241
Operating Expenses	12,753,585	14,133,728	18,111,302	14,133,728
Capital Equipment	66,486	0	20,744	0
IT Projects <sup>3</sup>	8,119,166	8,507,552	16,696,669	8,507,552
<b>Total Expenditures</b>	<b>\$46,223,267</b>	<b>\$52,585,811</b>	<b>\$64,773,246</b>	<b>\$54,662,521</b>
<b>Total Disbursements</b>	<b>\$46,223,267</b>	<b>\$52,585,811</b>	<b>\$64,773,246</b>	<b>\$54,662,521</b>
<b>Ending Balance</b>	<b>\$18,737,744</b>	<b>\$1,085,591</b>	<b>\$4,507,021</b>	<b>\$2,463,733</b>

<sup>1</sup> Localities receive wireless 9-1-1 funding based on annual true-up data (total number of all incoming 9-1-1 calls, wireless 9-1-1 calls and personnel costs). On July 1, 2018, the PSAP funding percentages produced through the formula were recalculated as required by the [Code of Virginia](#) §56-484.17. This formula will be fixed for five years and recalculated in 2023.

<sup>2</sup> This revenue category includes annual revenue from the City of Fairfax for dispatch services, FOIA fees, and reimbursement from Nextel to cover County expenses related to the Nextel 800 MHz rebanding initiative.

<sup>3</sup> IT projects are budgeted based on the total project costs and most projects span multiple years. Therefore, funding for IT projects is carried forward each fiscal year, and ending balances fluctuate, reflecting the carryover of these funds.