

Service Authority for Freeways and Expressways Annual Report

Fiscal Year 2020 - 2021



PROGRAM OVERVIEW

About the Program

The Transportation Agency for Monterey County's Service Authority for Freeways and Expressways (SAFE) program provides free emergency telephone service to stranded motorists through call boxes. The program is a joint effort between the California Department of Transportation (Caltrans), the California Highway Patrol and the Transportation Agency. Agency staff oversee the program contracts and daily operations. The call boxes are linked directly to a call answering center where live operators dispatch the calls to the California Highway Patrol, tow trucks and/or emergency services. Since its inception in 1999, thousands of stranded motorists have received assistance through call boxes in Monterey County.



Funding

Funding for the program is from a \$1 registration fee on each registered vehicle in Monterey County collected by the Department of Motor Vehicles, which generates approximately \$387,000 per year for Monterey County. The annual operating cost for fiscal year 2020 – 2021 was \$119,200. In the past, revenues in excess of annual operating costs were utilized to pay capital costs to acquire and install each new phase of call box equipment. Currently these remaining funds are used for call box maintenance and upgrades as well as the local match for the Freeway Service Patrol program and to support other Agency motorist aid services, including the Go831 Rideshare and Traveler Information program.

Service Routes

Currently, the call box program provides a system of 158 call boxes allowing motorists to request roadside assistance along the following routes: State Route 1, State Route 68, State Route 156, US Highway 101, Jolon Road (G14 and G18) and Carmel Valley Road /Arroyo Seco

Road (G16). The call boxes along Jolon Road and Carmel Valley /Arroyo Seco Roads were added in 2010 at the request of Monterey County Public Works and the South Monterey County Fire Protection District to enhance safety and provide emergency roadside assistance to motorists, given the lack of cellular reception in these areas. These locations include areas that have historically seen accidents and fires, and that have limited or no access to other forms of communication (such as pay phones and residential/commercial districts).

Maintenance Activities

In February 2014, the Agency entered into a three-year maintenance and improvement contract with CASE Systems Inc. to ensure all call boxes are maintained and to evaluate Americans with Disabilities Act (ADA) access requirements to accommodate persons in wheelchairs. The contract was renewed for an additional three years in 2017. After release of an RFP for Call Box Maintenance and Improvements in April 2020, the Agency entered into a three-year contract with CASE Emergency Systems. Under this contract, CASE is responsible for replacing knocked down call boxes as well as performing corrective maintenance on all call boxes. Maintenance work includes making repairs associated with electronics, transceivers, power supply, and the interface with the cellular system, in addition to keeping call boxes clean and operational by conducting preventive maintenance field visits at least two times a year. This contract includes tasks to upgrade the existing call boxes to 4G cellular services as well as site improvements at the call boxes to improve accessibility for disabled motorists. The 4G cellular service upgrades have been completed. The site improvement project will begin after implementation of the Call Box Modernization Plan (reduction plan) which has been approved by Caltrans and the California Highway Patrol.

Call Routing

Call box calls were originally routed to and answered by the California Highway Patrol. In January 2005, the Agency shifted the call answering service to a private call answering center to reduce costs, improve service, and increase reporting. In June 2016, following a competitive procurement process, the Agency approved a new three-year contract with Keolis Transit Services, LLC to provide call box answering services. In May 2018, the Agreement with Keolis was assigned to AAMCOM, LLC. In June 2019, the Agency exercised its option to extend the contract to June 2022.

Previous Annual Reports

The Agency has baseline data from the program starting in fiscal year 2005 - 2006 and has tracked call box usage in a consistent manner since fiscal year 2013 - 2014 for year-to-year comparisons. Since fiscal year 2014 - 2015, there has been a decline in usage as well as a shift. The majority of calls currently come from call boxes along State Route 1. The number of calls in 2020 - 2021 is down 43.4% from fiscal year 2014 - 2015 volumes and down 8% from fiscal year 2019-2020 volumes.

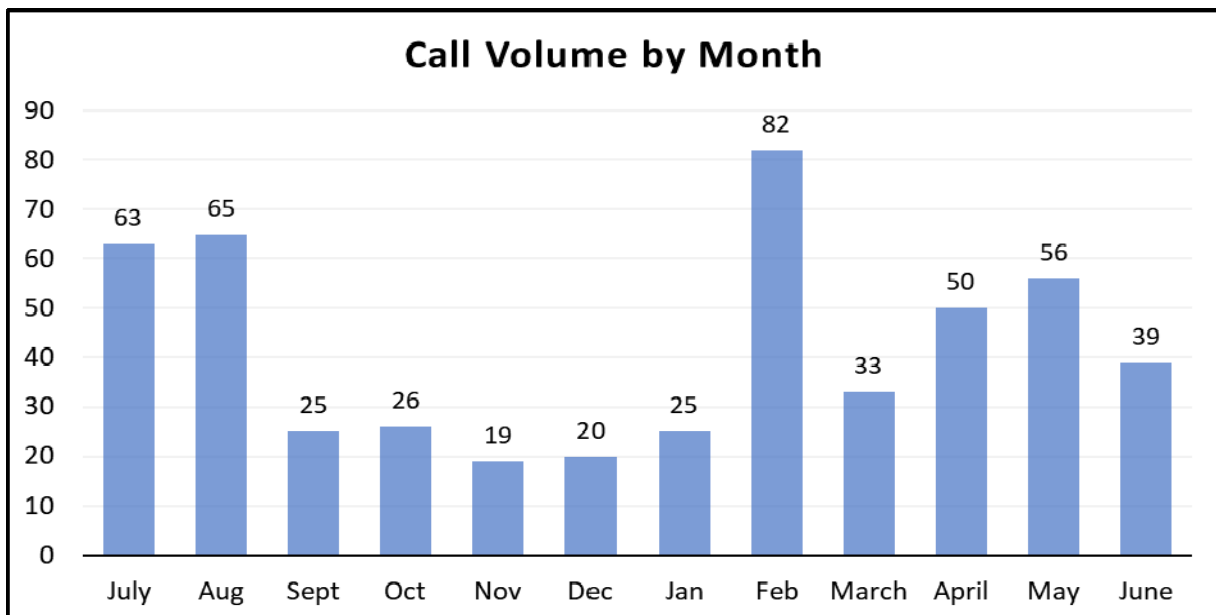
USAGE EVALUATION

AAMCOM, our call box answering center consultant, provides call box usage data which allows the Agency to evaluate the program.

Call Volume by Month

In fiscal year 2020 - 2021, the total number of calls was 503 with an average of 42 calls per month. This excludes the 269 calls received from call boxes or regular calls outside the county. Figure 1 shows the monthly call volume for fiscal year 2020 – 2021. February had an unusually high call volume. This was due to two call boxes malfunctioning and registering a high number of open line calls into the answering center. Excluding February, this year saw higher volumes in the summer months of June and July and a seasonal decline in the winter months. This was the case in fiscal year 2018-2019 but not fiscal year 2019-2020 where the call volumes were more evenly distributed throughout the year.

Figure 1: Call Volume by Month (Fiscal Year 2020 – 2021)



The last five years have a total call volume of 2,347 with an average of 469 calls per year. Table 1 shows the monthly call volumes for fiscal years 2016 – 2017 through 2020 – 2021. The months of July and June typically see the highest call volumes while November and February typically see the lowest call volumes. On March 18, 2020, a Shelter in Place Order for Monterey County went into effect followed by a statewide order on March 19, 2020. These Orders were in response to the COVID-19 pandemic. The April 2020 monthly call volume saw a fifty-one percent reduction compared to April 2019. After the initial impacts from the Shelter Order, fiscal year 2020-2021 began to see call volumes returning to more normal volumes. In general, call box usage continues to decline from previous years.

Table 1: Call Volume by Month (Fiscal Years 2016 – 2017 through 2020 – 2021)

FY	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	Total	Avg
2020-21	63	65	25	26	19	20	25	82	33	50	56	39	503	42
2019-20	64	35	33	31	39	122	38	25	24	19	44	73	547	46
2018-19	53	58	40	44	39	45	36	23	21	39	38	40	476	40
2017-18	123	53	44	57	46	69	82	37	53	57	30	97	748	62
2016-17	76	42	54	59	29	50	57	37	49	30	39	54	576	48
5 Yr. Avg	75.8	50.6	39.2	43.4	34.4	61.2	47.6	40.8	36	39	41.4	60.6	2,347	469

Call Volume by Route

Figure 2 shows the percentage of call volume by Route. State Route 1 continues to have the largest percentage of call volumes. The 74% of total volume for this fiscal year is an artificially inflated call volume due to “runaway calls”. If you remove the runaway calls, 65% of the total volume is from State Route 1. US Highway 101 with 14% had the second largest percentage of call volumes. Call boxes along the remaining routes make up the balance of total call volumes.

Runaway calls are excessive calls into the Call Answering Center (CAC) where no one is on the line and are classified as “Call Box Check” calls. They are generated for several reasons. The most common reasons are when weather impacts the call box (moisture shorts the controller board) or when equipment fails (radio, SIM card, etc.). In these cases, the CAC notifies the maintenance provider which box is experiencing runaway calls so they can address the issue. These issues can usually be addressed quickly.

In addition to CAC notifications, our maintenance provider has a system in place where call boxes call into the system nightly to report their status (all clear, low battery, broken handset, etc.). If a scheduled call is not received, the system will retry in four hours. If the retry call is not received, a site visit to investigate the issue will be scheduled. If a call box is knocked down, the tilt sensor immediately generates a check-in call to the maintenance system.

Figure 2: Call Volume Percentage by Route (Fiscal Year 2020 – 2021)

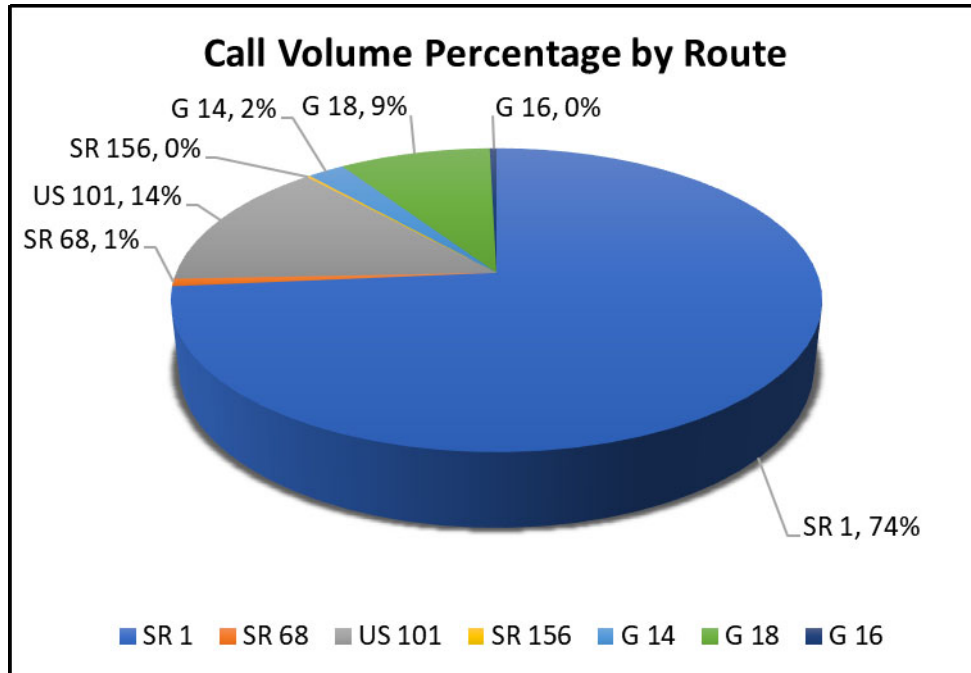


Table 2 shows the yearly percentage of call volume by route for fiscal years 2016 – 2017 through 2020 – 2021. State Route 1 continues to have the highest percentage of call volumes while State Route 156 continues to have the lowest percentage of call volumes. As noted earlier, State Route 1 is artificially inflated due to runaway calls. State Route 68 was artificially inflated in fiscal year 2019-2020 due to runaway calls from a malfunctioning call box.

Table 2: Call Volume Percentage by Route (Fiscal Years 2016 – 2017 through 2020 – 2021)

FY	SR 1	SR 68	US 101	SR 156	G14	G18	G16
2020-21	74%	1%	14%	0%	2%	9%	0%
2019-20	44%	11%	30%	1%	2%	2%	11%
2018-19	51%	2%	36%	1%	2%	1%	7%
2017-18	41%	3%	48%	1%	1%	1%	6%
2016-17	46%	2%	40%	1%	1%	1%	10%

Table 3: Call Volume by Route (Fiscal Years 2016 – 2017 through 2020 – 2021)

FY	SR 1	SR 68	US 101	SR 156	G14	G18	G16	Total
2020-21	370	4	70	1	11	45	2	503
2019-20	241	58	162	5	12	9	60	547
2018-19	244	11	171	5	9	4	32	476
2017-18	306	23	360	5	5	6	43	748
2016-17	266	10	228	5	5	3	58	575

While Table 2 shows the percentage of call volume by route, Table 3 shows the volume of calls by route. Table 3 more clearly shows the impact of the 2016 – 2017 winter season on State Route 1. This decline in usage corresponded to the record storm season for the Big Sur Coast, where there were frequent road closures during the winter, culminating in a complete closure of State Route 1 from Pfeiffer Canyon Bridge in Big Sur to the San Luis Obispo County Line. The decline in usage for State Route 1 continued into the fiscal year 2017 - 2018 as State Route 1 was not completely reopened until July of 2018. Beginning with fiscal year 2018 – 2019, we continue to see declines in the total number of calls when compared to fiscal year 2017 – 2018 call volumes, which corresponds to the increased use of cell phones. Fiscal year 2019 – 2020 recorded 276 calls from outside the area while fiscal year 2020-2021 recorded 269. Most of these were open lines that did not display a call box identification or result in any operator talk time and are not included in the number of calls received.

Top Call Box Usage

Table 4 lists the five most used call boxes in Monterey County. During the fiscal year 2020 - 2021, the top five call boxes logged 15 or more calls each, making them the most-used call boxes in the system. The total number of calls coming in is divided between calls requiring assistance and those not requiring assistance. Those not requiring assistance include call box checks, test calls, canceled calls and those requiring no help. This fiscal year saw the same three call boxes in the top three as was the case in fiscal years 2018 – 2019 and 2019 - 2020. All of last year’s most frequently used boxes were on State Route 1 (three south of Carmel and one south of Nashua Road) with the exception of the fourth most frequently used located on US 101 north of Airport Road.

Table 4: Most Frequently Used Call Boxes (Fiscal Year 2020-2021)

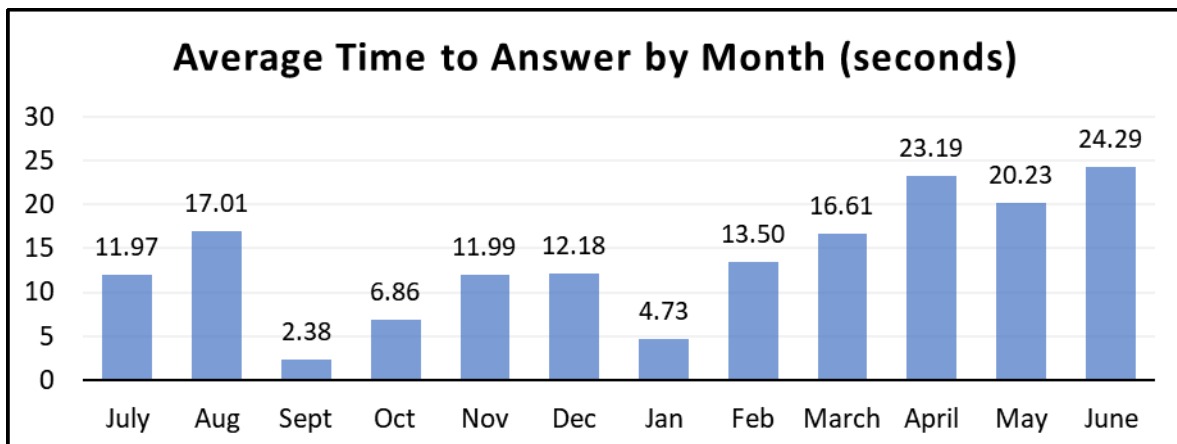
Rank	Total Calls	No Assistance Calls	Assistance Calls	Hwy or County Road	Location	Sign No.
1	97	35	62	SR 1	Sobreanes Point	MY-001-0658
2	75	37	38	SR 1	Garrapata Beach	MY-001-0632
3	65	37	28	SR 1	Salmon Creek	MY-001-0025
4	19	8	11	SR 1	Pacific Valley Station, USFS	MY-001-0146
5	15	8	7	G16	Arroyo Seco Rd, 4.5mi Eof CV Rd	MY-G16-0000

The remaining call boxes registering calls had 14 calls or less each with the majority of these call boxes with only one or two calls each for the year.

Time to Answer

The time to answer a call fluctuates based on factors such as call volumes, time period (peak vs. off-peak) and staffing. The average time to answer a call during fiscal year 2020 - 2021 was approximately 14 seconds. On a monthly basis, the longest monthly average time to answer a call was 25 seconds in June 2021. The shortest average monthly time to answer a call was approximately 3 seconds in September 2020. As shown by Figure 3, the monthly average time to answer a call has increased beginning with April 2021. This is due in part to staffing levels and COVID-19 related impacts. Even with these increases, the overall monthly average time to answer a call is 14 seconds, the same as last year which was substantially improved from the fiscal year 2018 – 2019 average of 55 seconds.

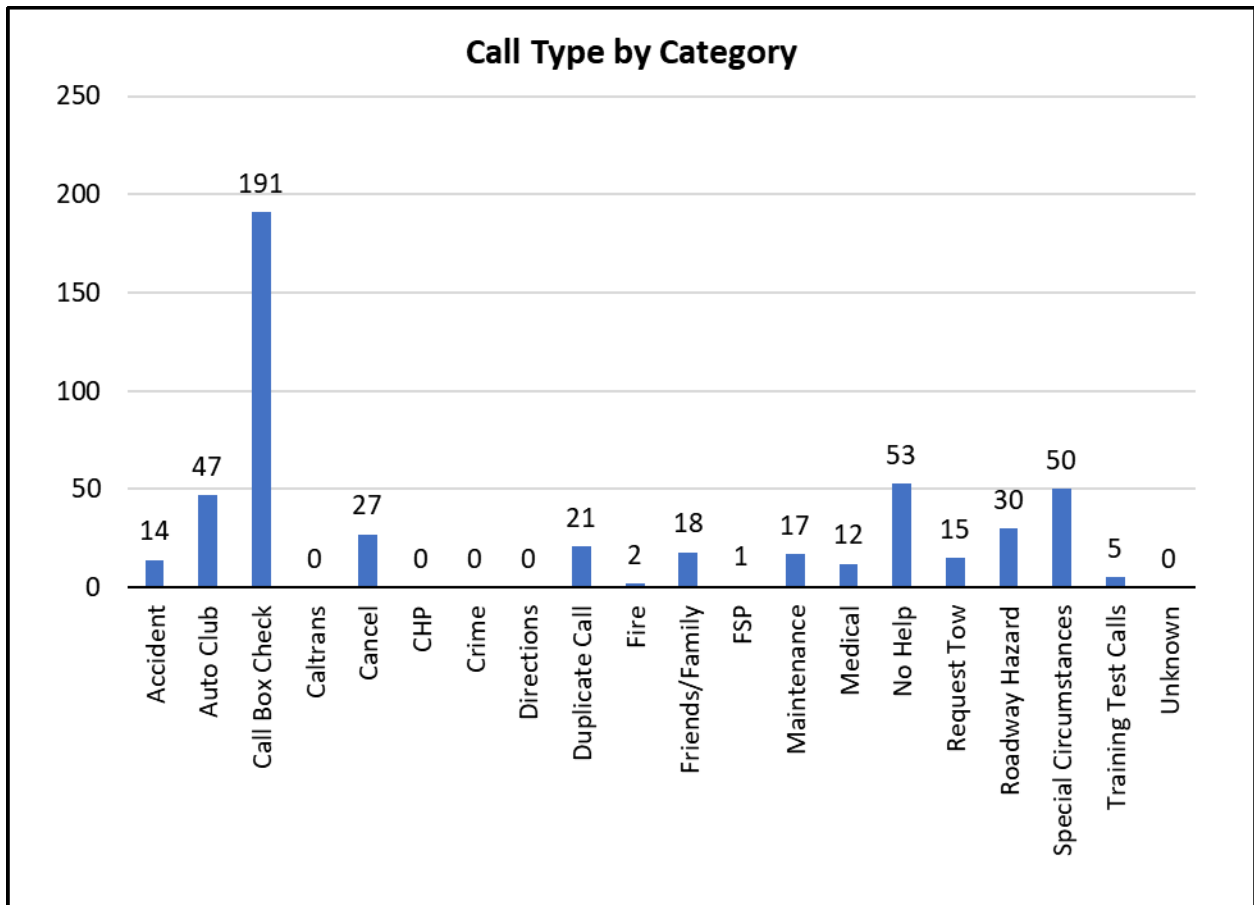
Figure 3: Average Time to Answer by Month (Fiscal Year 2020 - 2021)



Call Type by Category

The type of call received falls into one of 20 categories as defined by the call answering center. Figure 4 lists the number of calls under each category. If you remove the Call Box Check category and Duplicate Call category, the five most common types of calls are Auto Club, Cancel, No Help, Roadway Hazard and Special Circumstances. These are essentially the same top five categories as last year with Friends and Family being replaced by Roadway Hazard. Special Circumstance calls include, but are not limited to, calls where the operator feels an officer should be sent to the scene, there is a dead animal on the side of the road or a broken freeway sign.

Figure 4: Call Type by Category (Fiscal Year 2020 - 2021)



CONCLUSIONS AND NEXT STEPS

The Agency will continue to track call box usage for year-to-year comparisons as well as continue to work on other motorist-aid programs, such as implementing the Go831 Ridesharing and Traveler Information System.

In 2017, the Agency conducted a multi-year usage analysis to determine if reducing the size of the call box system was warranted. The analysis showed a considerable decline in usage along State Route 1 north of Carmel, State Route 68, US Highway 101 and State Route 156. The decline corresponds to an increase in cell phone reception along these routes, as well as the continued proliferation of cell phone ownership. The analysis has been updated to include the 2017-2018 data, further confirming the identified usage trends.

Corridors that were under consideration for call box removal include State Route 1 between Carmel and the Santa Cruz County Line, State Route 68, US Highway 101 and State Route 156. Call boxes that were under consideration to remain active include those along State Route 1 south of Carmel, Jolon Road, Carmel Valley Road, Arroyo Seco Road and additional locations throughout the county with poor cellular coverage. The recommended removal strategy maintains call boxes along corridors with a high number of incidents over the last five years and in poor cell phone service areas.

Based on the analysis, the Agency finalized the Call Box Modernization Plan for Monterey County and received approval from Caltrans and the California Highway Patrol, as required by the statewide call box program guidelines. The Agency plans to begin removals in the next fiscal year.