

Service Authority for Freeways and Expressways Annual Report

Fiscal Year 2021 - 2022



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.



Call Box along the Big Sur Coast

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 2021 – 2022 was \$113,100. 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 91 call boxes allowing motorists to request roadside assistance along the following routes: State Route 1, State Route 68, 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. Following a joint procurement for call answering services in early 2022 with the San Luis Obispo Council of Governments, the Santa Cruz County Regional Transportation Commission and the Metropolitan Transportation Commission (SF Bay Area) as the lead agency, three-year agreements with AAMCOM were executed by each agency with the option to renew for an additional three years. By teaming with fellow agencies to procure call answering services, TAMC enjoys cost saving as a result of the higher call volumes when combined with a larger agency.

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 2021 - 2022 is down 52% from the fiscal year 2014 - 2015 call volume of 889 and down 14% from the fiscal year 2020-2021 call volume of 503.

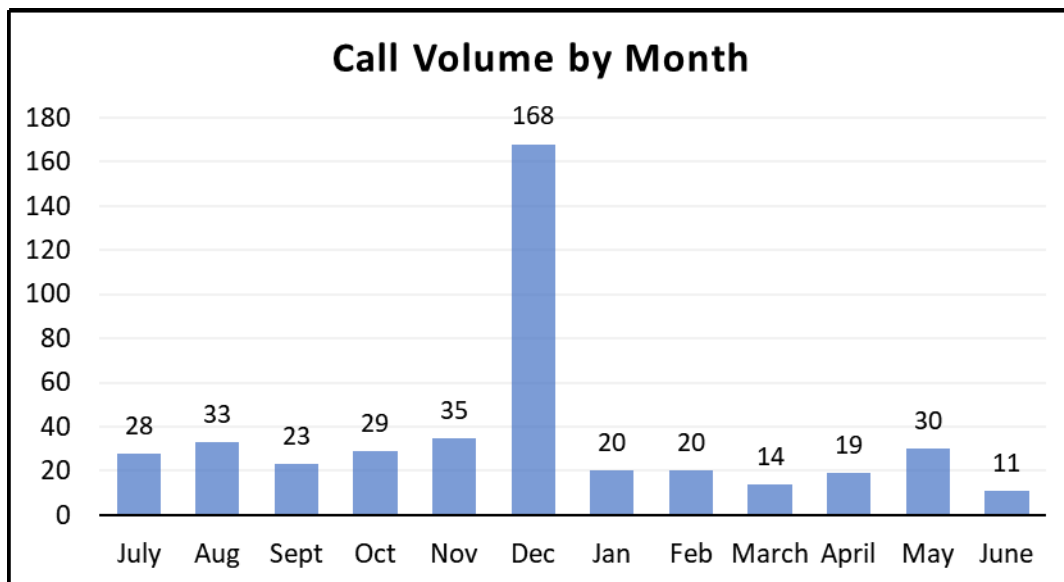
USAGE EVALUATION

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 2021 - 2022, the total number of calls was 430 with an average of 36 calls per month. This excludes the 224 calls received from call boxes or regular calls outside the county. Figure 1 shows the monthly call volume for fiscal year 2021 – 2022. December had an unusually high call volume. This was due to runaway calls from a malfunctioning call box registering a high number of open line calls into the call answering center. Excluding December, this year saw higher volumes in the first half of the fiscal year. This was not the case in fiscal year 2020 – 2021 where there were more calls in the summer months with the traditional decline in winter months.

Figure 1: Call Volume by Month (Fiscal Year 2021 – 2022)



The last five years have a total call volume of 2,274 with an average of 455 calls per year. Table 1 shows the monthly call volumes for fiscal years 2017 – 2018 through 2021 – 2022. The months of July and June typically see the highest call volumes while November and February typically see the lowest call volumes. December 2021 had an unusually high call volume due to runaway calls from a malfunctioning call box. 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. Call volumes in 2021-2022 are also reduced by the initial implementation of Modernization Plan which began removing call boxes in early 2021.

Table 1: Call Volume by Month (Fiscal Years 2017 – 2018 through 2021 – 2022)

| FY | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | April | May | June | Total | Avg |
|----------|------|------|------|------|------|------|------|------|-----|-------|------|------|-------|-----|
| 2021-22 | 28 | 33 | 23 | 29 | 35 | 168 | 20 | 20 | 14 | 19 | 30 | 11 | 430 | 36 |
| 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 |
| 5 Yr Avg | 66.2 | 48.8 | 33 | 37.4 | 35.6 | 84.8 | 40.2 | 37.4 | 29 | 36.8 | 39.6 | 52 | 2,274 | 455 |

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 66% of total volume for this fiscal year is an artificially inflated call volume due to “runaway calls”. If you remove the runaway calls, 57% of the total volume is from State Route 1. US Highway 101 with 23% 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 2021 – 2022)

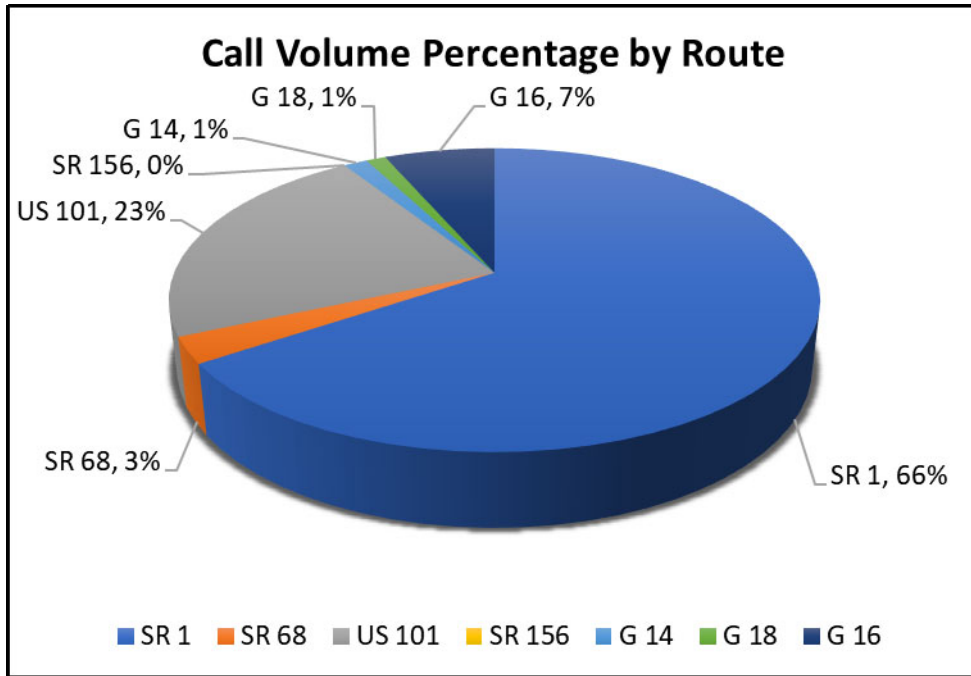


Table 2 shows the yearly percentage of call volume by route for fiscal years 2017 – 2018 through 2021 – 2022. State Route 1 continues to have the highest percentage of call volumes while county routes G14 and G18 have the lowest percentage of call volumes in fiscal year 2021 - 2022. G14 and G18 took over from State Route 156 as the lowest volume routes since the four call boxes along State Route 156 have been removed resulting in zero calls for SR 156. As noted earlier, State Route 1 is artificially inflated due to runaway calls. A call box on State Route 1 near Marina malfunctioned in both the previous fiscal year and this fiscal year. The call box was repaired both times and is no longer experiencing runaway calls.

Table 2: Call Volume Percentage by Route (Fiscal Years 2017 – 2018 through 2021 – 2022)

| FY | SR 1 | SR 68 | US 101 | SR 156 | G14 | G18 | G16 |
|---------|------|-------|--------|--------|-----|-----|-----|
| 2021-22 | 66% | 3% | 23% | 0% | 1% | 1% | 7% |
| 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% |

Table 3: Call Volume by Route (Fiscal Years 2017 – 2018 through 2021 – 2022)

| FY | SR 1 | SR 68 | US 101 | SR 156 | G14 | G18 | G16 | Total |
|---------|------|-------|--------|--------|-----|-----|-----|-------|
| 2021-22 | 282 | 12 | 97 | 0 | 6 | 5 | 28 | 430 |
| 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 |

While Table 2 shows the percentage of call volume by route, Table 3 shows the volume of calls by route. Beginning with fiscal year 2018 – 2019, we continue to see declines in the total number of calls when compared to call volumes in earlier years, 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 and 224 in fiscal year 2021 - 2022. 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 2021 - 2022, the top five call boxes logged 11 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 and test or maintenance calls. This fiscal year saw the same three call boxes in the top five as was the case in the past three fiscal years. Four of last fiscal year’s and three of the previous fiscal year’s most frequently used boxes were on State Route 1 south of Carmel.

Table 4: Most Frequently Used Call Boxes (Fiscal Year 2021-2022)

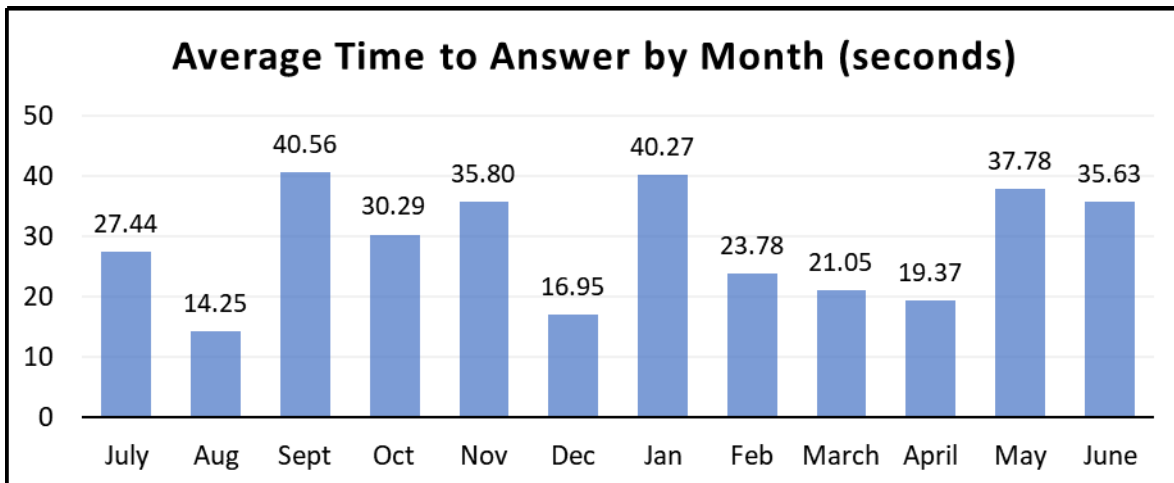
| Rank | Total Calls | No Assistance Calls | Assistance Calls | Hwy or County Road | Location | Sign No. |
|------|-------------|---------------------|------------------|--------------------|-----------------------------|-------------|
| 1 | 54 | 12 | 42 | SR 1 | Salmon Creek | MY-001-0025 |
| 2 | 28 | 1 | 27 | SR 1 | Sobreanes Point | MY-001-0658 |
| 3 | 30 | 7 | 23 | SR 1 | Garrapata Beach | MY-001-0632 |
| 4 | 12 | 0 | 12 | SR 1 | Pacific Valley Station USFS | MY-001-0146 |
| 5 | 14 | 3 | 11 | SR 1 | Radio Point, south of Gorda | MY-001-0048 |

The remaining call boxes registering calls had 6 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 29 seconds. On a monthly basis, the shortest average monthly time to answer a call was approximately 14 seconds in August 2021. The longest monthly average time to answer a call was 41 seconds in September 2021. The monthly average time to answer a call has been higher than previous months beginning in 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 still improved from the fiscal year 2018 – 2019 average of 55 seconds.

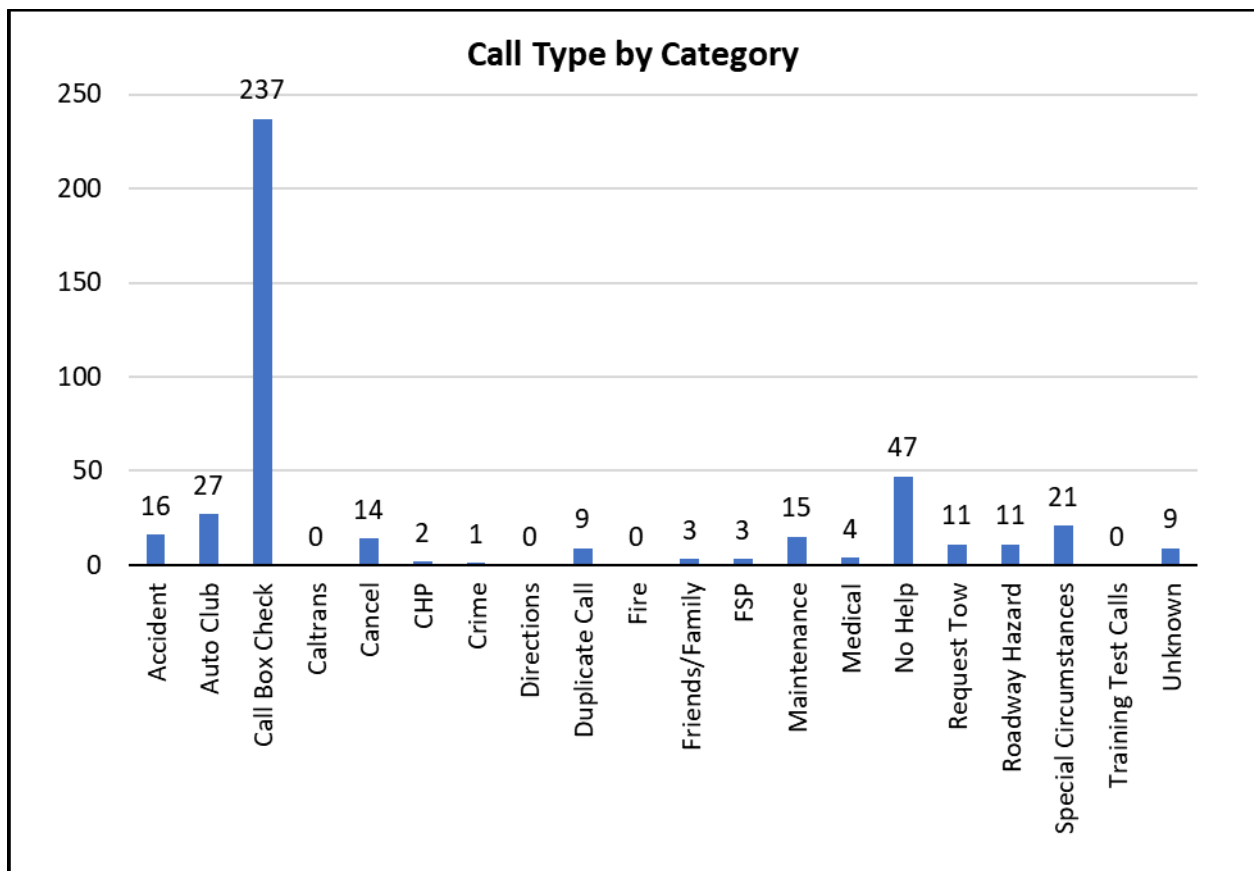
Figure 3: Average Time to Answer by Month (Fiscal Year 2021 - 2022)



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, the five most common types of calls are Accident, Auto Club, Maintenance, No Help and Special Circumstances. These are essentially the same top five categories as last year with Accidents replacing Roadway Hazards and Maintenance replacing Canceled. 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 2021 - 2022)



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 began removals in 2021. While San Luis Obispo and Santa Barbara performed removals under their Caltrans Call Box Maintenance permits, TAMC's removals were placed on hold after Caltrans determined a separate encroachment permit should be required. Staff have applied for the separate permit and hope to restart removals in a couple of months. To date, approximately 95 call boxes have been removed from their poles. These include the four call boxes along State Route 156 as well as additional call boxes along State Route 1 and US Highway 101.