



**Commission on
Fire Accreditation
International**

Accreditation Report

**Charleston Fire Department
1451 King St. Extension
Charleston, SC 29405**

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by the
Commission on Fire Accreditation International**

**This report represents the findings
of the peer assessment team that visited the
Charleston Fire Department
On January 9-12, 2021**

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Preface

To the citizens and the governing body of the agency: This report represents a thorough review of the organization to verify and validate how this agency is executing its stated mission in accordance with universally accepted practices for a contemporary fire and emergency services organization. Quality improvement can only be initiated and realized by those agencies that challenge themselves through a comprehensive self-assessment. This report documents that this agency is seeking organizational improvements and discovering elements of excellence. Please note that the recommendations by the peer assessment team are opportunities for improvement provided from professionals in the fire and emergency service industry.

To the agency: This report communicates the outputs and outcomes of your dedication and commitment to quality improvement. Your self-assessment, community risk assessment: standards of cover, and strategic plan amount to years of work to understand your community, establish accountable goals, institute transparency, and factually comprehend what you did not know about your organization. The verification and validation of your agency by a team of peers represents a major accomplishment. The recommendations in this report are opportunities to become better and stronger in your community. Finally, take this report and communicate to your community the areas you identified during your self-assessment that were outstanding and those that represent improvement opportunities.

EXECUTIVE SUMMARY

The Charleston Fire Department is a career organization with 387 uniformed personnel and 16 civilian personnel. The agency staffs 17 engine companies, two ladder companies, and two tower companies at 17 fire stations. All fire suppression vehicles are staffed with four firefighters. The department operates with a minimum staffing of 95 personnel. There are 14 personnel dedicated to community risk reduction/public fire education. Six full-time personnel are dedicated to fire training.

The most recent census data indicates Charleston had a population of 120,083, current population estimates (2020) show 156, 236 residents. The city occupies 109 square miles of land spread over Charleston and Berkeley counties, including 19 square miles of water and waterways. Commuters increase the population by approximately 33,000 people each day. Two cruise ships have started using Charleston as a departure port and this adds 2,000 more people when the ships are docked. The Charleston Area Convention and Visitors Bureau estimates that 4.76 million tourists visited the Tri-County area, with 2.5 million seeking lodging in the city of Charleston limits in 2018. The city operates under voluntary annexation that has created a unique situation in which there are pockets of outside agency public safety zones within the city. In order to ensure continuity of service, there are strong automatic aid relationships with adjoining fire departments including: St. Johns Fire Rescue, James Island Fire Department, St. Andrews Fire Department, and North Charleston Fire Department.

Charleston's commerce ranges between being the 4th largest container port on the east coast (9th overall in the United States) to being one of the top 10 travel destinations for the last 17 years. There has been over 30 percent population increase since the 2000 census.

The Commission on Fire Accreditation International (CFAI) has completed a comprehensive review and appraisal of the Charleston Fire Department based upon the ninth edition of the *Fire & Emergency Service Self-Assessment Manual (FESSAM)*. The commission's goals are to promote organizational self-improvement and to award accreditation status in recognition of good performance. The peer assessment team's objectives were to validate the department's self-assessment study, identify and make recommendations for improvement, issue a report of findings, and conclude if the department is eligible for an award of accreditation.

The peer assessment team followed CFAI processes and the Charleston Fire Department demonstrated that its self-study accreditation manual, community risk assessment/standards of cover (CRA/SOC), and strategic plan met all core competencies and criteria. The peer assessment team recommends accredited agency status for the Charleston Fire Department from the Commission on Fire Accreditation International.

The peer assessment team observed a strong commitment by the department to the CFAI accreditation process and, in particular, to ensuring appropriate succession training for the accreditation manager position. The current accreditation manager has a support team. Several members of the department regularly act as peer assessors for CFAI. These approaches ensure continuity, more direct access to quality improvement with similar organizations, and the engagement of a broader spectrum of the department.

The peer assessment team had meetings with the Emergency management director, senior budget analyst, senior HR analyst, Charleston Consolidated Dispatch center accreditation manager, RMS administrator, 9-1-1 technology manager, fire chief, and numerous members of the agency's staff.

Individually and collectively, they expressed a long-standing interest in the process, having been engaged and involved from the outset of the department's journey towards accreditation. There is clearly a commitment to continue to follow and support the implementation of identified opportunities for improvement. It can be anticipated that all representatives will be strong supporters and network participants as the full benefits of going through the self-assessment process are realized and built on in the future.

The peer assessment team identified opportunities for improvement provided below. These recommendations flowed from discussions, interviews, and a review of the department supplied documentation to support its self-assessment conclusions.

The following represents a synopsis of the recommendations made by the peer assessment team during the on-site visit. Additional details for each of these recommendations can be found in the Observations Section of this report. For each of the recommendations, the performance indicator from the model is provided, including notating if it is a core competency (CC).

Recommendations

Recommendations were developed from the evaluation of criterion, core competencies, and performance indicators.

1. It is recommended the agency collect and analyze call and response time data specific to each geographical region to aid in the planning process for deployment of resources ([CC 2A.3](#)).
2. It is recommended that the agency look for alternative ways to complete all inspections ([CC 5A.3](#)).
3. It is recommended that the agency establish a schedule for the frequency of fire inspections ([5A.6](#)).
4. It is recommended that the agency identify annual fire loss benchmarks ([5A.7](#)).
5. It is recommended the agency implement the established ERF response protocols as identified in their SOC ([CC 5F.1](#)).
6. It is recommended that the agency create an updated agreement for shipboard firefighting and marine response to include an inclusive dispatch protocol and full risk assessment of all marinas in Charleston ([CC5J.1](#)).
7. It is recommended that the agency track demographic information for their recruit classes ([7B.4](#)).
8. It is recommended that the agency implement an employee appraisal system that appropriately evaluates its personnel ([7D.3](#)).
9. It is recommended that the agency establish a formal process for reviewing external agency agreements ([10B.2](#)).

The agency demonstrated its keen desire to immediately implement plans to address opportunities for improvement. The site team identified several areas where no timeframes were stated for project completion. One example was when the team observed the EMS program report reviews, response

time monitoring, and informal meetings occur several times a year, there were no specific dates. The agency addressed the issues and established dates and schedules for their EMS program reports.

The agency responded to a total of 19,618 calls for service in 2019 including: 576 fire calls (2.9 %), 9,693 Emergency Medical Service (EMS)/Rescue Calls (49.4%), 2,926 False Alarm Call (14.9%), 645 Hazardous Calls (3.3%), 5,778 Other Type Calls (29.5%). The agency has managed to evolve with the growth of new development and increasing population. The department has a total staff of 403 personnel, which includes both uniformed and civilians. The department maintains a minimum daily staffing of 95 uniformed personnel working out of 17 fire stations.

In 2020, the Insurance Services Office (ISO) visited the city to rate its public protection classification. The outcome of the visit validated the department's current PPC rating of Class 1.

The Charleston Fire Department provides community-based services, one example is in August 2020 the agency created birthday drive-by gift bags, which consists of life safety education material, to increase Community Risk Reduction awareness. The gift bags are put together by age group, such as 3rd grade and younger, 4th grade, and 5th grade to adult. The bags can be requested through the department's website or Facebook. Fire apparatus will then go by and drop the bags off. This is considered an innovative practice for others to emulate.

OBSERVATIONS

Category 1 — Governance and Administration

The City of Charleston operates under a strong mayor form of government. The fire chief reports to the mayor. The city was legally chartered in 1783 and the fire department was established in 1882. The city and agency are legally established and have adequate administrative staff and structure to carry out the mission of the city and the fire department. There are approved financial resources and the agency works with the city to adhere to all legal and policy compliance.

The City of Charleston was legally chartered by the State of South Carolina as a municipality in 1783. The city operates a strong mayor form of government. The mayor has the sole decision-making authority for the development of the overall organizational structure for the city. Department heads including the fire chief are given the authority to develop divisional organizational structures. The fire chief meets with the mayor on a monthly basis. The fire chief provides bi-weekly updates to the mayor regarding significant incidents and occurrences within the fire department.

The governing body is legally established. The mayor is responsible for directing the supervision of all municipal agencies, preparation and submission of the annual budget, and capital outlay program to be provided to the city council. The council has the power and authority to make rules and pass ordinances consistent with the laws of the State of South Carolina, considers and enacts legislation and adopts the annual budget.

The fire chief is responsible for the management, command, and control of the fire department. The chief has the power to hire, with the approval of the mayor, such personnel in such positions are provided for in the budget and approved by the city council. The present structure provides a conducive environment for the fire department and its ability to carry out the mission, goals, and objectives to provide a high-quality service to the citizens and visitors of Charleston.

Category 2 — Assessment and Planning

The agency is divided into 18 fire response areas/ management zones that have been categorized by population density. Each of the 18 response zones is further divided into three planning zones utilized for equal distribution of non-response related work activities amongst the three assigned shifts. All elements of calls for service data are available for the past five years. The agency moved from utilizing response time data in FireHouse RMS in 2017 because auto aid response time was not included. In 2017 the Charleston County Consolidated Dispatch Center included auto aid calls in the data.

The city is made up of five geographical functional regions defined by road networks divided by rivers which all have their own unique response time challenges. The data is presently not broken down to evaluate the areas individually. [It is recommended the agency collect and analyze call and response time data specific to each geographical region to aid in the planning process for deployment of resources.](#)

The agency has a documented and adopted methodology for identifying, categorizing, and classifying risks in its jurisdiction. The risk to the community was analyzed using response times, census data which included total population, and vulnerable populations identified 0-5 years of age and over 55.

Emergency service demands have been identified in each response area and community risk programs were also added to the non-emergency services. The agency compiles and analyzes loss and save data covering life, injury, and property. This data is put into Firehouse. The agency assesses risks created by identified hazards to determine possible impacts on service demands.

The identification of service demands is effective with comprehensive treatment of the criterion. The agency's deployment SOPs are consistent and meets the expectations of the agency and industry research. The agency has documented its efficiency and effectiveness through measurements which consider overall response and outcomes. The agency adopted a methodology for task analysis, benchmarks for performance, and established attainable goals and objectives. This is facilitated through their WIG sheet ("Widely Important Goal"). The agency has completed a critical task analysis on associated risk levels and programs. This is completed on a quarterly basis. Since 2019, the agency has made significant improvements in this analysis. One example is based on risk factors such as community impact, building use, building construction, and building size.

The summary is comprehensive, the assessment team observed the agency's travel time gap analyses indicated the need for new stations and subsequently resulted in the opening of two new fire stations in 2018. Plans to formalize a specific methodology were discussed. Analysis of the need for performance measures was also discussed. These are in the process of being implemented. The agency has a tracking system in operation to assess public education, community service programs, and community risk reduction. The agency is partnering with the city leadership to identify locations where traffic preemption devices would provide possible reduced response times. This includes continuous improvement and gap analysis. The fire chief meets with stakeholders several times a year, and the agency maintains these connections though out the year.

Category 3 — Goals and Objectives

Charleston Fire Department is guided by a community driven five-year strategic plan. The department has established goals and objectives that are consistent with the operations of the agency has developed seven goals to guide them through the 2016-2021 timeframe. The strategic plan was presented to the mayor and city council members for approval and is published as a hardcopy and on the city's website for ease of access.

The agency's seven specific goals and thirty-three objectives direct its priorities in a manner consistent with its mission and appropriate for the community it serves. The chief sends an annual work plan to the department to accomplish goals. Charleston Fire Department has program analyses for each division, special team, and program that has helped create improvement plans. The department has created Birthday Drive-by Gifts to increase Community Risk Reduction. The gift bags are put together by age group, such as 3rd grade and younger, 4th grade, and 5th grade to adult. Each bag consists of life safety education materials. The bags can be requested through the department's website or Facebook.

Along with the annual work plan, the agency also holds Widely Important Goal (WIGS) meetings. WIGS allows the department to discuss goals weekly and performance measures monthly. WIGS has allowed the department to keep communication open and implement the needed goals and objectives.

Processes are in place to measure and evaluate progress towards the completion of specific objectives and overall system performance. The goals and objectives are re-examined and modified periodically. The agency revisits the strategic plan and communicates a one-year work plan. Personnel are required

to update the accreditation manager. The accreditation manager will then update the strategic plan database file.

Category 4 — Financial Resources

The city provides the agency with direction regarding the budget and financial planning matters. The budget preparation schedule maintains a timeline for the agency to develop budget requests. Internal staff participate in the development of the department budget. In the last three years, the agency has submitted budget requests according to the timeline set within the budget manual. The agency has developed a budget-based department priority process.

The agency works with a budget analyst from the city budget and finance department to develop the budget. The processes to be followed during the development and approval stages of these budgets are clearly articulated in various city and fire department policies and procedures.

The peer assessment team confirmed that the agency is in receipt of the most currently available Certificate of Achievement for Excellence in Financial Reporting (certificate) from the Government Finance Officers Association of the United States and Canada (GFOA) for its Comprehensive Annual Financial Report (CAFR). The department has submitted its most recent GFOA certificate and CAFR as prima facie compliance with this criterion.

The agency is continuing to evolve since the changes occurring from the 2007 Sofa Super store fire. There was a significant amount of funding allocated immediately after the fire but there was no growth or replacement plan in place. The team observed a strong commitment from the city towards the fire department. The city does rely on tourism for a significant part of its budget and COVID has delayed certain long- and short-term revenue streams. However, the city and the agency are committed to the future and is on track with several station projects including station 6's complete renovation scheduled to be complete in April 2021. The team did observe this project in the works. Additionally, two other large projects are scheduled for FY 2021 which started in January. These are for the \$350,000 total renovation of station 7 scheduled in late 2021 and a \$100,000 partial renovation of station 12. These projects are being facilitated with a combination of city and grant funding. The city is also actively seeking land for two additional stations (stations 22 and 23) projected to be in the Cainho section and on Johns Island. The city is working on closing a 3.329 acre parcel for Johns Island for \$800,000 which is in the budget. This station will house a new engine company and ladder company.

Category 5 — Programs

Criterion 5A – Community Risk Reduction Program

Through the fire marshal division, the agency enforces compliance with the International Fire Code, as mandated by the South Carolina State Legislature. The agency currently employs thirteen full-time, certified fire inspectors who are responsible for approximately 15,000 occupancies. The inspectors complete 24 hours of continuing education annually, tracked through TargetSolutions. Currently no inspection frequency schedule exists for occupancies, and inspections are driven by demand. [It is recommended that the agency look for alternative ways to complete all inspections. It is also recommended that the agency establish a schedule for the frequency of fire inspections.](#) Inspections are being simultaneously tracked in two software systems, as the agency is working to transition to the EnerGov system used by the city while still using the Firehouse system. No fire loss

benchmarks have been established by the agency. [It is recommended that the agency identify annual fire loss benchmarks.](#)

Criterion 5B – Public Education Program

The agency provides public education through its fire marshal division, with six personnel currently certified as fire and life safety educators. However, these are not dedicated positions, and the educational responsibilities are in addition to their primary role as fire inspectors. Operation personnel are also employed to deliver educational messages to targeted groups. The agency focuses its youth efforts on third grade students, based on studies indicating this age group is most likely to ask questions and retain the information. Following significant structure fires, the agency will go door-to-door in the surrounding neighborhood to distribute fire safety education and install smoke alarms.

External partnerships with organizations such as the Red Cross and Safe Kids are leveraged to improve their outreach capability. The agency is in the preliminary process of establishing an internal juvenile fire setter program.

Criterion 5C – Fire Investigation, Origin and Cause Program

The agency has an adequate and efficient fire investigation program. The program is directed by the fire marshal and complies with the South Carolina Code of Laws. Additionally, the agency has CFD standard operating guidelines to conduct investigations of fires and the scientific method to determine and investigate the origin and cause of all significant fires and explosions. The fire marshal division emphasizes their members interface with their regional partners every two months and complete forty-hours of training in investigations each year.

The fire investigation division is staffed sufficiently at this time. Fire investigators handle cases from inception to completion, but if the crime becomes suspected of arson, then law enforcement becomes involved. The agency's relationship with law enforcement is effective and is constantly evolving. The team observed continual quality improvement in this area, an example is the establishment of forensic training with both law enforcement and fire department personnel. The training improved understanding of both agencies responsibilities and was noticeable in recent arson events. An annual appraisal is done yearly, and this identifies specific areas for improvement.

Criterion 5D – Domestic Preparedness, Planning and Response

The agency operates under four emergency operation plans, the City of Charleston emergency operations plan (EOP), Charleston County EOP, Berkeley County EOP and its internal standard operating procedures. In 2021, emergency management has integrated into the fire department. Outside agency support is identified and documented through the use of automatic aid and mutual aid agreements. The agency completed an all-hazard vulnerability and risk assessment in 2020. The assessment identified populations and assets that were vulnerable to various physical threats, the consequences of the treats, and measures that could be implemented.

Criterion 5E – Fire Suppression

The agency is a sufficient, efficient, safety conscious and effective fire suppression department. Key determinants are: NFPA 1710: Standard for the Organization and Deployment of Fire Suppression

Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments that they use as a pathway to ensure industry’s best practices are reviewed, practiced and used in emergency operations. The fire operations division is staffed through seventeen stations with 354 personnel. They have updated SOPs which define duties and responsibilities in order to maintain safe operations at incident scenes.

Performance Gap Analysis

The following table represent the agency’s actual performance (baseline) versus the goal (benchmark). The gaps are provided in red (representing improvement opportunities), and green (when actual performance exceeds the goal).

2017-2019 Moderate Risk Fire Suppression Response Times				
1st/ERF	Urban/Rural	Baseline	Benchmark	Gap
1st Due	Urban	8:02	7:30	00:32
		n=139		
ERF	Urban	12:24	10:30	01:54
		n=88		

2016-2019 High Risk Fire Suppression Response Times				
1st/ERF	Urban/Rural	Baseline	Benchmark	Gap
1st Due	Urban	6:22	7:30	01:08
		n=116		
ERF	Urban	13:03	13:30	00:27
		n=67		

For the 2017-2019 data, response times were compiled by Charleston County Consolidated Dispatch Center and auto aid is included. For the 2015-2016 data, response times were compiled from CFD’s FireHouse RMS and auto aid was not included. The 2015-2016 data was verified by team but not included in the report.

Criterion 5F – Emergency Medical Services (EMS)

The agency provides out-of- hospital emergency medical care to the citizens at the basic life support (BLS), non-transport level. The CFD meets its deployment objectives and maintains its staffing levels. CFD has a strong medical director and EMS director, and there have been no operational discrepancies since 2019. CFD follows all HIPPA laws and there have been no violations. Since 2019, CFD has provided CPR training and Stop the Bleed courses free to the public. The high demand is being met at this time. This has culminated in meeting the high demand for public training.

The agency presently considers its first due low risk response and then adds resources as needed based on the arrival report, this results in them reporting the ERF the same as the first due. Although

moderate and high-risk responses are identified in their SOC, they state that it is not being dispatched and are for future reference. [It is recommended the agency implement the established ERF response protocols as identified in their SOC.](#)

Performance Gap Analysis

The following table represents the agency’s actual performance (baseline) versus the goal (benchmark). The gaps are provided in red (representing improvement opportunities), and green (when actual performance exceeds the goal).

2017-2019 Moderate Risk EMS Response Times				
1st/ERF	Urban/Rural	Baseline	Benchmark	Gap
1st Due	Urban	8:47	7:30	01:17
		n= 23,172		
ERF	Urban	12:30	9:30	03:00
		n=418		

For the 2017-2019 data, response times were compiled by Charleston County Consolidated Dispatch Center and auto aid is included. Agency considers first due as ERF for EMS For the 2015-2016 data, response times were compiled from CFD’s FireHouse RMS and auto aid was not included.2015-2016 data was verified by team but not included in the report.

Criterion 5G – Technical Rescue

The agency operates an adequate technical rescue program and includes response plans for structural collapse, vehicle accidents, confined space, trench collapse, and other situations where trapped victims may face life-endangering situations. The agency has up to date SOP’s and all operational personnel are trained at the awareness level. The agency has expanded its services in 2019 to include swift water rescue. The agency produced an operations in the water environment concept of operations plan in 2018 and encompasses all aspects of water rescue including training and equipment needed. The city wanted to pursue this and funded the program for the first year but has discontinued funding for the out years. There is a support for the program at the city level and it is recommended the agency re-evaluate its resources in order to continue to provide the swift water rescue to its citizens.

Performance Gap Analysis

The following table represents the agency’s actual performance (baseline) versus the goal (benchmark). The gaps are provided in red (representing improvement opportunities), and green (when actual performance exceeds the goal).

2016-2019 Moderate Risk Tech Rescue Response Times				
1st/ERF	Urban/Rural	Baseline	Benchmark	Gap
1st Due	Urban	9:45	7:30	02:15
		n=124		
ERF	Urban	14:51	10:30	04:21
		n=48		

For the 2017-2019 data, response times were compiled by Charleston County Consolidated Dispatch Center and auto aid is included. Agency considers first due as ERF for EMS For the -2015- 2016 data, response times were compiled from CFD’s FireHouse RMS and auto aid was not included.2015-2016 data was verified by team but not included in the report.

Criterion 5H – Hazardous Materials (Hazmat)

The agency operates a FEMA Type 2 hazardous materials unit, HM 101. The unit is cross-staffed with personnel from Engine 109, all of whom maintain technician level hazardous materials certification. Additional hazardous materials technicians are available via callback procedures. Training to maintain hazardous materials certification is tracked through TargetSolutions.

Funding for maintaining tools and equipment specific to the hazardous materials unit has not increased in proportion with the resources assigned. In addition, the agency does not bill for costs incurred on hazardous materials incidents, nor does it bill for the overtime cost associated with assigning HM 101 on stand-by for special events.

Performance Gap Analysis

The following table represents the agency’s actual performance (baseline) versus the goal (benchmark). The gaps are provided in red (representing improvement opportunities), and green (when actual performance exceeds the goal).

2017-2019 Moderate Risk Hazmat Response Times				
1st/ERF	Urban/Rural	Baseline	Benchmark	Gap
1st Due	Urban	8:39	7:30	01:09
		n=22		
ERF	Urban	19:39	10:30	09:09
		n=14		

2016-2019 High Risk Hazmat Response Times				
1st/ERF	Urban/Rural	Baseline	Benchmark	Gap
1st Due	Urban	7:40	7:30	00:10
		n=432		
ERF	Urban	16:52	11:30	05:22
		n=110		

For the 2017-2019 data, response times were compiled by Charleston County Consolidated Dispatch Center and auto aid is included. Agency considers first due as ERF for EMS For the 2015- 2016 data, response times were compiled from CFD's FireHouse RMS and auto aid was not included.2015-2016 data was verified by team but not included in the report.

Criterion 5J – Marine and Shipboard Rescue and Firefighting Services

The agency operates a marine and shipboard rescue and firefighting service as part of a regional Marine Incident Response Team (MIRT) and the Charleston harbor workgroup. The MIRT has specialized equipment, with trained personnel assigned to provide emergency response to a variety of water-based incidents. The agency maintains two modern 40-foot fire boats with 3,000 gallon-per-minute (gpm) pumping capability, which was purchased with the assistance of a homeland security grant to respond to incidents involving marine situations.

Currently the agency is revisiting the original Memorandum of Understanding (MOU) with all departments involved within Charleston County to update the agreement and to establish a recurring training schedule for all agencies involved with marine response. [It is recommended that the agency create an updated agreement for ship board firefighting and marine response to include an inclusive dispatch protocol and full risk assessment of all marinas in Charleston.](#)

Performance Gap Analysis

The following table represents the agency's actual performance (baseline) versus the goal (benchmark). The gaps are provided in red (representing improvement opportunities), and green (when actual performance exceeds the goal).

It was verified and validated by the peer assessment team that Charleston Fire Department had a statistically insignificant number of marine and shipboard firefighting incidents for 2015-2019, to provide a sufficient data set to study. Therefore, no performance gap analysis is provided in this report.

Criterion 5K – Wildland Fire Services

The agency has trained members at the operational level for wildland firefighting. Wildland trained firefighters staff the apparatus and stations that are in areas of risk for wildland fires and receive a higher level of wildfire training. Four members of the CFD wildland team are Red Card certified. The CFD has two type VI engines/brush trucks that are cross staffed as needed. A 2100-gallon water tender with pumping capabilities is staffed on a full-time basis and is located in the area of the highest wildland fire risk. The CFD responds with automatic aid, mutual aid departments, and the State Forestry Commission to assist with mitigation of wildland fires if needed.

Performance Gap Analysis

The following table represents the agency's actual performance (baseline) versus the goal (benchmark). The gaps are provided in red (representing improvement opportunities), and green (when actual performance exceeds the goal).

2017-2019 Moderate Risk Wildland Response Times				
1st/ERF	Urban/Rural	Baseline	Benchmark	Gap
1st Due	Urban	9:16	7:30	01:46
		n=167		

It was verified and validated by the peer assessment team that the Charleston Fire Department had a statistically insignificant number of wildland incidents requiring an effective response force (ERF) for 2015-2019, to provide a sufficient data set to study. The agency’s dispatch protocol utilizes the initial response for ERF. Therefore, no performance gap analysis for the ERF is provided in this report.

Category 6 — Physical Resources

The agency enlists multiple parties when planning and designing physical facilities. This includes the fire chief, deputy chief of planning and professional services, assistant chief of professional services, city parks department, planning department, and director of finance. The partnership has proven successful in addressing the needs of the agency and the city.

The agency’s facilities were built as early as 1887 and as recently as 2020. All stations were built in accordance with federal, state, and local codes at the time of construction. Seven stations are fully compliant with the Americans with Disabilities Act (ADA). The ten stations that are not ADA compliant were built between 1887 and 1990. Due to the historical presence some stations require a significant degree of care and maintenance. Now renovations and upgrades of facilities are a part of the budgeted process; this was not always the case until 2018. Budgeting has allowed the department to begin renovations of one of the older historical stations and bring it up to code. The agency also plans to start renovating another historical station in 2021.

The agency has created apparatus design committees, made up of all ranks within the department, to ensure apparatus types are appropriate for the functions served. For example, the agency transitioned the fire marshal’s division to pickup trucks to provide an appropriate vehicle for duties and it offers a camper shell to allow separation from contaminated personal protective equipment (PPE) following investigations. The agency has an apparatus replacement plan that ensures the reliability of the frontline apparatus. Currently frontline engines stay in service for ten years then are placed in reserve status for five years. Frontline ladders, specialty apparatus, and administrative vehicles follow a similar plan. Having an apparatus replacement plan has allowed the agency to provide a long-range plan for budget, finance, and revenue collection.

The agency maintains its own maintenance apparatus shop. The fleet maintenance program is managed by the assistant chief of technical services who has a battalion chief, logistics coordinator, a trade helper, a lead mechanic, and two additional mechanics. Assigned drivers check the apparatus daily to ensure it is ready for service. To manage repair, request the agency utilizes a web-based program called Collective Fleet. The lead mechanic is responsible for maintaining and tracking apparatus preventive maintenance, repairs and warranty maintenance is completed. As of 2018 only major engine or transmission failures and fire boats were outsourced. The agency was able to do all the other repairs in house which was financially beneficial. The agency has sufficient reserve apparatus if needed.

Tools and equipment for engines and ladders are standardized and distributed based on the agency's SOC objectives, Insurance Service Office recommendations, and National Fire Protection Association 1901 Standard for Automotive Fire Apparatus. The new fire apparatus is fully equipped with loose equipment and is operationally ready. The agency uses the record management system to track equipment and the expiration dates in addition to daily apparatus check sheets. The department also ensures maintenance, testing, and inspections are completed by qualified personnel. The agency houses a SCBA testing center at Station 9 for Scott air packs along with a PPE cleaning, inspection and repair facility at the station.

The agency distributes safety equipment to all departmental personnel. Safety equipment is sufficient in quality and quantity for protection. In late 2019, the agency completed the project of issuing all personnel a second set of structural turnout gear and ensured the budget will allow for replacement of both sets when needed. The agency routinely evaluates the condition of safety equipment and replaces items needed. The agency keeps accurate records for all maintenance and repairs completed on safety equipment and these records are readily available.

Category 7 — Human Resources

The city provides human resources administration for the agency through a centralized Human Resources (HR) department, overseen by a human resources director. In addition, the agency employs a human resources coordinator to collect initial paperwork and help streamline human resources processes by collaborating with the human resources department.

HR follows equal opportunity standards in the hiring process. The process for new firefighters consists of a physical ability test, written test, and interview. Promotional processes for positions below the rank of shift commander consist of a written test, practical exercises, and an interview. The agency has recently implemented an internal fire recruiter position to help align the agency's demographics more closely with those of the community served. [It is recommended that the agency track demographic information for their recruit classes.](#)

In 2018, the agency implemented a new pay plan, which allows employees to progress through various pay steps by completing specified educational objectives and receiving a sign off. In 2019, a separate pay plan was implemented for the fire marshal's division.

The city publishes an employee handbook containing policies on ethics, sexual harassment, and grievances. The handbook is provided to all new employees during orientation and is available online. In addition, the agency publishes its own standard operating procedures which contain additional policies applicable to its employees. The city maintains a disciplinary policy; however, the agency has established its own disciplinary policy specific for firefighters in order to ensure greater consistency when applied to its personnel.

Job descriptions exist for all positions within the agency. These are maintained by the HR and updated as needed with input from agency personnel. The city has an established employee appraisal process, the agency has found the city performance appraisals do not properly evaluate shift personnel, and do not participate in this appraisal process. [It is recommended that the agency implement an employee appraisal system that appropriately evaluates its personnel.](#)

The agency maintains a promotional matrix outlining requirements for advancing to the next rank, as well as how the pay scale aligns with the various ranks. This exists for both operations and fire

inspector personnel. Since 2018, the Chief has been making routine weekend visits to firehouses to ensure feedback and input is received from all personnel.

The agency implemented a new pay scale for operations and fire inspector personnel in 2018. This pay scale includes the ability to advance to certain ranks by completing educational objectives and receiving sign-off. Non-sworn personnel follow the pay matrix used by the City of Charleston. Both pay matrices are available on the City's intranet site, along with all employee benefit information.

The agency works closely with the city's appointed safety director, who is responsible for the risk management program. The agency established an internal safety officer position to provide greater focus on the health and safety of its personnel. The agency maintains an occupational health and safety plan, though it has not been updated since 2009.

Accidents and identified safety risks are reported to the city's safety officer, who maintains all records for these incidents. Though the agency has encouraged near-miss reporting, concerns over discipline have limited notification of such occurrences.

The agency has a peer fitness team of four certified trainers who provide fitness coaching to new recruits as well as incumbent personnel, though physical ability tests are only applied to recruits. While not every station has fitness equipment on site, the agency has provided access to local gyms for all firefighters on duty. Agency personnel have access to counseling and critical incident stress management through an internal peer support team as well as the independent Lowcountry Firefighter Support Team.

Category 8 — Training and Competency

The agency has a training and education program in place to meet its needs and is consistent with the goals and objectives of the strategic plan. Training needs are identified by research on state and national standards, standard operating procedures, critiques, and regional partners. The agency has required minimum level of training based on all positions based on the National Fire Protection Association (NFPA) then goes above and beyond to ensure personnel are ready for higher ranks by offering recruit academy, driver academy, and an officer development program along with several others. The officer development program is an 80-hour course, all command staff and officers have to complete. The program educates personnel in leadership, ethics, sensitivity, emergency response command, and organizational culture.

The agency has an extensive process to certify personnel are properly trained. The agency has developed task books for the positions of probationary firefighter, driver operator, acting officer, and acting battalion chief. The agency has continued to improve the use of training schedules and has implemented a detailed monthly training schedule to ensure required training hours are met. Training hours are tracked in Target Solutions and have shown an increase in hours from 2017 to 2019. The agency uses performance-based evaluations for individual and crew performance to ensure they are in line with the industry standards. The agency uses Target Solutions to maintain, track, and evaluate training records. The agency has also created an evaluation process through Survey Monkey to better evaluate training classes.

The agency ensures personnel are provided with current training manuals and publications in print format at the training facility and at the stations. The agency has a robust set of instructors consisting of eight full time instructors and over thirty adjunct instructors. The agency has a training facility

with four classrooms, a climate-controlled storage facility, office, burn building, flashover simulator, commercial building prop, ventilation prop, and numerous other training props. The training facility has one assigned engine and additional reserve apparatus available to use when needed. The agency has been made aware of the land where the training facility is being sold and will eventually have to vacate the property. The agency is exploring real estate options in hopes a new training facility can be built before the department is removed from the present site. No funding has been secured at the time. The agency has developed in-house courses based on national standards and has a complete library of training manuals for personnel. This process has shown improvement in test scores on promotional processes and tactical decisions. The agency evaluates training material annually by referring to the performance requirements of the NFPA and materials developed by the International Fire Service Training Association to ensure materials reflect current practices.

Category 9 — Essential Resources

Criterion 9A – Water Supply

The peer assessment team confirmed that the Charleston Fire Department is in receipt of a most recent Insurance Services Office (ISO) grading of 39.92 out of 40 points. The department has submitted its most recent ISO report as prima facie compliance with this criterion.

Criterion 9B – Communication Systems

The summary is comprehensive and complete. The agency has identified service level impacts from the Consolidated Dispatch Center (CDC). Administrative staff are well-qualified. The radio channels and talk-groups are sufficient, reliable, and work well currently and staffing is sufficient. Strategic plans were from 2015-2020 and were right on task. Charleston County maintains a budget to maintain radio towers, and they place in their Capital Improvement Plan (CIP) budget when new towers for communication are needed. Due to COVID 19 restrictions, the site team assessors were not allowed to go through the 911 center, but through interviews, reviewing their data, and diagrams of the center, the team observed it meets their needs.

Communications have an adequate back-up system of diesel engine generators in the event of a major disaster in the city. It has automated backup capability. Communications has effective standard operating guidelines (SOP). Generators are tested regularly, and all required maintenance is completed as needed. Call volume has been steadily increasing each year and the present numbers of dispatchers are able to handle the workload. There is an adequate training program to train new dispatchers and ongoing training for veteran dispatchers. The radio system provides inoperability for all Charleston County emergency responders. Yearly appraisals are documented and performed each year. Additionally, the communications center has a formal Emergency Medical Dispatch (EMD) system. This system gives pre-arrival instructions to the responders and works well. The radio coverage is through 16 public safety towers and meets the present alarm load.

Criterion 9C – Administrative Support Services and Office Systems

The agency's administrative services are adequate to provide efficient services to personnel and citizens. The administrative services manager position was reclassified to the assistant chief of planning and administration, which is a sworn position. The administrative division is comprised of

five civilian staff located in headquarters. There are two civilians in the fire marshal division, and one in training. The division oversees human resource function, budget and purchasing, payroll, citizen requests, ISO, and accreditation. The agency has a fire data analyst which was added in 2019 to assist in mapping for strategic planning and service analysis. Each station has adequate office equipment and supplies to meet the department's needs. The fire marshal serves as the public information officer and coordinates press releases; as well as manages the department social media accounts and life safety education activities. The agency's headquarters provides a public reception area staffed by an administrative assistant during business hours. The agency is able to assist the public with information regarding fire, rescue/emergency medical services topics.

The agency provides tuition assistance after one year of employment to encourage personnel to obtain higher education. The agency also provides continuing education for civilian administrative staff through conferences and other venues. The informational technology department provides training in Microsoft Suite and other software products through outside vendors. The agency acknowledges the benefit of extending civilian staff professional development training to gain retention and output. The general office files, financial files, and leave files are maintained at headquarters and disposed of accordingly by mandates.

Category 10 — External Systems Relationships

The agency maintains working relationships with a variety of outside organizations in furtherance of its operational mission. The Charleston County Consolidated Dispatch Center provides dispatch services for all agencies within the county, including the agency's five automatic aid partners. The agency also works closely with the Emergency Management and EMS services of Charleston and Berkeley Counties. It participates in a number of regional professional development associations, including the South Carolina Firefighter's Association, South Carolina State Association of Fire Chiefs, and South Carolina Chapter of the International Association of Arson Investigators. No formal conflict resolution policy exists with any partner agencies, and the agency has relied on open and regular communication to avoid conflicts.

The agency meets on a regular basis with its critical external partner agencies, including those with whom it has automatic aid agreements. The process for reviewing the agreements is currently informal, with changes made on an as needed basis. The Fire Chief has reached out to his peers to attempt to formalize the review process. [It is recommended that the agency establish a formal process for reviewing external agency agreements.](#)