

PS COMMITTEE #1
October 18, 2021

Update

MEMORANDUM

October 14, 2021

TO: Public Safety Committee

FROM: Susan J. Farag, Legislative Analyst

SUBJECT: **Update:** Emergency Communications Center (ECC) and Next Generation 911

PURPOSE: To receive an update on ECC operations.

Those expected for this worksession:

Cassandra Onley, ECC Director, Montgomery County Police Department
Assistant Chief Edward Radcliffe, Communications, Montgomery County Fire and Rescue Service (MCFRS)
Dr. Rolando Santiago, Chief, Behavioral Health and Crisis Services, Health and Human Services
Dorné Hill, Senior Administrator, Crisis, Intake and Trauma Services, HHS

Background

The ECC answers all 911 calls (and non-emergency police service calls) dialed in the County. It also dispatches all calls for Police (excluding Park Police and Takoma Park Police), Fire, and Rescue. While the call should be simple and straightforward to the caller, the process behind the scenes is highly complex and depends on appropriate staffing, reliable processes and protocols, and evolving technology to help Fire and Rescue and Police provide timely, effective services to residents.

In 2020, the ECC received 727,500 calls for service, approximately 13% fewer calls than 2019. Sixty five percent of the calls received by the ECC were emergency calls, an average of 1,300 emergency calls per day, a decrease of 11% from the number of emergency calls received in 2019. The remainder constituted non-emergency or otherwise non-dispatched call types.

The 911 system is regulated by the State so that all counties provide similar services and can interoperate to the extent possible. The original technology is over 50 years old and initially relied on AT&T to provide the copper wire, landline service to a 911 Call Center. As communications practices and technologies have evolved over the years, many 911 systems have found it challenging to keep pace. Faced with these new challenges and recognizing the new types

of real-time information that mobile phones can provide, such as text, photo, and video, many 911 systems across the nation, including the County, are now upgrading to Next Generation 911 (NextGen911) Internet Protocol-based platforms.

Originally, 911 calls were placed on landlines directed to a local Public Safety Answering Point (PSAP), known in Montgomery County as the Emergency Communications Center (ECC). The answer and dispatch function was a bifurcated model with separate Police Department and Fire and Rescue Service call takers and dispatchers. Police call takers answered all incoming calls to determine if the caller needed police, fire, or medical assistance. If the caller needed police assistance, the call stayed on the police side of the ECC operations. If the caller needed fire or medical, the initial police call taker routed the caller to MCFRS call taker (opposite side of the same room), who then further assessed the situation. MCFRS call takers would transfer the call to a MCFRS dispatcher, which Police call takers would transfer the call to a Police dispatcher.

The Public Safety Committee began discussing changes to ECC operations with Executive Branch staff as part of the FY13 budget. At that time, the intent was to move to a Unified Call Taker (UCT) model, which would combine and cross train all call takers so that all calls could be processed without the need for a second transfer step. The transition was delayed in 2013 due to difficulties with the implementation of the call taking protocol software, and ultimately the procurement was cancelled. At the same time, Executive branch staff began to reevaluate how to move forward. In September 2013, Executive staff discussed with the Committee the need to pause and reassess how to best address several interrelated components that affected ECC operations. Briefly, these included updating the call taking protocol, implementing components of the Public Safety System Modernization (PSSM) including the Computer Aided Dispatch (CAD), addressing staffing shortages, and civilianizing MCFRS staff.

These operational and personnel goals were branded the *ECC Consolidation*. The Executive made the decision to house the entire ECC operation in the Police Department, transition all staff to professional civilian call takers, hire a Police Captain to function as a transition leader (with MCFRS input), and begin the transition to new call taker protocols using a new CAD. The Police Department stressed that because there were several complex competing issues, the transition plan may change as they moved forward. Much of this work has been completed, and the ECC is now operating under a unified call taker model.

ECC Consolidation		
Change	Date Work Began	Current Status
New CAD	2011	Completed 2017
Radio Infrastructure	2011	Completed 2021
Civilianization of MCFRS ECC Staff	2014	Superseded by Consolidation
Increase Staffing to Support Consolidation	2015	2017
Creation of a New Communication Specialist Series	2015	Completed 2016
Operational Oversight Transferred to Police. Civilian Employees are Police Employees	2016	Completed 2017
Primary Renovations to both ECC and AECC	2016	Completed 2017
Cross Training for Universal Call Taking	2016	Completed 2020
PSCC Refresh CIP	2017	Building Purchased 2019, Upgrades Completed
NextGen 911	2017	Completed September 2021

Major Fiscal Investments in the Emergency Communications Center		
Fiscal Year	Investment	Cost
FY15	MCPD and MCFRS developed a transition plan and hired a Police Captain as the transition leader. Funding was included in the MCFRS operating budget to begin a four-year plan to civilianize Fire dispatch positions, beginning in FY16.	\$225,329
FY16	23 new full-time positions in the Police operating budget to upstaff the ECC.	\$770,419
FY17	Three positions added, including Deputy Director, Quality Assurance Specialist Position, and IT Specialist	\$348,703
FY18	Consolidation Transition Director Term Captain Position	\$193,000
FY18	Funding shift from MCFRS to MCPD, including nine additional civilian call taker positions	\$2,307,819
FY18	PSCC Next Gen 911	\$979,307
FY19	Next Gen 911 upgrades	\$365,977
FY19	Purchased leased space for the ECC, HVAC and other upgrades \$17,569,000 (CIP)	\$17,569,000
FY20	Annualization of Next Gen 911 upgrades started in FY19	\$717,294
FY21	New LCSW Position at the ECC	\$83,697
FY21	Phase II Electrical and HVAC Systems Upgrade (CIP)	\$14,931,000
FY21	Astro Advanced Messaging and Responder Locations Apps (CIP)	2,700,000

Recent Legislative History

The General Assembly has passed several bills over the past few years that impact 911 operations.

Year	Bill	Purpose
2018	SB1053 ¹	Amended the Property Tax Code to allow a county to grant certain property tax credits for 911 Public Safety Telecommunicators. The County has not yet acted on this enabling legislation.
2018	SB285 ²	Established the Commission to Advance NG911 Across Maryland for a term of two years, with annual reports due to the Governor.
2019	HB397 ³	Carl Henn's Law – Expanded the purpose of the 911 Trust Fund, increased State 911 fees from \$0.25 to \$0.50 per month, and enabled

¹ [Property Tax Credit - 9-1-1 Public Safety Telecommunicators](#)

² [Commission to Advance Next Generation 9-1-1 Across Maryland - Establishment](#)

³ [Public Safety - 9-1-1 Emergency Telephone System \(Carl Henn's Law\)](#)

		local jurisdictions to increase their 911 fees from \$0.75 to \$1.50 per month. Required the Emergency Numbers Systems Board to include establishing (1) minimum standards for cybersecurity, oversight, and accountability of service level agreements between counties and core serve providers of NG 911 services; (2) training standards for PSAP personnel based on national best practices; and (3) establishing minimum standards for records retention.
2020	SB47 ⁴	Extended termination date, from June 30, 2020, to June 30, 2022, of the Commission to Advance Next Generation 911 Across Maryland. The bill also requires the commission to submit two additional annual reports.
2020	SB838 ⁵	Changes the name of the ENSB to the Maryland 911 Board. The bill also expands the roles and responsibilities of the Maryland 911 Board, PSAPs, and counties. Businesses with multiple phone lines must ensure that callers can dial 911 directly without any additional steps.
2021	HB989 ⁶	Requires reporting of service outages lasting more than 30 minutes and affecting more than 600,000 user minutes. Requires the Commission to Advance Next Generation 9-1-1 Across Maryland to report to the General Assembly certain demographic, employment, and training information regarding 911 specialists by December 31, 2021.

Next Generation 911

Next Generation 911 (NextGen911) is an IP-based 911 system that can accept more information from today’s callers, who primarily use cell phones, rather than landlines to communicate. Cell phones have location, voice, text, photo, and audio/video capability, and have the ability to provide much more information to public safety communications specialists. Next Gen911 can process all call types, including voice, text-to-911, crash notification, as well as images and video. It can also provide improved location accuracy that will allow emergency personnel to send help more quickly. This graphic, provided by the Executive, illustrates the evolution of 911 technology:



⁴ [Commission to Advance Next Generation 9-1-1 Across Maryland - Extension and Alteration](#)

⁵ [Public Safety – 9-1-1- Emergency Telephone System](#)

⁶ [Public Safety – 9-1-1 Emergency Telephone System – Alterations](#)

In 2018, the General Assembly established the State Commission to Advance Next Generation 9-1-1 Across Maryland (the Commission) to help local jurisdictions transition to NextGen911. The Commission has worked to ensure adequate funding, training, and oversight. The Commission has reported annually⁷ to the General Assembly on recommended changes, resulting in several new laws that facilitate the adoption of new NextGen911 technology. Initially, the Commission was set to sunset after two years. In 2020, the General Assembly extended the Commission's term another two years. It sunsets June 30, 2022.

The County has worked with the State and the Metropolitan Washington Council of Governments (MWCOG) to transition to NextGen911. The County has contracted with ATT for ESINet and Next Generation Core Services.

Text to 911: On August 20, 2020, the entire State enabled text to 911 capabilities.⁸ While some jurisdictions (including Montgomery County) were ready before others, the Statewide rollout helped avoid potential caller confusion about which counties had this ability. Text to 911 is helpful to those who have speech or hearing impairments, and text to 911 provides a modern, effective alternative to the old TTY/TDD system. It is also useful for callers who are in emergency situations where they cannot safely speak.



Full Cutover: The ECC fully transitioned to NextGen911 (the AT&T ESINet) in September, switching to voice on September 23 and text on September 27.

Caller Location: Traditionally, 911 service was provided by communications infrastructure supplied by AT&T (and later by Verizon) over analog, copper landlines. All 911 calls were directed to a local PSAP (the ECC is the County's PSAP). PSAPs could easily trace the caller to a precise physical address, and analog phones on copper lines worked even when the power went out. As communications providers began to offer newer technology, 911 call centers began to experience some operational challenges. For example, Voice over Internet Protocol (VoIP) allowed cable providers to offer broadband phone service. While this technology offered many advantages to customers including voicemail, etc. it often made it much more difficult, and

⁷ [Commission to Advance NextGen911 Across Maryland 2018 Annual Report](#)
[2019 Annual Report](#)
[2020 Annual Report](#)

⁸ [Montgomery County Text-to-911 Press Release](#)

sometimes impossible, for 911 call centers to locate a caller. New mapping technology and regulatory frameworks evolved to help maximize the ability to locate callers.⁹

More recently, the explosion of mobile phones has transformed how people communicate, and many people have dropped their landline phones completely. Again, technology providers have developed improved location services, and state and federal regulators have imposed additional requirements on service providers to enhance the ability for PSAPs to locate callers. NextGen911 provides geospatial technology that helps pinpoint the caller's actual location. Geographic Information System (GIS) data is used to validate address data and route 911 calls to the correct PSAP.

Staffing

Staffing has been an ongoing concern, with the need to plan out and execute cross-training and on-the-job training. The ECC upstaffed several years ago to allow for new training requirements. As of today, Police had filled 162 out of 184 authorized positions, although 22 of these are new employees currently in training.

Attrition has been an ongoing concern. Attrition rates have varied from 15% to 34% over the past several years. In the past, Executive staff have advised that the County is in the bottom 25% for retention among Maryland's PSAPs. It advises the most significant challenges to hiring and retention include background checks, the nature of the job, and stress. For Fire dispatch, attrition is mainly based on promotions and firefighters voluntarily transferring back to field operations.

It is a continuing challenge, both in the County and nationally, to find and retain qualified applications. To strengthen the application pool, the ECC partnered with Montgomery College for the development of a Certificate Program for 911 professionals. Montgomery College was able to hold one class before COVID.

Civilianizing Fire Dispatch: Part of the original ECC Consolidation plans involved civilianizing uniformed Firefighter positions who were dispatching Fire and Rescue calls. The Fire dispatch function is different than the Police dispatch function in that Fire dispatcher helps manage the scene of the emergency, calling in additional resources, understanding what other units are free, etc. The civilianization process was put on hold to allow finite resources (both staff and training space) to focus on other aspects of the consolidation process. Now that much of that work has been completed, the Executive has reinstated the mandate to civilianize Fire dispatch staff. There are currently eight trained civilian Fire Dispatch personnel, and the ECC has plans for classes extending into calendar year 2024.

911 Surcharge

⁹ [VoIP and 911 Service – FCC Consumer Guide](#)

The Maryland 911 surcharge is comprised of two separate fees that help offset local and state 911-related capital and operating costs. Effective July 1, 2109, the State 911 fee is \$0.50 per phone line, and the County fee is up to \$1.50 per phone line. The State 911 Board remits the County portion on a periodic basis. The following chart illustrates the County’s distribution from 911 fees collected by the State:

State 911 Revenues		
Year	Budgeted	Actual
FY18	\$7.0 million	\$7.7 million
FY19	\$7.0 million	\$7.7 million
FY20	\$12.0 million	\$10.6 million
FY21	\$15.0 million	*
FY22	\$12.0 million	*

**not finalized.*

Triaging Mental Health Calls

Much of the national (and local conversation) about police reform has focused on providing alternate governmental responses to certain community crises, including emergency mental health situations. While the County already has mental health response services, such as the Mobile Crisis Unit, it is also exploring ways to identify and triage mental health calls that the ECC receives on 911 or the Police non-emergency number (301-279-8000). The worksession provides a brief overview of County initiatives to provide triaged responses. If the Council wants a more in-depth briefing on this issue, it may wish to do so in a future Joint Health and Human Services/Public Safety Committee worksession.

In December 2020, HHS created a workgroup guidance on an integrated crisis call center. This workgroup has met about four times. It includes representatives from the Emergency Communications Center (ECC), the National Suicide Hotline run by EveryMind, the 311 Call Center, and the Crisis Call Center at the Crisis Center. It is examining the feasibility of a common triage protocol for dispatching Mobile Crisis and Outreach Teams (MCOTs) to a behavioral health crisis. The triage and dispatch protocol will specify the situations when MCOTs respond without police presence, and with police presence. The protocol is under development.

The White Bird Clinic (WBC) that runs the Crisis Assistance Helping Out on the Street (CAHOOTS) model in Eugene, Oregon, is consulting with DHHS and holding conversations with staff at the ECC, EveryMind, 311 Call Center, and Crisis Call Center to propose the agreed upon protocol. WBC is expected to submit a report with the triage and dispatch protocol this Fall 2021

Potential Discussion Questions

1. NextGen911 provides better GIS location of a mobile phone caller, to route the call more accurately to the proper PSAP. It also uses the phone’s ability to connect to local Wi-Fi

to help improve latitudinal/longitudinal location accuracy. What steps are needed to improve altitude location, such as identifying which floor a caller is on within a larger building?

2. What are the next steps in moving toward accepting photos and videos? What are the potential staffing considerations with that step (e.g., additional staff to process larger volumes of information, staff, and other resources to assist with potential mental health impacts on staff?)
3. When NG911 is fully operational and capable of receiving texts, photos, and videos, (audio, too?), what are the potential implications on data storage?

This packet contains

ECC PowerPoint

©

1-9



ECC Council Public Safety Presentation

10.18.2021



Next Generation 911 update

The Phone CPE was updated in May 2021 and a needed update in August 2021.

We transitioned to AT&T ESInet (NG911)

- Voice on **September 23, 2021**
- Text (Data) **September 27, 2021**

Currently there are no National or State Industry Standards for receiving video and pictures. As information is developed, we will evaluate if the ECC will receive the data.



Cybersecurity Initiatives

The Technology and Enterprise Business Solutions (TEBS) and the Office of Enterprise Information Security (OEIS) are responsible for the cybersecurity initiatives for the public safety systems.

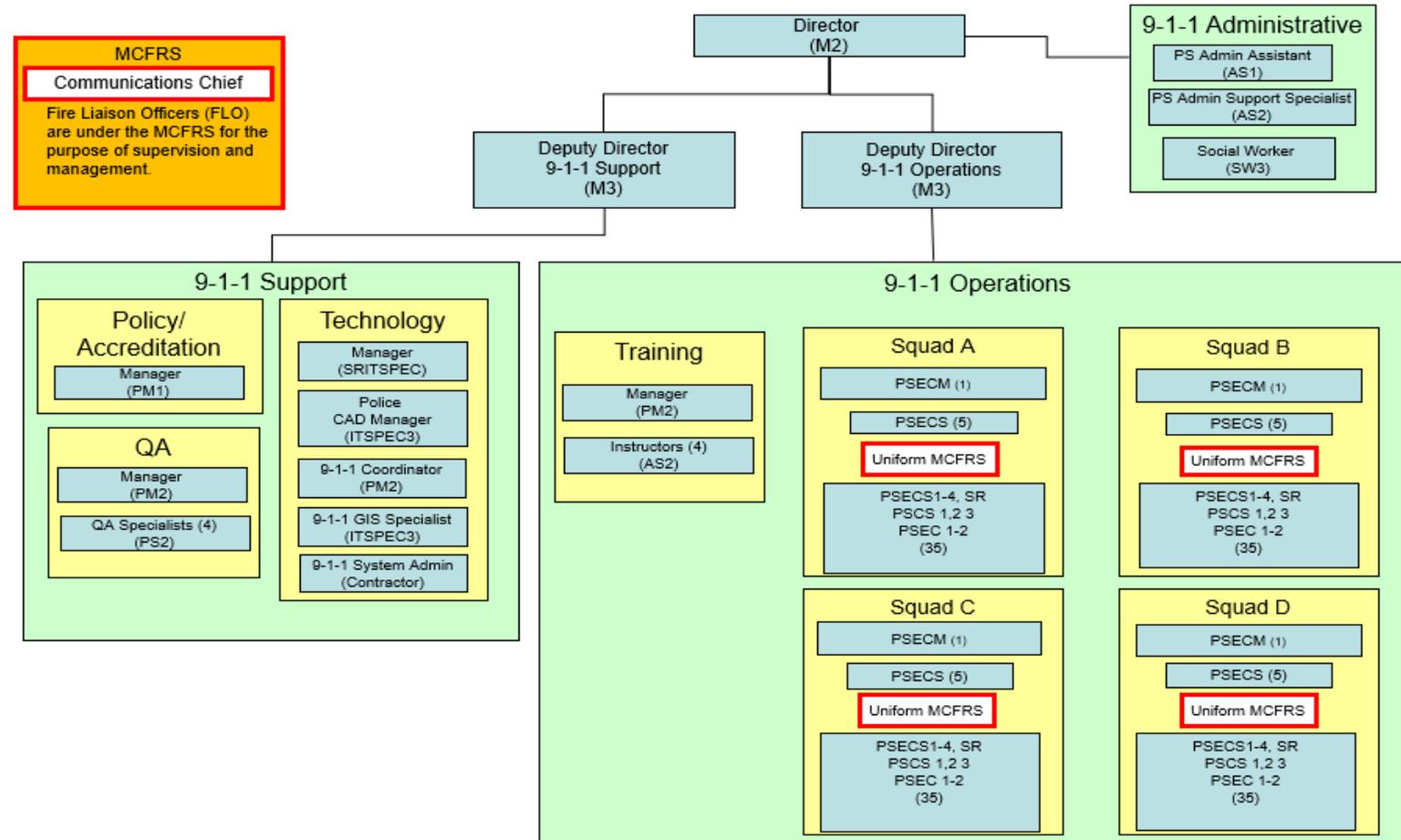
Personnel are responsible for completing the monthly mandatory security awareness trainings.



Information on Staffing

(Organizational Chart, Civilianization [Professional Staff])

MONTGOMERY COUNTY MARYLAND DEPARTMENT OF POLICE 9-1-1 Emergency Communications Center



Revision Date: July 2021



Full Civilianization (Professional Staff) of the Emergency Communications Center

As of March 12, 2020, All Public Safety Emergency Communications Specialists are certified and qualified to answer all 9-1-1 and non-emergency calls.

ECC started Fire Dispatch training in 2016. However, the training was suspended in 2017 to solely concentrate on call taking. Currently, there are 8 qualified professional Fire Dispatch personnel.

Recently, a fire dispatch class of 9 completed classroom training and are in the on-the-job training phase. Another fire dispatch class of 6 started this month and are projected to start the on-the-job training phase in November 2021.

We are evaluating the timelines for fire dispatch classes to be held in CY2022, CY2023, and CY2024.



Information on Staffing

(Current Authorized Complement, Vacancies, New Employees in Training, Attrition)

Current Authorized Complement:

183 Funded

Current Vacancies:

21 Public Safety Emergency
Communications Specialists

1 Program Specialist 2 – Quality
Improvement/Assurance

New Employees in Training:

22*

*1 Retiring December 1, 2021

Possible Attrition within 1-5 years:

5 Public Safety Emergency Communications Specialists

3 Public Safety Emergency Communications Supervisors

1 Public Safety Emergency Communications Manager

2 Deputy Directors

1 Director

1 Administrative Specialist 2 – ECC Training Instructor

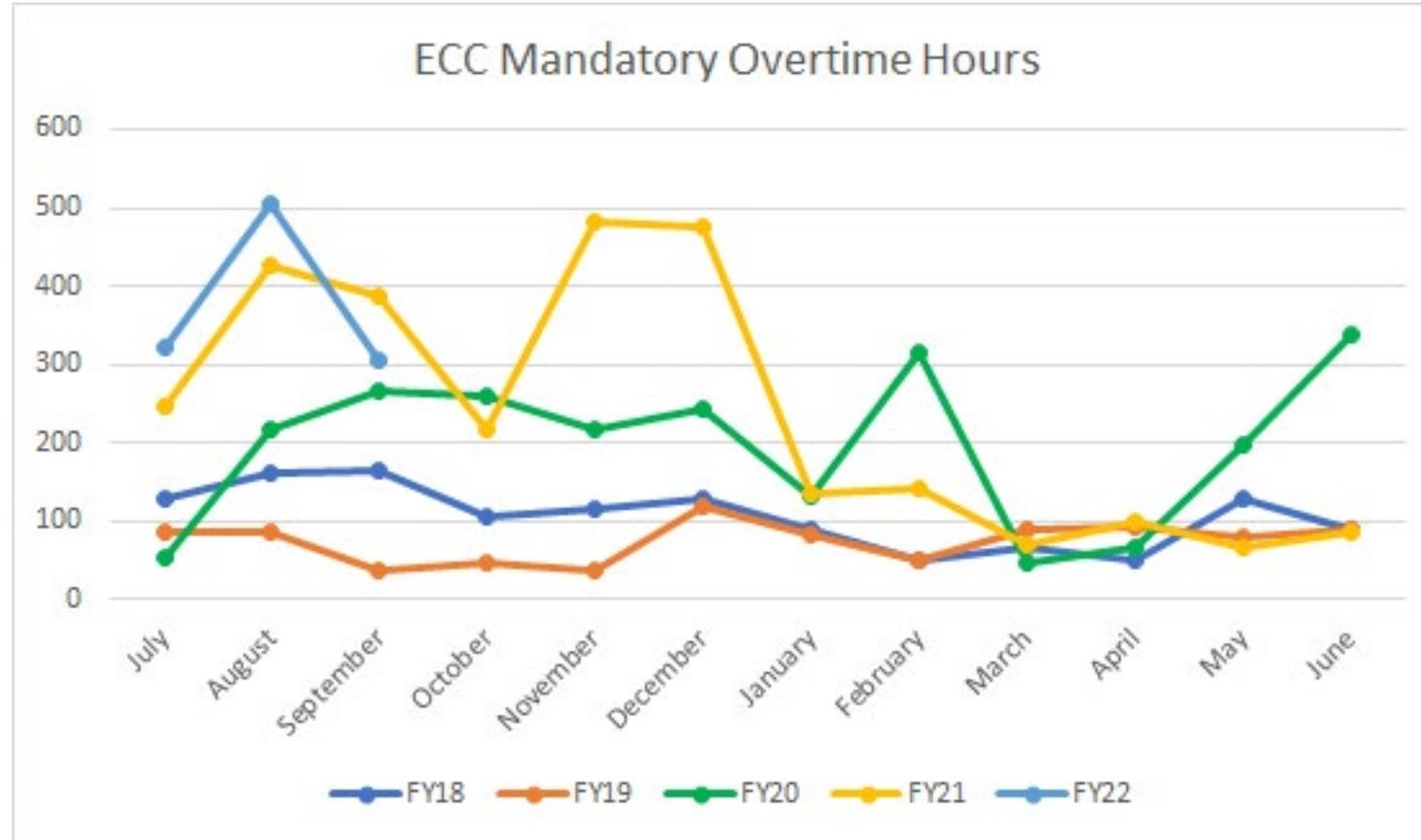
1 Program Specialist 2 – Quality Improvement/Assurance

1 Technology Manager

1 Program Manager 2 – 9-1-1 Coordinator



Information on Staffing (Mandatory Overtime)





Information on Staffing (Staffing Needs and Social Worker)

Staffing Needs:

43 positions

-Public Safety Emergency
Communications Specialists

-Program Specialists

-Administrative Specialists

-Technology Specialists

-Managers

Social Worker:

Onboarded March 2021 strictly for
employee wellness



Mental Health Triage

In December 2020, DHHS convened a workgroup that provides guidance on an integrated crisis call center. This workgroup has met about four times. It includes representatives from the Emergency Communications Center (ECC), the National Suicide Hotline run by EveryMind, the 311 Call Center, and the Crisis Call Center at the Crisis Center.

The goal of this workgroup is to provide feedback and advise for implementing a common triage protocol for dispatching Mobile Crisis and Outreach Teams (MCOTs) to a behavioral health crisis. The triage and dispatch protocol will specify the situations when MCOTs respond without police presence, and with police presence. The protocol is under development.

The White Bird Clinic (WBC) that runs the Crisis Assistance Helping Out on the Street (CAHOOTS) model in Eugene, Oregon, is consulting with DHHS and holding conversations with staff at the ECC, EveryMind, 311 Call Center, and Crisis Call Center to propose the agreed upon protocol. WBC is expected to submit a report with the triage and dispatch protocol this Fall 2021.