



# INSPECTOR GENERAL

California Department of Transportation

## Audit of the Clean California Program: Litter Abatement Efforts



Independent Office of Audits and Investigations

Bryan Beyer, Inspector General  
Diana Antony, Chief Deputy

March 2024  
23A.PROG02



For questions or assistance concerning the contents of this report, please contact (916) 323-7111 or email [ioai.reports@dot.ca.gov](mailto:ioai.reports@dot.ca.gov).



# Inspector General

California Department of Transportation

Bryan Beyer, Inspector General

Diana Antony, Chief Deputy

March 28, 2024

Tony Tavares  
Director  
California Department of Transportation  
1120 N Street  
Sacramento, CA 95814

## Final Report — Audit of the Clean California Program: Litter Abatement Efforts

Dear Director Tavares:

The Independent Office of Audits and Investigations completed its audit of the litter abatement efforts within the Clean California Program.

Enclosed is our final report, which includes your response to the draft report. The final report is a matter of public record and will be posted on our website.

A Corrective Action Plan (CAP) addressing the recommendations is due from Caltrans 60 days from receipt of this letter. Thereafter, we ask that you provide us with an update every six months and one year from the report issuance date, until all findings have been addressed. The CAP should be sent to [ioai.reports@dot.ca.gov](mailto:ioai.reports@dot.ca.gov).

If you have any questions regarding this report, please contact Fabiola Torres, Deputy Inspector General, at (916) 704-3628.

Sincerely,

Bryan Beyer, CIG  
Inspector General

Gavin Newsom, Governor

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March 28, 2024  
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## Terms Used in Report

Term/Acronym	Definition
Butte County	Butte County Office of Education (Local public agency that partnered with Caltrans to assist with litter collection)
Caltrans	California Department of Transportation
IMMS	Integrated Maintenance Management System
Program	Clean California Program





## Summary

The California Department of Transportation (Caltrans) is responsible for, among other things, maintaining California's state highway system. Among the responsibilities of Caltrans' Division of Maintenance is overseeing the Clean California Program (Program), which is an initiative designed to remove litter, create jobs, and beautify California. Beginning in 2021, Caltrans received \$1.2 billion from the General Fund to implement the Clean California Program, including \$418 million to increase litter abatement or collection efforts by:

- Increasing the number of Caltrans' maintenance crews dedicated to litter abatement,
- Partnering with the Butte County Office of Education to hire additional litter collection crews,
- Offering a stipend of \$250 to encourage new Adopt-A-Highway adopters,
- Partnering with local agencies to collect litter on Caltrans' behalf, and
- Offering Free Dump Day Events for members of the public.

The efforts of Caltrans' staff, contractors, and members of the public have had a positive impact on the beautification of California. Highway cleanliness, as measured by Caltrans' level of service evaluations, has dramatically improved since the inception of the program. Caltrans measures these evaluations using a scoring system of between zero and 100, with the latter being the cleanest score. For instance, when it began the program in July 2021, Caltrans assessed its statewide level of service to be 43. In just over a year, Caltrans was able to consistently maintain a statewide score near or above 80.

Caltrans also established a goal of removing an additional 1.2 million cubic yards of litter from the state highway system between July 1, 2021, through June 30, 2024. For our audit period, which ended April 17, 2023, Caltrans reported that it had collected 502,547 cubic yards of litter. However, we found that Caltrans' process of collecting and reporting this data was potentially unreliable, decreasing our confidence that Caltrans had actually collected this number of cubic yards. For example, we determined that 68,583<sup>1</sup> of the 130,479 cubic yards of litter (53 percent) that we reviewed was either unsupported by source records, erroneously calculated, or miscategorized. We did not infer that unsupported data was inaccurate, but without being able to validate its accuracy, we have less confidence that it was reliable for reporting purposes. Caltrans could improve its data collection and retention practices by developing clearer guidance to its staff and improving its oversight of the process.

Furthermore, we found that Caltrans' reporting methodology to the public

<sup>1</sup>Of the 68,583 cubic yards of litter that we questioned, 59,260 cubic yards (86 percent) was unsupported, 6,729 cubic yards (10 percent) was miscalculated, and 2,594 cubic yards (4 percent) was miscategorized.

and Legislature was not as transparent as it could have been and was potentially misleading. Specifically, when Caltrans reported the amounts of cubic yards that it had collected, it did not differentiate between the efforts under the Clean California Program and those from other litter collection programs that were already in place (and separately funded). Our review of Caltrans' data revealed that most of the litter collected was actually from non-Clean California related programs. As a result, Caltrans' reporting methodology has made it more difficult to assess the progress and success of the Clean California Program in isolation. To increase transparency, we suggest Caltrans separate the reporting of its data so that members of the public and the Legislature would know how much litter it collected under each of the various programs and efforts.

In response to the concerns raised in this audit, Caltrans brought to our attention several initiatives to improve its data collection, tracking, and reporting processes. In response to our discussions with key staff, Caltrans indicated that it initiated several potential corrective measures, including:

1. Drafting a new policy memo and updating the Caltrans Maintenance Manual to address data reliability by improving instructions for data entry, reviewing entered data, and maintaining documentation to support the data.
2. Piloting a new process to electronically report litter data, with the intent to reduce errors. This process includes using portable electronic devices and software applications to enter data electronically and quick-response codes to geolocate the location where litter is collected.
3. Developing a new process for its maintenance staff to reconcile invoices and work orders.
4. Implementing a new quality assurance/control procedure for its headquarters staff to review data submitted by the districts.

While we commend Caltrans for acting promptly, its corrective measures fell outside of our audit period. Therefore, we did not provide any conclusion as to their impact on our findings. We will assess Caltrans' responses to our audit as part of our normal corrective action process. Nevertheless, we appreciate Caltrans' attention to these issues and are optimistic that its recent changes will improve its processes.

We conducted this audit in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We gained an understanding of Caltrans' policies and procedures, operations, and assessed key internal controls significant to the audit's objectives. We also performed a risk assessment to identify and evaluate whether key internal controls relevant to our audit objectives were properly designed, implemented, and operating as intended. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Introduction

### Background

#### **Caltrans' Litter Abatement Efforts Prior to Clean California (or Non-Clean California Program Efforts)**

The Caltrans' Division of Maintenance oversees numerous programs, including various litter abatement programs. Prior to the Clean California Program, Caltrans' litter abatement programs removed litter, debris, and sediment to help maintain traffic safety, protect water quality, maintain adequate drainage, and provide attractive facilities for travelers and local communities. These efforts consist of maintenance crews, special programs people, and Adopt-A-Highway adopters (those who agree to clean up certain areas of the highway). In 2020, a surge in public-generated trash exhausted available resources, which necessitated additional funding to meet maintenance standards.

#### **The Clean California Program**

To transform California's streets and highways which were blighted with litter and hazardous waste, California passed Assembly Bill 149 in July 2021, establishing the Clean California Program. Caltrans administers the program, which includes the following components:

- Clean California Local Grant Program — Allocates grants to local and public agencies, among other entities, to beautify and clean up local streets and roads, tribal lands, parks, pathways, transit centers, and other public spaces.
- Clean California State Beautification Program — Provides funding for beautifying and cleaning up the state highway system. In addition, the program authorizes Caltrans to procure vehicles, equipment, or other necessary products to support litter abatement.

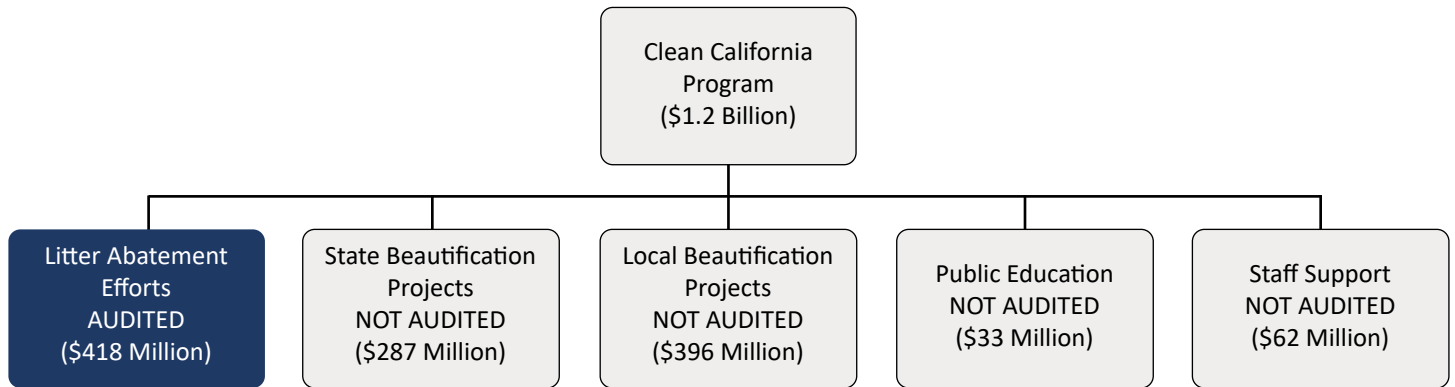
Assembly Bill 149 added to the Streets and Highways Codes sections 91.4 through 91.43, outlining Caltrans' authority, goals, and requirements for the Clean California Program. In response, Caltrans' Division of Maintenance established a dedicated Clean California Program Management Office. Importantly, these activities are separate from the activities of other litter abatement programs.

The State Budget for fiscal year 2021–22 provided a one-time funding augmentation of \$1.1 billion from the General Fund for a three-year effort to clean up garbage statewide, beautify the state's transportation network, educate the public about the harms of litter, and create long-lasting litter deterrents. The outlays from this funding consisted of: (1) \$418 million for litter abatement activities, including strengthening trash collection efforts by Caltrans and partners to eliminate over one million cubic yards of trash

from state routes, increasing access to waste facilities, and providing free monthly disposal days, (2) \$287 million for state beautification projects, (3) \$296 million for local beautification projects, (4) \$33 million over two years for a public education campaign and outreach to schools, and (5) \$62 million over three years for staff to support the initiative. In fiscal year 2023–24, the State’s Budget Act provided an additional funding augmentation of \$100 million for local beautification projects for a total of \$1.2 billion in funding for the program. Figure 1 provides an illustration of the Program’s budget allocations.

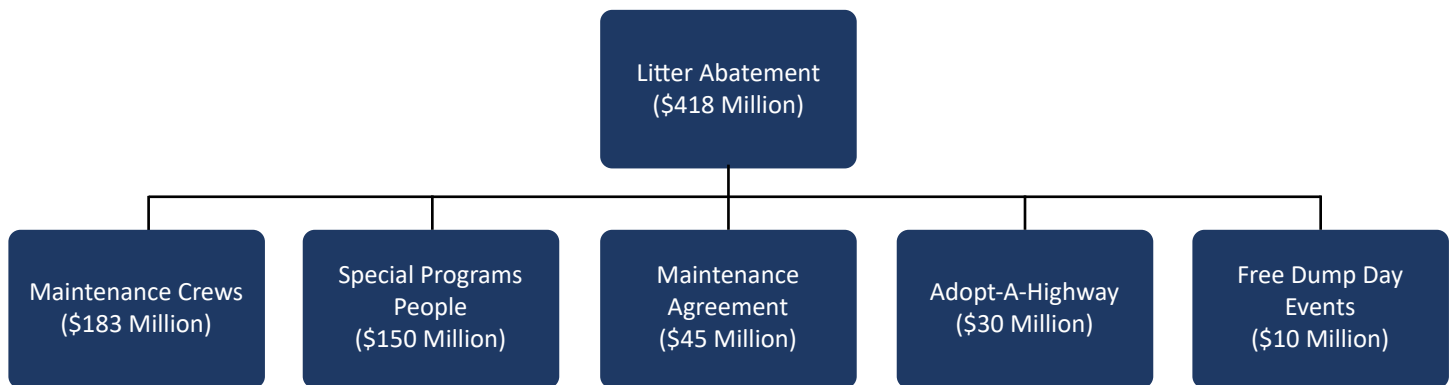
This audit focused on the Clean California Program’s litter abatement efforts.<sup>2</sup> To implement these efforts, Caltrans allocated \$418 million to five litter abatement areas as shown in Figure 2.

**Figure 1: Summary of the Budget Allocation for the Clean California Program and Subcomponents**



Source: Visualization by the Independent Office of Audits and Investigations of selected portions of Fiscal Years 2021–22 and 2023–24 Enacted Budgets.

**Figure 2. Summary of the Budget Allocation for the Clean California Program Litter Abatement Efforts**



Source: Visualization by the Independent Office of Audits and Investigations of Caltrans’ Clean California financial data for fiscal years 2021–22 through 2023–24.

<sup>2</sup>Prior to the enactment of the Clean California Program, Caltrans had several pre-existing litter abatement efforts utilizing the same names (e.g., Maintenance Crews, Special Programs People, Adopt-A-Highway, etc.). For the purpose of this audit, we focused primarily on those associated with the Clean California Program.

Caltrans established two main goals for the program:

- Level of Service — To reach and maintain a level of service score of 80 for litter abatement. See below for a more complete description and Figure 3 for more detail on the scores.
- Litter Collection — To remove an additional 1.2 million cubic yards of trash from the state highway system by June 2024.

### Caltrans’ Level of Service Evaluation Process of Its Litter Abatement Efforts

As detailed in its Legislative Report, Caltrans measures the effectiveness of its increased litter abatement efforts using a level of service evaluation. This involves quarterly statewide evaluations to measure progress towards achieving the Program's litter abatement goals. Level of service evaluations are conducted by Caltrans Maintenance Supervisors (supervisors) who drive the most highly trafficked one-mile segments of the state highway system in their region that are known to be litter “hot spots.” Caltrans uses average daily traffic data and the volume of litter-related customer service requests to determine which routes to evaluate. As part of its level of service evaluation, Caltrans assesses 2,547 highly trafficked one-mile segments of highway on a quarterly basis. For consistency, the same highway segments are evaluated each quarter. During the level of service evaluation process, supervisors assign scores to each one-mile segment based on the density of trash along the roadside at that point in time. Raw scores range from zero, 50, or 100, with the latter being the cleanest score (refer to Figure 3 for a depiction of the scoring methodology). The raw scores are then averaged into district and state level values. The average scores are then compared to a baseline from the start of the program to determine if its investment has yielded statewide improvements in litter reduction.

Figure 3. Example of a Level of Service Evaluation



Source: Caltrans’ Clean California Program Legislative Report 2022

**Table 1. Quarterly Level of Service Data**

District	One-Mile Segments	July 2021 Baseline	Fiscal Year 2021–22 Quarter 1	Fiscal Year 2021–22 Quarter 2	Fiscal Year 2021–22 Quarter 3	Fiscal Year 2021–22 Quarter 4	Fiscal Year 2022–23 Quarter 1	Fiscal Year 2022–23 Quarter 2	Fiscal Year 2022–23 Quarter 3
1	58	47	65	59	100	98	98	97	99
2	175	91	87	84	98	98	99	92	94
3	218	40	44	60	85	71	80	77	75
4	314	45	48	43	73	67	60	60	68
5	218	67	59	68	92	90	87	92	93
6	221	25	29	65	82	75	67	80	86
7	374	34	36	48	74	73	73	78	83
8	257	16	7	29	72	77	81	83	87
9	72	67	59	63	97	99	89	100	98
10	219	10	11	10	76	86	52	67	71
11	193	55	57	49	90	90	86	90	80
12	228	63	60	64	87	89	95	95	96
<b>Total and Weighted Averages</b>	<b>2,547</b>	<b>43</b>	<b>43</b>	<b>51</b>	<b>83</b>	<b>81</b>	<b>77</b>	<b>81</b>	<b>83</b>

Source: Summary of Caltrans’ quarterly level of service Fact Sheet.

We obtained quarterly level of service Fact Sheets and summarized the data in Table 1. According to this data, Caltrans met its goal of achieving a level of service score of 80 by reaching 83 in quarter three of fiscal year 2021–22 and has maintained a score above 80 for four out of the last five quarters.

**Litter Abatement Efforts Under the Clean California Program**

Caltrans increased its litter abatement efforts by increasing the number of maintenance crews, executing a cooperative agreement with the Butte County Office of Education (Butte County), partnering with local agencies, encouraging new Adopt-A-Highway participation, and offering free dump day events. Notably, Caltrans had various litter abatement efforts already in place prior to the enactment of the Clean California Program. To distinguish the various litter abatement programs from one another, Caltrans added the words “Clean California” to each effort that was funded by the Clean California Program as opposed to those funded by another source (e.g., Clean California Maintenance Crews vs. Maintenance Crews). The Clean California efforts are as follows:

**Clean California Maintenance Crews**

The Clean California Program funded temporary or limited-term positions for the Clean California Maintenance Crews’ litter abatement efforts from July 1, 2021, through June 30, 2024. These positions amounted to 361 full-time equivalent personnel-years and included various roles such as supervisor, lead worker, mechanic, and service assistants. Caltrans indicated that service assistant positions were easily accessible jobs that

involved less challenging maintenance tasks, such as litter, weed, and debris removal.

### **Clean California Special Programs People**

On December 22, 2021, Caltrans and Butte County entered into a \$127 million cooperative agreement for litter and debris removal that will expire on June 30, 2024. The overall goal of the agreement is removing an approximately 550,000 cubic yards of litter. Under this agreement, Butte County is responsible for providing a total of 82 transitional employment work crews daily at various locations within Caltrans' right-of-way. The first Butte County crew began to collect litter in February 2022. On June 28, 2022, Caltrans and Butte County amended its agreement by adding an additional \$22.6 million along with 18 transitional employment crews, for a total of \$149.6 million and 100 transitional employment crews.

### **Clean California Maintenance Agreement**

Caltrans enters into agreements with local agencies (county or city) to address litter and graffiti on and around the state highway system. As stated in the Clean California Maintenance Agreement, local agencies are funded to remove and discard litter and debris, including, but not limited to, furniture, appliances, tire casings, bulky and large items, automobile wreckage, auto components, clothing, beverage containers, food packages, and garbage.

### **Clean California Adopt-A-Highway Program**

Caltrans' Adopt-A-Highway program offers individuals, organizations, and businesses the opportunity to adopt and maintain specific sections of the roadside within California's state highway system. As a result, the public helps to reduce the workload for Caltrans' field maintenance crews.

To encourage public participation in the Adopt-A-Highway program, Caltrans offers a stipend to adopters. The Streets and Highway Code section 91.4(a) states, "Upon the completion of a scheduled cleanup and abatement of litter pursuant to an agreement with an adopter entered into pursuant to [Streets and Highway Code], Section 91.5, the department may provide a two hundred fifty dollar (\$250) stipend to the adopter." To fund the stipend, Caltrans allocated \$30 million over three years, concluding on June 30, 2024.

### **Free Dump Day Events**

Caltrans allocated funding to the Free Dump Day Events program to provide free monthly disposal days across the state. According to Caltrans' literature, "Free monthly disposal days will allow people with a timely and affordable option for disposing of large items responsibly."

In the Free Dump Days Guidelines for Implementation, Caltrans defined the purpose of Free Dump Day Events as "...to provide the public with a place to dispose of their waste materials to discourage and prevent illegal dumping on the roadways. In addition to collecting waste materials, the events will provide educational materials to the public on litter abatement."



Caltrans implemented three options for the events:

- Free Dump Day Events held at Caltrans owned facilities and partnering with waste hauling contractors, the California Highway Patrol, and local partners.
- Partnered with local agencies to host events using their facilities/setup.
- Partnered with a landfill for a voucher-based system where Caltrans distributed vouchers to the public.

### **Caltrans' Litter Collection Data Tracking Process**

Caltrans launched an internal dashboard to track all litter it collects, including the Clean California Program litter abatement efforts. The data source of the dashboard comes from work orders in Caltrans' Integrated Maintenance Management System (IMMS) and manually tracked information in Excel spreadsheets. Caltrans uses its dashboard to monitor and report the progress towards achieving the Clean California Program litter abatement goals.

To support its dashboard, Caltrans uses IMMS to create work orders and record the litter abatement efforts of the Maintenance Crews, Special Programs People, and Adopt-A-Highway program, using assigned activity codes. The Caltrans Maintenance Manual states the objective of the work order is to record the expenditures of labor, production units (e.g., cubic yards of litter), vehicles, and materials in such a way that they can be related to the planned and budgeted workload.

Additionally, Caltrans assumes that all Adopt-A-Highway participants collect the same amount of litter. Therefore, it uses a ratio to determine the proportional amount of litter collected by Clean California Adopt-A-Highway adopters, as opposed to other Adopt-A-Highway adopters. Caltrans considers all adopters who enrolled after July 1, 2021, to be part of the Clean California Program. The ratio is computed by dividing the number of Clean California Adopt-A-Highway adopters by the total number of adopters.

Caltrans also uses various spreadsheets to track the litter collection from the Clean California Free Dump Day Events and Clean California Maintenance Agreement efforts. Caltrans prepared a template for each of its districts to track invoices with dates, cubic yards collected, and additional details. A manager periodically compiles and summarizes the spreadsheets from the districts and provides the data to an IMMS consultant to manually upload in the dashboard.

As of April 17, 2023, Caltrans reported that it collected 502,547 cubic yards (refer to Table 2 on the following page), which represented 42 percent of its 1.2 million cubic yards of litter collection goal. For the Clean California Maintenance Crews, the litter collection total consists of multiple litter collection activities as shown in Table 3 on the following page.

**Table 2. Summary of the Clean California Program Litter Collection Data, by Districts and by Effort (in Cubic Yards)**

District	Clean California Maintenance Crews	Clean California Adopt-A-Highway	Clean California Special Programs People	Clean California Maintenance Agreement	Clean California Free Dump Day Events	Total
1	378	79	1,492	--	15,383	17,332
2	3,507	127	1,333	541	6,572	12,080
3	16,690	808	15,647	--	5,958	39,103
4	33,255	811	2,035	1,262	7,703	45,066
5	6,733	736	8,031	--	8,974	24,474
6	25,769	574	14,904	12,982	15,410	69,639
7	93,727	3,408	7,023	394	14,339	118,891
8	18,181	1,253	14,510	--	2,661	36,605
9	7,588	81	982	2,060	17,018	27,729
10	10,129	260	4,135	536	6,544	21,604
11	35,957	1,026	16,395	--	8,686	62,064
12	9,156	690	6,197	223	11,694	27,960
<b>Total</b>	<b>261,070</b>	<b>9,853</b>	<b>92,684</b>	<b>17,998</b>	<b>120,942</b>	<b>502,547</b>
<b>( % )</b>	<b>52%</b>	<b>2%</b>	<b>18%</b>	<b>4%</b>	<b>24%</b>	<b>100%</b>

Source: Caltrans' Clean California Program dashboard and Excel spreadsheets for the Maintenance Agreement and Free Dump Day Events. Data as of April 17, 2023.

**Table 3. Summary of the Litter Collected by the Clean California Maintenance Crews**

Activity Description	Cubic Yards	Percentage of the Litter Collection
Sweeping	10,211	4%
Litter Control	214,070	82%
Road Patrol/ Debris Pickup	20,412	8%
Encampment Litter/ Debris Removal	16,377	6%
<b>Total (rounded)</b>	<b>261,070</b>	<b>100%</b>

Source: Caltrans' IMMS Production and Support Report. Data as of April 17, 2023.

## Audit Results

### **Finding 1. Caltrans Tracked the Number of Cubic Yards of Litter It Collected from Various Clean California Program Efforts, but Unsupported, Miscalculated, and Miscategorized Data Caused Us to Question the Reliability of Its Public Reports**

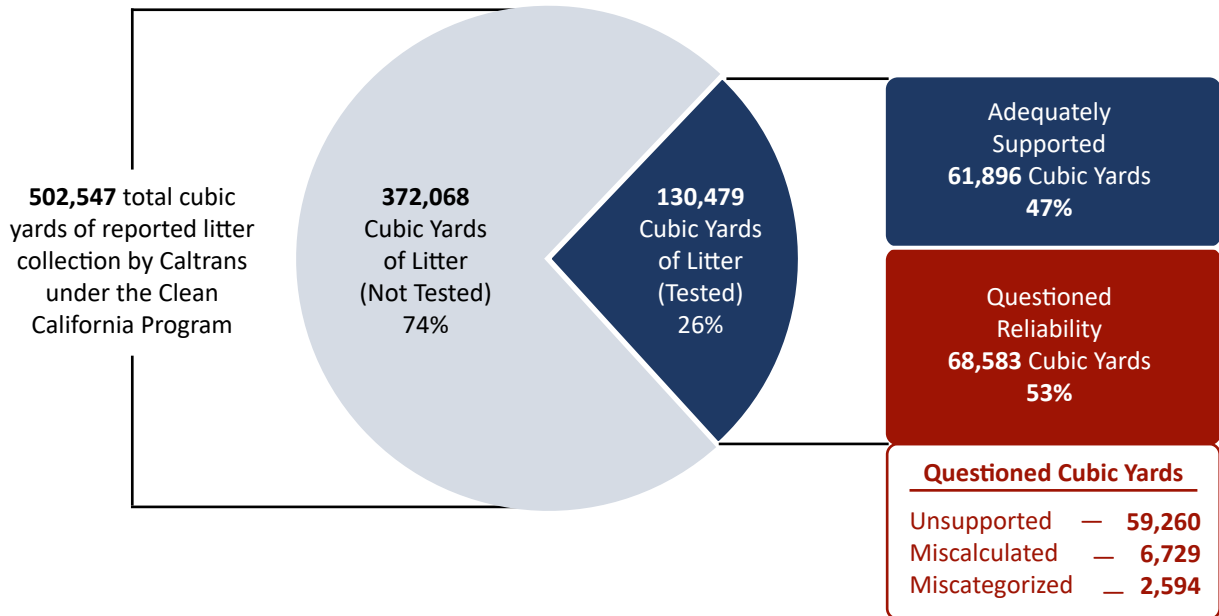
Under the Clean California Program, Caltrans developed an internal dashboard to track and report, among other things, its various related litter collection efforts. As of April 17, 2023, the internal dashboard indicated that since July 2021, Caltrans collected a total of 502,547 cubic yards of litter relative to the Clean California Program. We reviewed the reliability of this particular data by performing various types of testing and found numerous problems. The problems we found adversely effected our opinion of the data's reliability and, by extension, lessened our confidence in the amount of cubic yards Caltrans publicly reported.

Caltrans tracks the amount of litter it collects from five distinct types of efforts, and we found data quality issues with four of them, including the Clean California Maintenance Crews, the Clean California Special Programs People, the Clean California Maintenance Agreement, and the Clean California Adopt-A-Highway.<sup>3</sup> Specifically, we found that data related to these types of collection efforts either lacked supporting or corroborating documentation, contained mathematical errors, or was miscategorized. Collectively, these problems led us to question the reliability of 68,583 of the total 130,479 cubic yards (or 53 percent) of reported litter collection we tested (refer to Figure 4 on the following page).

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<sup>3</sup>We found no reportable issues with the data we reviewed related to Free Dump Day Events.

**Figure 4. Summary of the Cubic Yards of Litter Reportedly Collected Under the Clean California Program by Caltrans, as of April 17, 2023, and the Results of Our Reliability Testing**



Source: Caltrans' Clean California Program dashboard and analysis by the Independent Office of Audits and Investigations.

Although we found numerous concerns with data quality, we commend Caltrans for developing several new policies and procedures once we brought our concerns to its attention. However, since these actions occurred after the timeframe of our testing, we were not able to assess their effectiveness relative to our audit findings. For informational purposes, we provide some general descriptions of Caltrans' more recent efforts, as follows:

- New process for staff to reconcile Clean California Special Programs People invoices and IMMS Work orders.
- New procedures for reviewing Clean California Adopt-A-Highway data that its consultant uploads in the dashboard.
- New instruction to staff to properly convert bags to cubic yards.
- New policy memo to staff and an update to the Caltrans Maintenance Manual to address data reliability by improving instructions for data entry, reviewing entered data, and maintaining documentation to support the data entries.
- New Quality Assurance and Quality Control procedures for Caltrans Headquarters to review data submitted by the districts.

**Table 4. Summary of Reported Cubic Yards of Litter That We Questioned Because the Data was Unsupported, by Effort**

Reasons	Clean California Maintenance Crews	Clean California Special Programs People	Clean California Maintenance Agreement	Clean California Adopt-A-Highway	Clean California Free Dump Day Events	Total
Lacking Source Documentation/ Corroborating Evidence	27,180	7,172	--	--	--	34,352
Unsupported Ratio	--	15,055	--	9,853	--	24,908
<b>Total</b>	<b>27,180</b>	<b>22,227</b>	<b>--</b>	<b>9,853</b>	<b>--</b>	<b>59,260</b>

Source: Analysis of Caltrans’ litter collection data, as of April 17, 2023, by the Independent Office of Audits and Investigations.

**Lack of Supporting Evidence or Documentation (Unsupported)**

We questioned the reliability of 59,260 cubic yards of litter that Caltrans had reportedly collected because the data lacked supporting documentation or other types of reliable corroborating evidence (refer to Table 4). Importantly, we did not determine the unsupported data to be inaccurate; rather, we found the data to be less reliable than it otherwise could have been. Most of the questioned data came from the Clean California Maintenance Crews, where we questioned 27,180 cubic yards of litter. During our audit, we learned that maintenance crew supervisors obtained data for the quantity of litter collected from their subordinate staff, who provided the data to them either through texts, phone calls, or “sticky” notes. We also learned that maintenance crew supervisors would then enter these amounts into a work order as part of the IMMS.

We reviewed 680 of the 23,322 work orders related to litter control, representing 82 percent of the cubic yards of litter reportedly collected by these maintenance crews. In 75 of these work orders, we found that the maintenance crew supervisors provided adequate additional information in a comment field, such as describing the number of bags their staff had collected. In those instances, we accepted the entries as sufficient support for the purposes of our audit since this information helped corroborate the number of cubic yards entered into the litter collection field. However, we found that maintenance crew supervisors did not provide adequate descriptions in the comment field in 559 of the 680 work orders we reviewed.<sup>4</sup> Since they also did not retain their source documentation, such as the texts, handwritten notes from their phone calls, or copies of the “sticky” notes, we determined the number of cubic yards entered into the collection field to be unsupported. Without

<sup>4</sup>We included the remaining 46 work orders of our testing in the next two sections of this finding. Specifically, we found that 22 of them had miscalculations and 24 of them had been miscategorized. These 46 work orders, plus the 75 work orders that were adequately supported and the 559 work orders that were not adequately supported equals 680 work orders.

these types of source records or additional explanation in the comments field, it is not possible for another person to be able to validate the data. Likewise, it would be nearly impossible to find any data entry mistakes or typos, unless they were egregious or obvious.

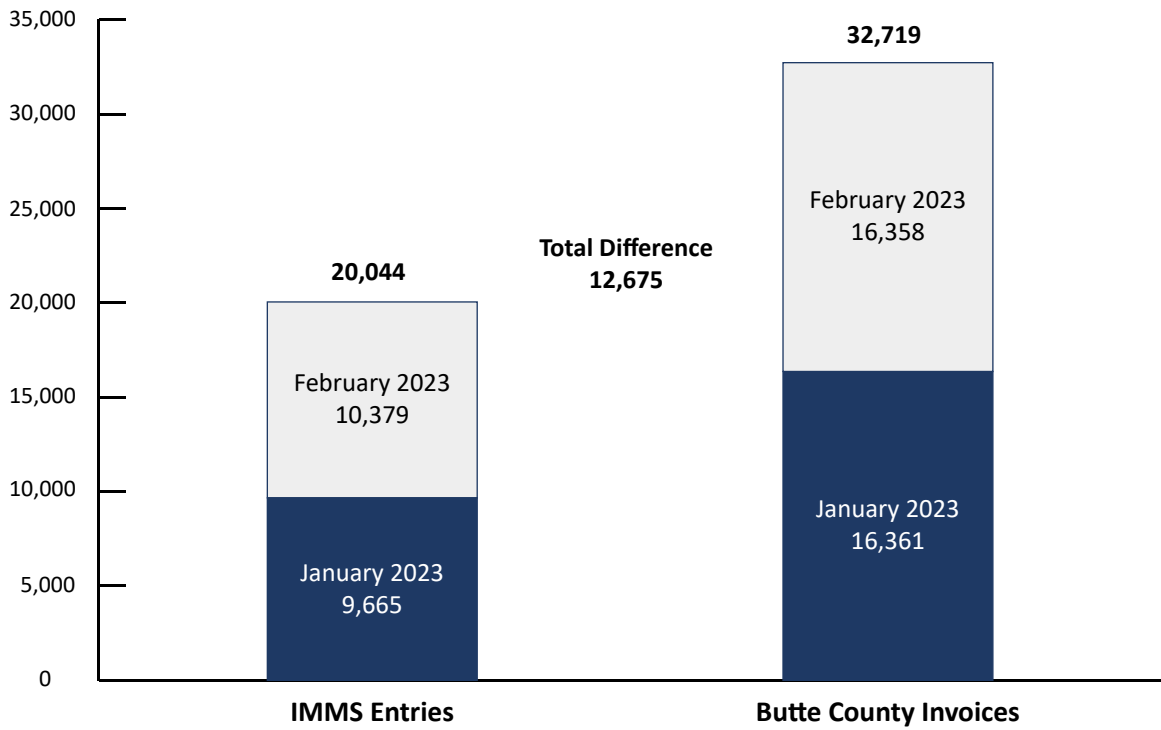
Additionally, we found the same condition with respect to the Clean California Special Programs People, where we questioned 7,172 cubic yards of litter reported under this effort between July 1, 2022, and April 17, 2023. Of the 320 work orders that we reviewed for this time frame, 144 lacked the appropriate descriptions in the comments field, making it impossible to validate the number of cubic yards entered into the collection field. In addition, the litter collection efforts under the Clean California Special Programs People involved an agreement with the Butte County. Under this arrangement, crew supervisors from Butte County along with supervisors from Caltrans sign monthly summaries for their work crews, certifying crew size, site location, and the number of litter bags they collected daily during the month.<sup>5</sup> Meanwhile, supervisors at Caltrans recorded the same type of litter collection daily in IMMS. As with the maintenance crews above, this data was reported to supervisors via text, phone calls, or “sticky” notes; and, like the maintenance crews’ data, the source documentation was also not maintained. We found that Caltrans’ supervisors did not reconcile the number of bags of litter reportedly collected in Butte County’s monthly summaries with the number of bags of litter reportedly collected in the IMMS. We found the difference between these two sources to be substantial, and it is unknown whether this resulted in underreporting or overreporting of the total cubic yards of litter. This difference lessened our confidence in either process.

For instance, we reviewed two months of data (January and February 2023) and discovered a difference between these two reporting sources of 12,675 cubic yards, or 63 percentage points, from the number of cubic yards reported from IMMS (refer to Figure 5 on the following page). Without having proper supporting documentation, Caltrans cannot be certain which reporting method was the most accurate, leading us to question the reliability of the reported amounts under either scenario. When we brought this issue to Caltrans’ attention, it acknowledged the necessity for implementing a process to reconcile data between Butte County’s invoice records and the data recorded in IMMS. In a statewide meeting held in September 2023, Caltrans informed its supervisors to review Butte County’s monthly summaries and ensure that the reported cubic yards match the data entered in IMMS.

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<sup>5</sup>The original agreement between Caltrans and Butte County required weekly timesheets, but the agreement was subsequently modified to require monthly summaries. (Appendix B)

**Figure 5. Comparison of Litter Collection Data Entered into the IMMS and Invoices Provided by Butte County (in Cubic Yards) for Clean California Special Programs People Crew**



Source: Analysis of Caltrans’ litter collection data and Butte County invoices by the Independent Office of Audits and Investigations.

We questioned another 15,055 of cubic yards of litter pertaining to the Clean California Special Programs People between March 1, 2022, and June 30, 2022, because Caltrans used a ratio of Clean California crews relative to the total number of crews (which included crews who were not part of the Clean California Program) to estimate the number of cubic yards of litter it collected for this effort. For example, in March 2022, one district had 10 Special Programs People crews, including three that were funded by the Clean California Program. This resulted in a ratio of 30 percent (3 divided by 10). Since this district had reportedly collected 628 cubic yards of litter for all 10 crews, the number of cubic yards of litter attributable to the Clean California crews was 188 (628 multiplied by 30 percent). We found this methodology to be inherently unreliable because it is too subjective to assume that all crews picked up at the same quantity of litter. Therefore, we questioned the entire amount reported in this manner.

We also questioned 9,853 cubic yards of litter that Caltrans had reportedly collected under the Clean California Adopt-A-Highway effort. Like the prior example, Caltrans used a ratio to estimate the amount of litter collected by its adopters (individuals who have agreed to pick up litter on certain areas of the highway). For this effort, Caltrans used a ratio



of new adopters relative to the total number of adopters in each district to arrive at the number of cubic yards of litter that they reportedly collected. We found, however, this methodology to be too subjective based on Caltrans' assumption that all adopters pick up the same quantity of litter. Although the reported number of cubic yards in this area was relatively small compared to the number of cubic yards of the overall Clean California Program, we questioned the entire amount related to this effort since there was no way to validate whether Caltrans' methodology was accurate.

### **Mathematical Errors (Miscalculated)**

We questioned the reliability of 6,729 cubic yards of litter that Caltrans had reported because the data was erroneously calculated (refer to Table 5 on the following page). More than half of this amount came from the Clean California Maintenance Agreement effort, where we questioned 4,416 cubic yards of litter Caltrans had reportedly collected. For this effort, Caltrans entered into agreements with various local agencies to perform litter collection along the state highway system in seven of its 12 districts. During our audit period, each district tracked and reported the local agencies' litter collection amounts using a spreadsheet. We found that Caltrans' instructions to its district coordinators did not factor that local agencies could use different size bags when they collected litter. Caltrans' instructions were solely based on a 42-gallon size bag while some of the local agencies instead used 30-gallon size bags. Because of this, we found that three of the seven districts used incorrect conversion rates in some instances and overreported the number of cubic yards of litter they collected by 4,416 cubic yards (or 25 percent of the total amount reported by these seven districts).

Furthermore, we questioned 1,461 cubic yards of litter that Caltrans had reported for its Clean California Maintenance Crews because it did not correctly apply a conversion rate based on the number of bags its crews reportedly collected. In our review of 22 work orders, we found that Caltrans reported that its crews collected a total of 1,653 cubic yards of litter, which would have equated to 11,571 30-gallon bags. However, according to the comments field, staff entered that only 1,344 30-gallon bags had been collected. According to Caltrans' maintenance manual, seven 30-gallon bags are equivalent to one cubic yard. After applying the approved conversion rate to the number of bags identified in the comments field, we determined that the number of cubic yards that should have been entered into the collection field was 192 (1,344 divided by 7), a difference of 1,461 cubic yards.

**Table 5. Summary of Reported Cubic Yards of Litter That We Questioned Because the Data was Miscalculated, by Effort**

Reasons	Clean California Maintenance Crews	Clean California Special Programs People	Clean California Maintenance Agreement	Clean California Adopt-A-Highway	Clean California Free Dump Day Events	Total
Conversion Error	1,461	852	4,416	--	--	6,729
<b>Total</b>	<b>1,461</b>	<b>852</b>	<b>4,416</b>	--	--	<b>6,729</b>

Source: Analysis of Caltrans’ litter collection data, as of April 17, 2023, by the Independent Office of Audits and Investigations.

Similarly, we questioned 852 cubic yards of litter Caltrans had reported under the Clean California Special Programs People because Caltrans again did not correctly apply a conversion rate based on the number of bags reportedly collected in the 15 work orders we tested. In these instances, Caltrans reported that it picked up a total of 1,050 cubic yards of litter, which would have equated to 7,350 30-gallon bags. However, according to the comments field, staff entered that only 1,386 30-gallon bags had been collected. After applying the conversion rate to the number of bags identified in the comments field, we determined that the number of cubic yards that should have been entered into the collection field was 198 (1,386 divided by 7), a difference of 852 cubic yards.

Moreover, we found errors in the method Caltrans used to calculate its Clean California Adopt-A-Highway figures. As we discussed earlier, Caltrans used a ratio based on the number of new adopters relative to the total number of adopters when it arrived at its reported value. However, we found that it did not use the correct ratio for several months, resulting in its overreporting of 2,274 cubic yards of litter (23 percent of the total reported number of cubic yards). Since we questioned the reliability of using a ratio for this purpose and, by extension, all the cubic yards of litter collected under this program, we did not double-count the mathematical errors in our total amount of questioned cubic yards. Therefore, even if we had determined Caltrans ratio to be reliable for reporting purposes, our discovery of these math errors would have added to our concerns of reliability.

**Miscategorized**

We questioned the reliability of 2,594 cubic yards of litter that Caltrans reported because the data was miscategorized as a Clean California litter effort when the data should have been categorized as something other than litter collection or the data was related to other non-Clean California Program litter collection efforts (refer to Table 6 on the following page). For instance, we questioned Caltrans’ reporting of 1,000 cubic yards of litter because the data revealed that it was for cleaning up 1,000 feet of graffiti, as opposed to litter.

We also questioned 931 cubic yards of litter that Caltrans had reportedly collected as part of the Clean California Special Programs People between July 2021 and February 2022 because Caltrans had not yet entered into its contract with Butte County (the contract was executed in December 2021) and had not deployed its first Clean California Special Programs People crew until March 2022. When we brought this to Caltrans’ attention, it agreed that these amounts were improperly attributed to the Clean California Special Programs People when the amounts should have been attributable to the non-Clean California Special Programs People program.

Finally, in our review of 24 work orders, we questioned 663 cubic yards of litter that Caltrans had reportedly collected as part of the Clean California Maintenance Crew effort because we found the litter was collected by non-Clean California Maintenance Crews.

State policy, as defined in the State Administrative Manual sections 5160 – 5160.2, requires, in pertinent part, that departments implement enterprise data governance practices, adopt data documentation standards, and manage the collection and procurement of data, as part of an enterprise approach to data governance.<sup>6</sup> In August 2021, Caltrans established a practice standard requiring each of its business areas to develop a Data Quality Management Plan to attain and maintain data quality for all of its new and existing data systems.<sup>7</sup> These types of plans are intended to describe the specific steps each business area must take

**Table 6. Summary of Reported Cubic Yards of Litter That We Questioned Because the Data was Miscategorized, by Effort**

Reasons	Clean California Maintenance Crews	Clean California Special Programs People	Clean California Maintenance Agreement	Clean California Adopt-A-Highway	Clean California Free Dump Day Events	Total
Non-Clean California Program Effort	663	931	--	--	--	1,594
Not Related to Litter/Trash Collection	--	--	1,000	--	--	1,000
<b>Total</b>	<b>663</b>	<b>931</b>	<b>1,000</b>	--	--	<b>2,594</b>

Source: Analysis of Caltrans’ litter collection data, as of April 17, 2023, by the Independent Office of Audits and Investigations.

<sup>6</sup>Caltrans defines data governance as “the exercise of authority, control and shared decision making (planning, monitoring and enforcement) over the management of data assets.” (Source: Deputy Directive 120, November 1, 2022)

<sup>7</sup>Enterprise Data and Geospatial Governance Practice, Number DGP-01, August 11, 2021. (Appendix E)

to ensure data quality and fitness of use, including various strategies, such as data collection techniques, personnel training and certification, and validation checks. With this standard, Caltrans recognized that,

“...data is an asset that needs to be maintained – much like physical assets. Good stewardship of data involves ensuring that data is of sufficient quality to serve its intended purposes.... It is essential that the most effective use of public funds be achieved through appropriately directed attention to data quality and the procedures to realize and maintain that quality.”

However, Caltrans did not develop a Data Quality Management Plan with respect to its Clean California Program litter data. After we shared our concerns with Caltrans, staff informed us that they will provide a written document summarizing their updated litter collection, quality control, quality assurance, and reporting of Caltrans’ statewide litter abatement efforts.

## Recommendations

To address the data reliability concerns raised in this audit, we recommend Caltrans:

- 1.1 Ensure staff enter sufficient information into the comments field of the Integrated Maintenance Management System, such as the number of bags they have collected, to corroborate the reported number of cubic yards of litter.
- 1.2 Develop a Data Quality Management Plan with respect to its Clean California Program litter abatement data. This plan should contain quality assurance and quality control procedures, including data validation techniques to identify potential errors as well as strategies for improving data quality and preventing data errors from occurring.

## **Finding 2. Caltrans Did Not Differentiate Between the Clean California Program's Litter Abatement Efforts and Its Other Related Efforts When Reporting the Amount of Litter It Collected to the Legislature and the Public, Which Made it More Difficult to Assess the Program's Progress and Success**

We reviewed the litter collection data that Caltrans reported in three types of public reports, including a Clean California News Release, its Clean California Website, and a Legislative Report, and found that Caltrans combined into one value the number of cubic yards of litter it purportedly collected from its Clean California Program efforts and its other related efforts when it reported the progress of the program.<sup>8</sup> Essentially, Caltrans included the number of cubic yards of litter from non-Clean California Program efforts in the Clean California Program total. Although we recognize the inherent value of reporting the total number of cubic yards of litter it has collected so that stakeholders understand how much work Caltrans has done to clean up litter, its reporting method nevertheless obscures the work performed specifically under the Clean California Program. Consequently, Caltrans' method of reporting is not as transparent as it could be, making it more difficult to assess the program's progress and success. To increase transparency, we suggest Caltrans report the number of cubic yards it has collected using the resources provided by the Clean California Program separately from the number of cubic yards it has collected using the resources provided by other programs.

For example, in an October 2023 News Release, Caltrans publicly stated that “[since] launching Clean California in July 2021, Caltrans and local partners have removed an estimated 1.86 million cubic yards of litter from the [state highway system] – a trash pile that would be more than 370 times taller than Mount Whitney (14,505 feet, the state’s highest peak).” However, this statement is partially misleading because it did not differentiate the amounts of litter removed under the Clean California Program as opposed its other related litter abatement programs; instead, it implied that all of this litter was removed as part of the Clean California Program. We found this was not the case: the litter removed under the Clean California Program accounted for only 34 percent of the cubic yards of litter that it reportedly removed; the remainder was from the other, non-Clean California Program litter abatement efforts.

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<sup>8</sup>Throughout this finding, we discuss for illustration purposes the numbers of cubic yards reportedly collected by Caltrans at different points in time. Although we raise concerns in Finding 1 about the overall reliability of Caltrans' data, our concern in Finding 2 would be the same regardless of the data quality issues we found. In other words, if we had not found any issues with respect to data reliability, our concern in Finding 2 would remain the same.

We also reviewed Caltrans' Clean California Website where it reported, as of June 30, 2023, in its "Measuring Progress" section as having removed .885 million cubic yards of litter in fiscal year 2022-23 (see Appendix C).<sup>9</sup> Again, as with the news release above, Caltrans did not separate the litter abatement efforts by the various programs and instead combined its reporting into one overall value. We noted that Caltrans included a disclaimer that its "Year-to-date Target includes all litter collection efforts." However, this disclaimer is not clear enough to fully inform readers about the source of this data. When we reviewed the supporting data, we arrived at a similar result as the example above. In this instance, the supporting data revealed that only .353 million cubic yards of litter (or 40 percent) was attributable to the Clean California Program, whereas the remaining .532 million cubic yards of litter (or 60 percent) collected was attributable to the other litter abatement efforts.

Finally, in its 2022 report to the Legislature regarding the Clean California Program,<sup>10</sup> Caltrans reported that from July 1, 2021, through March 1, 2022, it had collected 438,756 cubic yards of litter from the state highway system, representing a 244 percent increase in litter removal compared to the 2020 baseline of 267,000 cubic yards of litter (see Appendix D). Although we did not calculate the breakdown of litter removal by program as with the other examples, we did confirm that the report combined the values in the same manner.

Caltrans told us that its reporting process is efficient since its Clean California-related crews and other crews often work at or near the same locations and at times together. However, as we mention earlier, the State provided funding to Caltrans for the Clean California Program through the State's General Fund while it also—and separately—provided funding for Caltrans' other litter abatement efforts through the State Highway Account. These other efforts utilize separate staffing crews in each district to accomplish their own mission and goals. Since the Clean California Program has specific programmatic goals and its own funding source and staffing package, we believe combining the efforts of all these programs—even though they have similar purposes—without providing a breakdown of the numbers by program is not only confusing but potentially misleading.

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<sup>9</sup>Caltrans has since redesigned the format of its website with respect to the Clean California Program, but as of this report date, it has continued to combine the values of the Clean California Program with other similar non-Clean California litter abatement efforts.

<sup>10</sup>Pursuant to the Streets and Highways Code section 91.43(d), Caltrans shall report to the Legislature on the Clean California Local Grant Program of 2021 and the Clean California State Beautification Program of 2021, including, but not limited to, the vehicles and equipment purchased pursuant to subdivision (c), **cubic yards of litter collected**, the locations and types of projects, and any other important project or program outcomes. (Emphasis added)

## Recommendation

- 2.1 To enhance transparency, we recommend Caltrans separate the number of cubic yards for the Clean California Program from other related litter collection activities in its public reports. This would allow stakeholders to see more clearly the amount of litter it reportedly collected under the Clean California Program, relative to the total amount of litter it reportedly collected.



## Appendix A. Scope and Methodology

The purpose of this audit was to determine whether Caltrans effectively collected, tracked, and reported data relative to its litter abatement efforts under the Clean California Program between July 1, 2021, and April 17, 2023. We conducted this audit in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We gained an understanding of Caltrans’ policies and procedures, operations, and assessed key internal controls significant to the audit’s objectives.

We also performed a risk assessment to identify and evaluate whether key internal controls relevant to our audit objectives were properly designed, implemented, and operating as intended. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The table below details the methods we used to address the audit objectives.

Audit Objective	Methods
<p><b>Objective 1</b> Reviewed and evaluated laws, rules, and regulations significant to the audit objectives.</p>	<ul style="list-style-type: none"> <li>Reviewed and evaluated laws and regulations related to the Clean California Program litter abatement efforts.</li> </ul>
<p><b>Objective 2</b> Evaluated Caltrans’ process for assessing its level of service scores.</p>	<ul style="list-style-type: none"> <li>Interviewed headquarters’ staff and reviewed the Division of Maintenance’s Level of Service Manual.</li> <li>Conducted a site visit at one district to observe and document Caltrans’ evaluation process. This consisted of evaluating 15 one-mile segments along Interstate 80.</li> <li>Interviewed one Clean California District Coordinator to determine if the district’s process followed the criteria outlined in the Level of Service Manual.</li> <li>Reviewed the methodology in three districts relative to 89 one-mile segments to determine if the one-mile segments were selected based on their Average Daily Traffic levels as described in the Level of Service Manual.</li> <li>Judgmentally selected two quarterly level of service evaluations and recalculated the scores for the one-mile segments.</li> </ul>

Audit Objective	Methods
<p><b>Objective 3</b>                      Evaluated Caltrans’ process for tracking the number of cubic yards of litter reportedly collected under the Clean California litter abatement program and determined whether the data recorded was valid, supported, and accurate.</p>	<ul style="list-style-type: none"> <li>• Reviewed the Maintenance Manual, Butte County Agreement, Clean California Maintenance Agreement Instructions, Dump Day Events Implementation Guideline, and Adopt-A-Highway Program Guidance to gain an understanding of the required data collection procedures.</li> <li>• Interviewed headquarters and district staff to learn about the process for collecting and recording data from the Clean California Maintenance Crews, Clean California Special Programs People, Clean California Maintenance Agreement, Clean California Adopt-A-Highway Program, and Free Dump Day Events.</li> <li>• Reviewed the litter collection data presented in the Clean California Program dashboard to determine the total number of cubic yards that Caltrans had reportedly collected as of April 17, 2023.</li> <li>• For the Clean California Maintenance Crews and Clean California Special Programs People data, we reviewed supporting documentation for a sample of work orders in the IMMS to validate the number of reported cubic yards of litter. Specifically,                             <ul style="list-style-type: none"> <li>• For the cubic yards of litter collected from July 1, 2021, through April 17, 2023, by the Clean California Maintenance Crews, we selected all work orders that exceeded 30 cubic yards. This resulted in our review of 664 of 23,322 work orders. We compared the number of cubic yards entered in the litter collection field with the number of bags or cubic yard information in comments field to determine if the fields matched (or were properly converted). Additionally, we selected 16 work orders from one crew that had been reporting their collection to the program but was not funded by the Clean California Program.</li> <li>• For the cubic yards of litter collected from July 1, 2022, through April 17, 2023, by the Clean California Special Programs People, we selected all work orders that exceeded 30 cubic yards. This resulted in our review of 320 of 8,161 work orders. We compared the number of cubic yards entered in the litter collection field with the number of bags or cubic yard information in comments field to determine if the fields matched (or were properly converted).</li> </ul> </li> <li>• For the Clean California Special Programs People data, we reviewed and analyzed Caltrans’ methodology for using a ratio for reporting the number of cubic yards of litter. We also recalculated its litter collection amounts to determine whether the reported values were mathematically correct.</li> </ul>

Audit Objective	Methods
	<ul style="list-style-type: none"> <li>• For the Clean California Adopt-A-Highway data, we performed the following:                             <ul style="list-style-type: none"> <li>• Judgmentally selected 37 work orders from two districts to determine if the Clean California Adopt-A-Highway Litter Collection Reporting form supported the reported number of cubic yards.</li> <li>• Reviewed and analyzed Caltrans’ methodology for using a ratio for reporting the number of cubic yards of litter. We recalculated the litter collection amounts for four months to determine if the values were mathematically correct.</li> </ul> </li> <li>• For the Maintenance Agreements data, we obtained Caltrans’ electronic spreadsheet that summarized invoices with dates, cubic yards, and additional details. We selected seven entries from the spreadsheet and traced cubic yard amounts to invoices to determine if the data was reported accurately.</li> <li>• For the Dump Day Events data, we selected three Caltrans districts based on the highest amount of litter collected, location, or number of events. We selected 24 Dump Day Events and traced the amounts to invoices to determine if the data was reported accurately.</li> </ul>
<p><b>Objective 4</b>                      Determined whether Caltrans’ litter abatement efforts were on track to achieve performance outcomes and whether Caltrans accurately reported the information to the Legislature and the public.</p>	<ul style="list-style-type: none"> <li>• Interviewed appropriate staff and reviewed documentation to determine the methodology Caltrans used to establish its litter abatement goals, including the collection of an additional 1.2 million cubic yards of litter and reaching a level of service score of 80.</li> <li>• Assessed Caltrans’ process for reporting litter abatement performance outcomes to the Legislature and the public.</li> <li>• Reviewed supporting documentation to verify the accuracy of reported information and assessed the progress of litter abatement efforts in achieving performance outcomes.</li> </ul>

Source: The Independent Office of Audits and Investigations’ workpapers.

**Assessment of Data Reliability**

Generally accepted government auditing standards require we assess the sufficiency and appropriateness of the computer processed information that we use to support our findings, conclusions, or recommendations. In performing this audit, we relied on the data obtained from Caltrans' IMMS related to cubic yards of litter collected, resources used, and activity information. We also relied on the Excel spreadsheets with data related to the level of service and cubic yards obtained from the Clean California Program Manager. To evaluate the data, we reviewed existing information about the data, interviewed key personnel, and performed data verification procedures. We determined the data related to the level of service and the cubic yards of litter reported for Free Dump Day Events in Excel spreadsheets to be sufficiently reliable for our audit purposes. As we note in the report, we found unsupported, miscalculated, and miscategorized data from IMMS and other Excel spreadsheets related to cubic yards of litter. Accordingly, we determined these data were not sufficiently reliable for our audit purposes. Although this determination may affect the precision of some numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.

## Appendix B. Butte County Office of Education’s Monthly Summary Requires Caltrans Supervisors to Certify the Number of Litter Bags Collected

ANS CLEAN CALIFORNIA LITTER ABATEMENT REGISTER OF PARTICIPATION			
Location			
Month/Year			
Crew Identifier			
Crew Supervisors Name			
Date	Crew Size	Site Location	# Filled Trash Bags
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
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<table border="1" style="width: 100%; border-collapse: collapse; background-color: #e6f2ff;"> <thead> <tr> <th colspan="2" style="text-align: center;">Monthly Crew Size Summary</th> </tr> </thead> <tbody> <tr><td>Days Crew Size (6-8)</td><td></td></tr> <tr><td>Days Crew Size (5)</td><td></td></tr> <tr><td>Days Crew Size (4)</td><td></td></tr> <tr><td>Days Crew Size (3)</td><td></td></tr> <tr><td>Daily Average Crew Size</td><td></td></tr> </tbody> </table>	Monthly Crew Size Summary		Days Crew Size (6-8)		Days Crew Size (5)		Days Crew Size (4)		Days Crew Size (3)		Daily Average Crew Size		<table border="1" style="width: 100%; border-collapse: collapse; background-color: #e6f2ff;"> <thead> <tr> <th colspan="2" style="text-align: center;">Production</th> </tr> </thead> <tbody> <tr><td>Number of days worked</td><td></td></tr> <tr><td>Trash Bag Total</td><td></td></tr> <tr><td>Daily Average of Trash Bags</td><td></td></tr> </tbody> </table>	Production		Number of days worked		Trash Bag Total		Daily Average of Trash Bags	
Monthly Crew Size Summary																					
Days Crew Size (6-8)																					
Days Crew Size (5)																					
Days Crew Size (4)																					
Days Crew Size (3)																					
Daily Average Crew Size																					
Production																					
Number of days worked																					
Trash Bag Total																					
Daily Average of Trash Bags																					

**Crew Supervisor Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Caltrans Supervisor Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Source: Caltrans' Clean California Program.

# Appendix C. The Clean California Website Displayed the Combined Value of Clean California and Non-Clean California Program Litter Collection Efforts

[Home](#) | [Measuring Progress](#)

## MEASURING PROGRESS

### Your Local Caltrans Districts and Counties

### Litter Collection

29K tons of litter collected since 2021

7/1/22-6/30/23

District(s): All

Litter collected  
885,279  
cubic yards as of  
June 30, 2023

**101%**  
of Target

Year-to-Date Target = 877,347 cubic yards  
(Year-to-Date Target includes all litter collection efforts)

Cubic Yards	
Year-to-Date Target	Year-to-Date Total
877,347	885,279

District  
(All)

### How much litter is this?

Caltrans aims to collect 877,347 cubic yards of trash this year. 877,347 equals one lane of traffic (12 feet wide) covered by litter from Disneyland to north Lake Tahoe.

Source: Caltrans' Clean California website (<https://cleancalifornia.dot.ca.gov/dashboard>).

Inspector General – California Department of Transportation

## Appendix D. Caltrans' First Legislative Report Combined Existing and Clean California Program Litter Collection Data



### LITTER ABATEMENT

Caltrans has collected 438,756 cubic yards (7,386 tons) of litter from the state highway system, enough trash to fill 134 Olympic-size swimming pools or 3,375 semi-truck trailers. This is a 244 percent increase in litter removal compared to the 2020 baseline of 267,000 cubic yards of trash.



### BACK 2 WORK CREWS

Caltrans executed a \$127 million contract with the Butte County Office of Education (BCOE) in December 2021 that will provide an estimated 1,000 transitional employment jobs annually. As part of the contract, BCOE will deploy 82 litter abatement crews statewide.



### ADOPT-A-HIGHWAY

Caltrans successfully piloted and rolled out its Clean California Volunteer Incentive Stipend through the Adopt-A-Highway Program, increasing highway adoption sites by 495 and awarding \$141,000 in incentive stipends. The department has already exceeded its goal of 400 new highway adoptions by July 2022.



### DUMP DAY EVENTS

Caltrans held 51 free dump day events throughout the state collecting 4,908 tires, 1,340 mattresses, 247 pallets of E-waste, and 649 appliances while forging partnerships with state and industry partners to divert waste, such as tires and mattresses, from landfills.



### EQUIPMENT AND VEHICLES

269 vehicles and pieces of equipment to assist with litter collection activities that support Clean California are on order at a cost of approximately \$41 million. The equipment will support SAM crews in the safe collection and transportation of trash bags. Caltrans will use equipment like street sweepers to also clean litter and debris from roadsides.

Source: Caltrans' Clean California Legislative Report 2022.



## Appendix E. Enterprise Data and Geospatial Governance Practice on Data Quality Management Plan Implementation

California Department of Transportation <b>Enterprise Data and Geospatial Governance Practice</b>	<b>NUMBER:</b> DGP-01	<b>DATE ISSUED:</b> AUGUST 11, 2021
<b>SUBJECT:</b> Data Quality Management Plan (DQMP) Implementation	<b>REFERENCES:</b> Caltrans Data Documentation Package Enterprise Data and Geospatial Governance (EDGG) Fact Sheets	
<p><b>BACKGROUND AND PURPOSE</b></p> <p>Caltrans has adopted a set of core data principles<sup>1</sup>, based on those established by the American Association of State Highway and Transportation Officials (AASHTO). These principles recognize that data is an asset that needs to be maintained – much like physical assets. Good stewardship of data involves ensuring that data is of sufficient quality to serve its intended purposes.</p> <p>Data is used in all areas of the transportation decision-making process during the project lifecycle (planning, design, construction, maintenance and operations). Furthermore, data is increasingly being used externally by citizens and customers to facilitate their personal decisions, economic personalities and personal development, and by stakeholders to assess the aggregate performance of a transportation organization. Significant human and system resources are consumed in the collection, analysis and dissemination of data irrespective of the quality. It is essential that the most effective use of public funds be achieved through appropriately directed attention to data quality and the procedures to realize and maintain that quality.</p> <p><b>DATA QUALITY:</b></p> <p>“Quality data” means data is fit for their intended purposes. Several aspects of data quality include accuracy, timeliness, and completeness. Data may be highly accurate but produced too late to be of value to users. Conversely, data may be provided in real time, but lack credibility. Usability is also an important consideration, and the ease with which an end user can access and utilize the data to meet their need. Data may be accurate and timely, but if it is not accessible or requires specialized expertise to transform into a useable form, then it does not meet intended uses.</p> <p><b>PRACTICE:</b></p> <p>For Caltrans to attain and maintain data quality, each business area shall complete and implement a Data Quality Management Plan (DQMP) for each of their corporate datasets, database systems and corporate data over its life cycle as follows:</p> <ol style="list-style-type: none"> <li>1. Each business area shall complete each section of the DQMP template, including data quality objectives and targets, potential sources of error, actions to improve metrics, compliance with all laws, regulations, and policies and update frequency. Some datasets may require preparation by staff with professional credentials such as bridge or surveying data.</li> <li>2. For business areas with existing DQMPs or data quality documentation, the DQMP template shall be used to focus on other data quality areas not currently covered by existing practices or to document other areas for data quality improvement.</li> <li>3. For business areas with existing data quality practices, those practices shall be documented in the DQMP template in addition to methods to improve data quality objectives.</li> <li>4. Business areas are highly encouraged to use data quality tools or automated methods to verify data quality. For example, database constraints shall be used to prevent invalid data from being entered into the system.</li> <li>5. Manual checking of data is discouraged since it is time-consuming, prone to human error and not scalable. Where automated checks are not feasible, manual checks will be considered sufficient.</li> </ol>		
<p><sup>1</sup> AASHTO Data Principles: <a href="https://datagovernance.onramp.dot.ca.gov/data-principles-and-benefits">https://datagovernance.onramp.dot.ca.gov/data-principles-and-benefits</a></p>		



**APPLICABILITY:**

This practice document shall apply to:

1. Source System of Record (SSOR)
2. Authoritative Reporting System (ARS)
3. Corporate Datasets
4. Corporate Data Lifecycle
  - a. Field Data Collection
  - b. Data Procurement (Vendor-Provided)
  - c. Data Entry and Maintenance
  - d. Data Extraction and Loading

The DQMP shall apply to existing data and new data upon entry into data repositories. Validation checks such as input field validation, input maps and look up values shall be implemented whenever possible. DQMP serves as a living document which should be implemented with existing information and improved over time.

For corporate datasets, a DQMP shall be implemented and maintained by the business area responsible for the corporate dataset and be reviewed annually. Proposed improvement identified during the annual assessment, or more frequently as needed to ensure that the data meet the intended purpose, will be compiled into an Annual DQMP Improvement Plan and submitted to the responsible Division Chief for approval.

For data collection, a DQMP shall be completed as part of the scope of work and will cover how the data is collected in the field such that it meets the data quality standards necessary for its intended use.

**TIME FRAME:**

This practice document shall take effect immediately for corporate datasets. Where immediate compliance is not possible, the DQMP shall be updated during the next scheduled data migration or upgrade cycle.

DQMPs shall be completed for existing systems and new SSOR and ARS within 1 year upon nomination by the Enterprise Data and Geospatial Governance Board and Enterprise Data Stewards Committee. For new corporate datasets, DQMPs shall be completed upon nomination.

DQMP development and implementation shall be coordinated with other efforts, upgrades and migrations within each business area. Exemptions to this time frame shall be requested in writing from the Enterprise Data and Geospatial Governance Program.

**ROLES / RESPONSIBILITIES:**

Enterprise Data Stewards, Business Data Stewards and Data Custodians are responsible for developing and maintaining DQMPs for the corporate database system, corporate datasets and field data collection within their business area. Staff within each business area are responsible for implementing DQMPs and improvement plans.

The Division Chief for each business area shall approve the DQMP and Annual DQMP Improvement Plan prior to their adoption. The Division Chief shall support DQMP implementation by providing sufficient resources, guidance to staff and encourage collaboration with other business areas.

**IMPLEMENTATION:**

DQMP implementation shall start with corporate data and then expand to data collection and individual flat file systems. Implementation should include an as-is assessment of existing data quality.

Each business area shall establish metrics in their DQMPs which can be reasonably achieved. Objectives shall be proposed and met over time, then adjusted for improvement. Each business area shall work to improve their metrics over time.

Data quality objectives and metrics may vary between systems. Hence, each business area shall consider their existing data quality processes to develop objectives and metrics. For large, complex database systems, staff are encouraged to start their DQMP implementations early. For business areas that store data in flat files, staff are encouraged to complete and implement DQMPs.

Each business area is expected to complete their DQMPs and work with appropriate staff on its implementation. An action plan may be needed to organize implementation by task to achieve DQMP objectives and metrics within estimated complete dates. The business area shall prioritize DQMP tasks and determine which ones are mandatory or optional.

**PERFORMANCE TARGETS:**

DQMP completion shall be tracked and reported to the Enterprise Data Stewards Committee and approved by the Enterprise Data Governance Board annually.

**ATTACHMENTS:**

1. DQMP Template
2. DQMP Example
3. EDGG Roles and Responsibilities Fact Sheet
4. EDGG Glossary Fact Sheet
5. EDGG Corporate Data Fact Sheet
6. DQMP Metrics and Objectives Worksheet

**APPROVAL:**

*Chad Baker*

Date: August 11, 2021

Chair, Enterprise Data Governance Board or Designee  
California Department of Transportation

Source: Caltrans' Enterprise Data and Geospatial Governance's practice standards document -Data Quality Management Plan Implementation (DGP-01).

## Auditee's Response

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

### California Department of Transportation

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March 19, 2024

Mr. Bryan Beyer  
Inspector General  
Independent Office of Audits and Investigations (IOAI)  
P.O. Box 942874, MS-2  
Sacramento, CA 94274-0001

Dear Mr. Beyer:

The Department of Transportation (Caltrans) would like to thank the Independent Office of Audits and Investigations (IOAI) for the information provided in the Caltrans Clean California draft audit report (23A.PROG02) dated March 5, 2024.

As mentioned in the audit, Caltrans generally agrees with your findings and has already started implementing quality improvement measures to address those findings. Caltrans appreciates the insightful work done by the auditors. We also appreciate your office affirming the process for assessing Caltrans' level of service scores, and the impact the Clean California program has had on those scores. Though Caltrans acknowledges opportunities to improve data collection and documentation related to Clean California, the positive impact the program has had throughout the state, from cleaner roadsides, to beautified public spaces is abundantly clear.

Caltrans is proud of what has been accomplished under Clean California and thanks IOAI for providing recommendations to make the program even better. We look forward to continuing to work with your office, specifically addressing each finding by further developing a corrective action plan. Caltrans appreciates the opportunity to make the Clean California project an even greater success.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tony Tavares', written over a horizontal line.

TONY TAVARES  
Director

c: Michael Keever, Chief Deputy Director, Caltrans  
Janice Benton, Acting Deputy Director, Maintenance and Operations, Caltrans  
Mauricio Serrano, Acting Division Chief, Maintenance, Caltrans  
Walter Yu, Clean California Program Director, Caltrans  
Ton Yang, Deputy Division Chief, Field Technical Support, Caltrans  
Ben Shelton, Audit Chief, Internal Audits Office, Caltrans

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