

Item 7

Enclosure



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

County Program Manager Fund Expenditure Plan Guidance For **Fiscal Year Ending 2023**

Transportation Fund for Clean Air



Bay Area Air Quality Management District
375 Beale Street, Suite 600, San Francisco, CA 94105
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Transportation Fund for Clean Air (TFCA)

Vehicle emissions represent the largest contributor to unhealthful levels of ozone (summertime "smog") and particulate matter and on-road motor vehicles, including cars, trucks, and buses, constitute the most significant sources of air pollution in the Bay Area.

To protect public health, the California State Legislature enacted the California Clean Air Act in 1988. Pursuant to this law, the Bay Area Air Quality Management District (Air District) has adopted the [2017 Clean Air Plan \(CAP\)](#), which describes how the region will work toward compliance with State and Federal ambient air quality standards and make progress on climate protection. To reduce emissions from motor vehicles, the 2017 CAP includes transportation control measures (TCMs) and mobile source measures (MSMs). A TCM is defined as "any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions." MSMs encourage the retirement of older, more polluting vehicles and the introduction of newer, less polluting motor vehicle technologies.

In 1991, the California State Legislature authorized the Air District to impose a \$4 surcharge on motor vehicles registered within the Bay Area to fund projects of TCMs and MSMs. The Air District allocates this revenue through its Transportation Fund for Clean Air (TFCA) program to fund eligible projects and programs. The statutory authority and requirements of the TFCA program are set forth in California Health and Safety Code (HSC) Sections 44241 and 44242.

TFCA-funded projects have many benefits, for example:

- ✓ Reducing air pollution, including air toxics such as benzene and diesel particulates
- ✓ Conserving energy and helping to reduce greenhouse gas emissions
- ✓ Improving water quality by decreasing contaminated runoff from roadways
- ✓ Improving transportation options
- ✓ Reducing traffic congestion

Forty percent (40%) of these TFCA funds are pass-through funds to the designated county program manager in each of the nine counties within the Air District's jurisdiction based on the county's proportionate share of fee-paid vehicle registration ("County Program Manager Fund"). The remaining sixty percent (60%) of these funds are awarded by the Air District to eligible projects and programs implemented directly by the Air District and to a grant program known as the Regional Fund.

This document provides guidance on the expenditure of the TFCA County Program Manager Fund.

Updates from Fiscal Year Ending (FYE) 2022 to FYE 2023

Air District staff brings updates to the TFCA County Program Manager Fund Policies for Board approval annually. Based on feedback and comments received during the public comment period, the following updates have been made:

- Increased cost-effectiveness (C/E) threshold (provided more flexibility) in policy #2 for Infrastructure Improvements for Trip Reduction.
- Renamed “Shuttle/Feeder Bus Service” to “First- and Last-Mile Connections” for clarification that services aren’t limited to only shuttles or buses.
- Minor language updated in policy #17 for project extension requirements and in policy #34 for clarification purpose.
- Clarified that vehicle projects that both scrap and replace a vehicle are eligible for additional TFCA funding.
- Under the Alternative Fuel Heavy-Duty Trucks and Buses category, increased the percentage of project costs that are eligible for reimbursement for School Bus projects from 90% to 100%.
- Added Regional Active Transportation Plan, a pending update to the Metropolitan Transportation Commission’s Regional Bicycle Plan, as an eligible support document for bicycle projects.

Bay Area County Program Manager Liaisons

County	Contact	Email
Alameda	Jacki Taylor	jtaylor@alamedactc.org
Contra Costa	Peter Engel	pengel@ccta.net
Marin	Scott McDonald	SMcDonald@tam.ca.gov
Napa	Diana Meehan	dmeehan@nvta.ca.gov
Santa Clara	William Hough	William.Hough@vta.org
San Francisco	Mike Pickford	mike.pickford@sfcta.org
San Mateo	Kim Wever	kwever@smcgov.org
Solano	Brent Rosenwald	brosenwald@sta.ca.gov
Sonoma	Dana Turr��y	dana.turrey@scta.ca.gov

TFCA County Program Manager Fund

Roles and Responsibilities

County Program Managers are required to do the following:

1. Administer funding in accordance with applicable legislation, including HSC Sections 44233, 44241, and 44242, and with Air District Board-Adopted TFCA County Program Manager Fund Policies for FYE 2022 (found in Appendix D).
2. Hold one or more public meetings each year
 - a. to adopt criteria for the expenditure of the funds if those criteria have been modified in any way from the previous year (criteria must include the Air District Board-Approved TFCA County Program Manager Fund Policies)¹, and
 - b. to review the expenditure of revenues received.
3. Prepare and submit Expenditure Plan Applications, Project Information Forms, Cost-Effectiveness Worksheets, Funding Status Reports, Interim Project Reports, and Final Reports to the Air District.
4. Provide funds to only projects that comply with the Air District Board-Approved Policies and/or that have received Air District Board of Director's approval for award.
5. Encumber and expend funds within two years of the receipt of funds, unless an application for funds states that the project will take a longer period of time to implement and an extension is approved in writing by the Air District or the County Program Manager, or unless the time is subsequently extended if the recipient requests an extension and the County Program Manager finds that significant progress has been made on the project. The County Program Manager is responsible for tracking and monitoring its administrative costs and Project Sponsors' reimbursement costs. All costs incurred must be based on actual costs (e.g., timecards) and not estimated costs.
6. Limit administrative costs in handling of TFCA funds to no more than 6.25 percent of the actual funds received, or funds allocated in the funding agreement, whichever method the County Program Manager has historically administered.
7. Allocate (i.e., program) all new TFCA funds within six months of the date of the Air District Board of Director's approval of the Expenditure Plan.
8. Provide information to the Air District and to auditors on the expenditures of TFCA funds.

Air District is required to do the following:

1. Hold a public hearing to
 - a. Adopt cost-effectiveness criteria that projects and programs are required to meet. Criteria shall maximize emission reductions and public health benefits; and
 - b. Allocate County Program Managers' share of DMV fee revenues.
2. Provide guidance, offer technical support, and hold workshops on program requirements, including cost-effectiveness.
3. Review Expenditure Plan Applications, Cost-Effectiveness Worksheets, Project Information Forms, Funding Status Reports, Interim Project Reports, and Final Reports.

¹ California Senate Bill 491. *Transportation: omnibus bill*. Retrieved from <https://leginfo.legislature.ca.gov/>. Approved by Governor on October 2, 2015.

4. Re-distribute unallocated TFCA funds from the County Program Manager Fund.
5. Limit TFCA administrative costs to a maximum of 6.25 percent of the County Program Manager funds.
6. Conduct audits of TFCA programs and projects.
7. Hold a public hearing in the case of any misappropriation of revenue.

Eligible TFCA Project Types²

TFCA legislation requires that projects meet eligibility requirements, as described in the California HSC Section 44241. The following is a complete list of mobile source and transportation control project types authorized under the California HSC Section 44241(b):

1. The implementation of ridesharing programs;
2. The purchase or lease of clean fuel buses for school districts and transit operators;
3. The provision of local feeder bus or shuttle service to rail and ferry stations and to airports;
4. Implementation and maintenance of local arterial traffic management, including, but not limited to, signal timing, transit signal preemption, bus stop relocation and "smart streets";
5. Implementation of rail-bus integration and regional transit information systems;
6. Implementation of demonstration projects in telecommuting and in congestion pricing of highways, bridges, and public transit;
7. Implementation of vehicle-based projects to reduce mobile source emissions, including, but not limited to, engine repowers, engine retrofits, fleet modernization, alternative fuels, and advanced technology demonstrations;
8. Implementation of a smoking vehicles program;
9. Implementation of an automobile buy-back scrappage program operated by a governmental agency;
10. Implementation of bicycle facility improvement projects that are included in an adopted countywide bicycle plan or congestion management program; and
11. The design and construction by local public agencies of physical improvements that support development projects and that achieve motor vehicle emission reductions. The projects and the physical improvements shall be identified in an approved area-specific plan, redevelopment plan, general plan, or other similar plan.

TFCA funds may not be used for:

- *Planning activities that are not directly related to the implementation of a specific project; or*
- *The purchase of personal computing equipment for an individual's home use.*

Attributes of Cost-Effective Projects

- ✓ Project uses the best available technology or cleanest vehicle (e.g., achieves significant petroleum reduction, utilizes vehicles that have 2010 or newer engines, is not a Family Emission Limit (FEL) engine, and/or have zero tailpipe emissions).
- ✓ Project is placed into service within one year and/or significantly in advance of regulatory changes (e.g., lower engine emission standards).

² Projects must also comply with the Board-adopted County Program Manager Policies found in Appendix D.

- ✓ Project requests relatively low amounts of TFCA funds (Project Sponsor provides significant matching funds).
- ✓ The following are additional attributes of cost-effective projects for specific project categories:
 - For vehicle trip reduction projects (e.g., bike facilities, First- and Last-Mile Connections, ridesharing):
 - Project serves relatively large percentage of riders/participants who otherwise would have driven alone over a long distance.
 - Project provides “first- and last-mile” connection between employers and transit.
 - Service operates on a route (service and non-service miles) that is relatively short in distance.
 - For pilot trip reduction projects (excluding pilot First- and Last-Mile Connections projects):
 - Project reduces single-occupancy commute-hour vehicle trips. Service operates in areas that are underserved and lack other comparable service in past three years, or significantly expands service to an existing area. If multiple transit agencies provide service in the project area, the relevant transit agencies must have been given the first right of refusal and determined that the proposed project does not conflict with existing service.
 - Service is designed to be self-sustaining or require minimal TFCA funds by the end of the project’s operational period.
 - Services connects users to mass transit.
 - For vehicle-based projects:
 - Vehicle has high operational use, annual mileage, and/or fuel consumption (e.g., taxis, transit fleets, utility vehicles). A vehicle can operate outside the Air District, but only the operation within the Air District will be counted towards the air emissions reduced.
 - For arterial management and smart growth projects:
 - Pre- and post-project counts demonstrate high usage and potential to shift mode or travel behavior that reduces emissions.
 - Project demonstrates a strong potential to reduce motor vehicle trips by significantly improving mobility via walking, bicycling, and improving transit.
 - Project is located along high-volume transit corridors and/or is near major activity centers such as schools, transit centers, civic or retail centers.
 - Project is associated with a multi-modal transit center, supports high-density mixed-use development or communities.

Attributes of Projects that Meet the “Readiness” Policy

The intent of TFCA is to fund projects that achieve surplus emission reductions within two years. County Program Managers may grant a two-year extension, for a total of four years to implement projects.

The following is a list of activities that should be completed prior to awarding TFCA funds to ensure the successful completion of projects:

- Planning (e.g., design)
- Jurisdictional approval (e.g., permits)
- Legislative approvals (e.g., CPUC)
- Environmental review/approvals (e.g., EIR, negative declaration)

Program Schedule

Program Schedule for the FYE 2023 Cycle (*County Program Manager deadlines are italicized*)

Date	Activity
December 2021	Expenditure Plan Application Guidance issued by Air District
January 2022	Expenditure Plan Application funding estimates issued by Air District
March 3, 2022 (tentative)	<i>Deadline for County Program Manager to email Expenditure Plan Application, which includes:</i> • Summary Information Form, signed and dated by County Program Manager's Executive Director • Summary Information Addendum Form (if applicable)
April 28, 2022 (tentative)	Proposed Expenditure Plan funding allocations reviewed by Air District's Mobile Source & Climate Impacts Committee
May 4, 2022 (tentative)	Expenditure Plan funding allocations considered for approval by Air District's Board of Directors
May 12, 2022 (tentative)	Air District provides Funding Agreements for funding allocations to County Program Managers for signature
May 31, 2022	<i>Deadline for County Program Manager to email reports for projects from FYE 2022 and prior years:</i> • Funding Status Report – Include all open projects and projects closed since July 1. • Final Report – For projects closed July 1-December 31 (and optionally those closing later), submit both a Final Report Form and a final Cost-Effectiveness Worksheet
August 4, 2022 (tentative)	<i>Within three months of Air District Board approval, deadline for County Program Manager to email request for Board approval of any projects that do not conform to TFCA policies:</i> • Project Information Form (sample can be found in Appendix G) • Cost-Effectiveness Worksheet (instructions can be found in Appendix H)
October-December (tentative)	Estimated time of first FYE 2023 payment
October 31, 2022	<i>Deadline for County Program Manager to email reports for projects from FYE 2022 and prior years to the Air District:</i> • Interim Project Report – Submit this form for every open project. • Funding Status Report – Include all open projects and projects closed since January 1. • Final Report – For projects closed January 1-June 30 (and optionally those closing later), submit both a Final Report Form and a final Cost-Effectiveness Worksheet.

November 4, 2022 (tentative)	<i>Within six months of Air District Board approval, deadline for County Program Manager to allocate funds identified in the Expenditure Report and to email reports for each new FYE 2023 project:</i> • Project Information Form (sample can be found in Appendix G) • Cost-Effectiveness Worksheet (instructions can be found in Appendix H)
May 31, 2023	<i>Deadline for County Program Manager to email reports for projects from FYE 2023 and prior years:</i> • Funding Status Report – Include all open projects and projects closed since July 1. • Final Report – For projects closed July 1-December 31 (and optionally those closing later), submit both a Final Report Form and a final Cost-effectiveness Worksheet

Note: Items due on dates that fall on weekends or on State/Federal holidays are due the next following business day.

Expenditure Plan Application Process

The Air District will provide County Program Managers the Summary Information Form and Summary Information - Addendum Form (i.e., the Expenditure Plan application materials). These forms must be completed by the County Program Manager and returned to the Air District as indicated below. See Appendix B for examples of these forms.

Expenditure Plans must be **submitted electronically via email** to Hannah Cha at hcha@baaqmd.gov.

Materials sent to the Air District via fax will not be accepted.

Programming of Funds

County Program Managers must allocate (i.e., program) TFCA funds within *six months* of Air District Board approval of a County Program Manager's Expenditure Plan and submit electronic copies of: 1) the Cost-effectiveness Worksheet and 2) the Project Information Form for each new project. Any unallocated funds must be returned to the Air District for programming. Funds are considered allocated when they are awarded to a project based on that County Program Manager's own programming process.

Non-conforming projects: Policy #3 provides a mechanism for consideration of projects that are authorized in the TFCA legislation and meet the cost-effectiveness requirement for that project type, but are in some way inconsistent with the current-year TFCA County Program Manager Fund Policies. To request that such a project be considered for funding, County Program Managers must submit a Cost-Effectiveness Worksheet, Project Information Form, and supporting documentation to the Air District for review no later than *three months* after Air District Board's approval of the Expenditure Plan. (See the Program Schedule section for further details.) Upon receiving the materials, the Air District will work with the County Program Manager to bring the non-conforming project to the Air District Board for approval.

Reporting Forms

The following Air District-approved forms will be emailed to the County Program Managers or posted on either the Air District's website at www.baaqmd.gov/tfca4pm or another online platform.

- **Cost-Effectiveness Worksheet (due within six months of Air District Board approval of Expenditure Plan, and for FYE 2023 and prior year projects, with the Final Report; see Appendix H)**

The purpose of the Cost-Effectiveness Worksheet is to calculate estimated (pre-project) and realized (post-project) emissions reduced for each project and to compare the emissions reductions to the TFCA funds invested. County Program Managers must submit a worksheet for each new project and must ensure that the TFCA cost-effectiveness is equal to or less than the Board-approved TFCA cost-effectiveness limit, **as specified in Policy #2**. County Program Managers must submit a Cost-effectiveness Worksheet in Microsoft Excel format for each project to the Air District pre- and post-project. Post-project evaluations should be completed using the version of the Cost-Effectiveness Worksheet for the year the purchased, installed, or constructed project became available for use by the public.

Instructions for completing the worksheets are found in Appendix H. If you do not use the Air District's default guidelines to determine a project's cost-effectiveness, then you **must provide documentation and information to support alternative values and assumptions** to the Air District for review, evaluation, and approval. Data used to support the project should be the most recent data available.

- Pre-project cost-effectiveness worksheets must be submitted in a Microsoft Excel spreadsheet with the filename structure listed below.
 - [Last two digits of FYE][abbreviated county code][sequential project number]_CE-Submitted-[Project Name].xlsx
 - Example: 23SC12_CE-Submitted-SanJoseZeroEmissionShuttle.xlsx

- **Project Information Form (due within six months of Air District Board approval of Expenditure Plan; see Appendix G)**

The primary purpose of the Project Information Form is to provide a description of each project funded and other applicable (including technical) information that is not captured in the cost-effectiveness worksheet. A copy of this form and instructions for completing it are found in Appendix G. Project Information Forms must be submitted for all projects requesting funding, and a revised Project Information Form must be submitted whenever changes are approved by the County Program Manager that affect the information stated on this form.

- Information Forms must be submitted in a Microsoft Word document with the filename structure listed below.
 - [Last two digits of FYE][abbreviated county code][sequential project number]_ProjInfo-[Project Name].docx
 - Example: 23SC12_ProjInfo-SanJoseZeroEmissionShuttle.docx

- **Biannual Funding Status Report Form (due October 31 and May 31; see Appendix C)**

This form is used to provide an update on all open and recently closed projects (closed since January 1 for the October 31 report and closed since July 1 for the May 31 report) and report any changes in status for all projects, including cancelled, completed under budget, received supplemental funding, or received a time extension during the previous six months. A sample form is provided in Appendix C.

- **Final Report Form (due October 31 and May 31)**

A Final Report Form is due at the conclusion of every project. The Final Report Forms are specific to each type of project. Final Report Forms are due to the Air District semi-annually as follows:

- ***Due October 31: Projects that closed Jan 1–Jun 30 (and optionally those closing later)***

➤ **Due May 31:** *Projects that closed Jul 1–Dec 31 (and optionally those closing later)*

- **Annual Interim Project Report Form (due October 31)**

For each active/open project, an Interim Project Report Form is due annually on October 31. This report provides status information on project progress and fund usage.

County Program Managers may also choose to require additional reports of Project Sponsors.

Administration of Project Requests

- **Project Extension Request**

The County Program Manager may request a project extension when it finds, based on the Project Sponsor's application that despite significant progress on the particular project, the Project Sponsor requires additional time to implement the project (beyond the 2 years that the County Program Manager has already granted). The County Program Manager shall submit that request to the Air District in writing no later than sixty (60) days prior to the end of the project's Expenditure Deadline.

The County Program Manager should include the following information in the project extension request letter:

- a. Project Number
- b. Reason for extension request
- c. The date the County Program Manager's Funding Agreement ends (this information can be found in Section IV, paragraph 1 of the Funding Agreement (e.g., the corresponding Funding Agreement for fiscal year ending 2022 is 22ALA)

Then Air District staff will review the request and project's status reports. If the project qualifies for the extension request, Air District staff will determine whether the extension request requires an amendment to approve the extension or an administrative approval (option is based on the terms of the Funding Agreement). A project extension is approved once an amendment is executed by both parties, or a confirmation letter of approval from the Air District is received.

- **Project Modification Request**

Project modifications requested by a Project Sponsor can generally be approved or denied at the discretion of the County Program Manager. County Program Manager shall re-evaluate the cost-effectiveness of the project using the **most recent worksheet**. If the project modification impacts the projected emission reductions, the County Program Manager should collect the following information from the Project Sponsor:

- a. Updated Project Information Form indicating the requested project modification
- b. Updated Cost Effectiveness Worksheet indicating the change in emission reductions due to the requested modification

The County Program Manager is responsible for reviewing the materials to check that the project is still eligible and within the cost-effectiveness limit. Then s/he may determine whether the modification will be recommended for approval. Finally, if the County Program Manager decides to approve the project modification, s/he must notify the Air District of this decision by email. This email should include (1) a clear description of the project modification request, (2) the updated project information form, (3) updated cost effectiveness worksheet, and (4) a description for why the project is still eligible and compliant with the policies. County Program Managers may choose to hold off from approving project modifications until they have consulted with Air District staff.

- **Multi-Year Funded Project Request (New!)**

The County Program Manager may request to fund a project from multiple program cycles (up to 3 years), or earmark funds up to two future fiscal cycles. The County Program Manager shall submit the *initial* request to the Air District no later than *three months* after the Air District Board's approval of the Expenditure Plan.

The project must meet the following criteria to qualify as a Multi-Year Funded Project:

- a. Project Category is *Bikeways* or *Infrastructure for Trip Reduction*
- b. Project's completion date is longer than the two-year timeframe traditionally allowed.
- c. Complies with the County Program Manager Policies, including the project readiness policy.
- d. Request occurs before the project has been funded with any TFCA.

The County Program Manager should include the following information in the initial Multi-Year Funded Project request:

- a. Project Number
- b. Explanation how the project meets the Multi-Year Funded Project criteria listed above.
- c. Project Information Form
- d. Cost Effectiveness Worksheet evaluated using the total award amount (current allocation plus all future proposed allocation). To account for updates in Cost Effectiveness Worksheet, the evaluation should leave a 15% buffer from the cost effectiveness limit. For instance, a Bikeway project with a cost effectiveness limit of \$500,000 would have a buffer of \$75,000. In this example, a multi-year bikeway project should not exceed a cost effectiveness limit of \$425,000.
- e. Indicate the portioning of funds for each program year. What is allocated for the current cycle and what is earmarked for future cycle(s)?
- f. Project schedule (implementation, project service period and final reimbursement).

If the Air District approves the Multi-Year Funded project during the initial year, the Project Sponsor is still required to apply for approval for its earmarked funds during the regular programming cycle. In the subsequent program cycles, the project must still comply with the current policy for that year and provide regular documentation. The inputs for the Cost Effectiveness Worksheet evaluation would still use the total award amount (past funded, current funded, and future earmarked funds).

The project naming convention will be different for subsequent program cycles. The Project Number will be based on the initial Project Number with an added alphanumeric value. If the initial Project Number was 23ALA01, the subsequent project number will be 23ALA01a, 23ALA01b, and so forth. This will help identify the project as a Multi-Year Funded Project for reporting and audit purposes. Only one Final Report will be submitted to close the project. Although the project will be considered one project, the programmed funds will still need to comply with the corresponding policies and funding agreement.

Note: All the emission reductions will be attributed to the Project in its initial program year. Subsequent program cycles would allow for funds to be distributed but would not take additional emission reduction credit. Therefore, Multi-Year Funded Projects may **not** request any project extensions, including the 2 years that the County Program Manager may grant.

Additional Information

Workshops, Support, and Assistance

Air District staff is available to assist with TFCA project cost-effectiveness analysis, workshops for Project Sponsors, and outreach for TFCA projects. County Program Managers are urged to consult with Air District staff when evaluating complex projects (such as bike share, vehicle, and vehicle infrastructure projects requiring the evaluation of emission reductions beyond those required by regulations) or when using cost-effectiveness assumptions other than those provided by the Air District in this Guidance. Consulting with the Air District prior to awarding funds minimizes the risk of both funding projects that are not eligible for TFCA funds and awarding more funding to a project than it is eligible for. Please contact us and let us know how we can assist you.

Air District Contact

Please direct questions to: Hannah Cha, Staff Specialist, hcha@baaqmd.gov

Appendix A: Guidelines for Eligible TFCA Reimbursable Costs

The TFCA-enabling legislation allows vehicle registration fees collected for the program to be used for project implementation costs, as well as administrative project costs. This appendix provides guidance on differentiating and reporting these costs. The Air District will use the definitions and interpretations discussed below in the financial accounting of the TFCA program. The Air District conducts audits on TFCA-funded projects to ensure that the funds have been spent in accordance with the program guidelines and policies.

Project Implementation Costs

Project implementation costs are charges associated with implementing a TFCA-funded project including:

- Documented hourly labor charges (salaries, wages, and benefits) directly and solely related to implementation of the TFCA project;
- Capital equipment and installation costs;
- Shuttle driver labor and equipment maintenance costs;
- Contractor labor charges related to the TFCA project;
- Travel, training, and associated personnel costs that are directly related to the implementation of the TFCA-funded project (e.g., the cost of training mechanics to service TFCA-funded natural gas clean air vehicles); and
- Indirect costs associated with implementing the project, including reasonable overhead costs incurred to provide a physical place of work (e.g., rent, utilities, office supplies), general support services (e.g., payroll, reproduction), and managerial oversight. Project Sponsors should itemize these costs and, for each item, provide evidence that it supports the implementation of the project.

To determine if an indirect cost falls under the administrative or implementation costs, the reviewer should look at the cost in the larger context of the project type. For example, a printer can be purchased and used for (1) a project which installs a charging station versus (2) an outreach project. In the first instance, the printer is an administrative cost since the printer is not used directly as part of the charging station project; implementing the charging station project can be completed without the printer. In the second instance, the printer could be an implementation cost as a part of the project scope if the printer is used to print outreach materials related to the project; the printer is an integral part of the outreach project.

Administrative Project Costs for Project Sponsors³

Administrative project costs are costs associated with the administration of a TFCA project, and do not include project capital or operating costs, as discussed above. As best practice, we recommend that administrative project costs that are reimbursable to a Project Sponsor are limited to a maximum of 6.25% of the total TFCA funds received.

Administrative project costs are limited to the following activities that have documented hourly labor and overhead costs (salaries, wages, and benefits). Hourly labor charges must be expressed on the basis of hours worked on the TFCA project.

- Costs associated with administering the TFCA Funding Agreement (e.g., responding to requests for information from Air District and processing amendments). Note that costs incurred in preparation of a TFCA application or costs incurred prior to the execution of the Funding Agreement are not eligible for reimbursement;
- Accounting for TFCA funds;

³ This section applies to the Project Sponsor. The County Program Manager's own administrative costs are discussed in County Program Roles and Responsibilities.

- Fulfilling all monitoring, reporting, and record-keeping requirements specified in the TFCA Funding Agreement, including the preparation of reports, invoices, and final reports; and
- Documented indirect administrative costs associated with administering the project, including reasonable overhead costs of utilities, office supplies, reproduction and managerial oversight. These costs should be itemized and for each item provide evidence that it supports the administration of the project.

Reimbursement Procedure

The County Program Manager must track and monitor Project Sponsors reimbursement costs, including the following:

- Project implementation and administrative project costs that are approved by the County Program Manager shall be described in a Funding Agreement with the Project Sponsor.
- The Project Sponsor may seek reimbursement for project implementation and administrative project costs by providing proper documentation with project invoices. Documentation for these costs will show how these costs were calculated, for example, by listing the date when the hours were worked, employees' job titles, employees' hourly pay rates, tasks being charged, and total charges. Documentation of hourly charges may be provided with time sheets or any other generally accepted accounting method to allocate and document staff time.
- It is the County Program Manager's responsibility to review reimbursement requests for proper documentation, such as itemized timesheets/time tracking, before reimbursing the Project Sponsor.
- All costs reimbursed by TFCA, including Administrative Cost, are required to be included in the Cost-Effectiveness Worksheet.

Appendix B: Sample Expenditure Plan Application

County Program Manager Agency Name:

Address:

Summary Information

PART A: NEW TFCA FUNDS

			Project	Admin (default 6.25%)	Total (Project + Admin)
Estimated FYE 2023 DMV revenues (based on projected CY2021 revenues):	Line 1	\$	\$	\$	
Difference between prior-year estimate and actual revenue:	Line 2	\$	\$	\$	
a. Actual FYE 2021 DMV revenues (based on CY2020):	2a	\$	\$	\$	
b. Estimated FYE 2021 DMV revenues:	2b	\$	\$	\$	
<i>('a' minus 'b' equals Line 2.)</i>					
Estimated New Allocation (Sum of Lines 1 and 2):	Line 3	\$	\$	\$	

PART B: INTEREST FOR PROGRAMMING AND TFCA FUNDS AVAILABLE FOR REPROGRAMMING

Total available for programming/reprogramming to other projects.	Line 4	\$	\$	\$	
a. Amount available from previously funded projects:	4a	\$			
b. Admin expended in FYE 2021:	4b		\$		
c. Interest income earned on TFCA funds in CY 2021:	4c	\$		\$	
(Project equals '4a' plus '4c' equals Line 4. Admin equals '2a' minus '4b'.)					

PART C: TOTAL AVAILABLE TFCA FUNDS

Total Available TFCA Funds (Sum of Lines 3 and 4)	Line 5	\$	\$	\$	
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I certify that, to the best of my knowledge, the information contained in this application is complete and accurate.

Executive Director Signature

Date

[1] The "Estimated TFCA funds budgeted for administration" amount is listed for informational purposes only. Per California Health and Safety Code Section 44233, County Program Managers must limit their administrative costs to no more than 6.25% of the actual total revenue received from the Air District.

SUMMARY INFORMATION – ADDENDUM

Complete if there are TFCA Funds available for reprogramming.

[illegible]

TOTAL TFCA FUNDS AVAILABLE FOR REPROGRAMMING

\$ _____

(Enter this amount in Part B, Line 4.a. of Summary Information form)

* Enter UB (for projects that were completed under budget) and CP (for cancelled projects).

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Appendix D: Board-Adopted Policies for FYE 2023

Adopted November 17, 2021

The following Policies apply to the Bay Area Air Quality Management District's (Air District) Transportation Fund for Clean Air (TFCA) County Program Manager Fund for fiscal year ending (FYE) 2023.

BASIC ELIGIBILITY

1. **Reduction of Emissions:** Only projects that result in the reduction of motor vehicle emissions within the Air District's jurisdiction are eligible.

Projects must conform to the provisions of the California Health and Safety Code (HSC) sections 44220 et seq. and these Air District Board of Directors adopted TFCA County Program Manager Fund Policies.

Projects must achieve surplus emission reductions, i.e., reductions that are beyond what is required through regulations, ordinances, contracts, and other legally binding obligations at the time of the execution of a grant agreement between the County Program Manager and the grantee. Projects must also achieve surplus emission reductions at the time of an amendment to a grant agreement if the amendment modifies the project scope or extends the project completion deadline.

2. **TFCA Cost-Effectiveness:** Projects must not exceed the maximum cost-effectiveness (C-E) limit specified in Table 1. Cost-effectiveness (\$/weighted ton) is the ratio of TFCA funds awarded to the sum of surplus emissions reduced, during a project's operational period, of reactive organic gases (ROG), nitrogen oxides (NOx), and weighted PM10 (particulate matter 10 microns in diameter and smaller). All TFCA-generated funds (e.g., reprogrammed TFCA funds) that are awarded or applied to a project must be included in the evaluation. For projects that involve more than one independent component (e.g., more than one vehicle purchased, more than one shuttle route), each component must achieve this cost-effectiveness requirement.

County Program Manager administrative costs are excluded from the calculation of a project's TFCA cost-effectiveness.

Table 1: Maximum Cost-Effectiveness for TFCA County Program Manager Fund Projects

Policy No.	Project Category	Maximum C-E (\$/weighted ton)
22	Alternative Fuel Light- and Medium-Duty Vehicles	500,000
23	Reserved	Reserved
24	Alternative Fuel Heavy-Duty Trucks and Buses	500,000
25	On-Road Truck Replacements	90,000
26	Alternative Fuel Infrastructure	500,000
27	Ridesharing Projects – Existing	150,000
28	First- and Last-Mile Connections – Existing	200,000; 250,000 for services in CARE Areas or PDAs

29.a.	First- and Last-Mile Connections – Pilot projects not in CARE Areas or PDAs. <i>These projects will be evaluated every year.</i>	Year 1 - 500,000 Year 2 and beyond - see Policy #28 service is considered existing
	First- and Last-Mile Connections – <i>Pilot shuttle projects located in Highly Impacted Communities as defined in the Air District CARE Program and/or a Planned or Potential PDA may receive TFCA Funds under the Pilot designation. These projects will be evaluated every year.</i>	Years 1 & 2 - 500,000 Year 3 and beyond - see Policy #28 service is considered existing
29.b.	Pilot Trip Reduction	500,000
30.a.	Bicycle Parking	250,000
30.b.	Bikeways	500,000
31	Bike Share	500,000
32	Arterial Management	250,000
33	Infrastructure Improvements for Trip Reduction	500,000
34	Telecommuting	150,000

3. **Eligible Projects and Case-by-Case Approval:** Eligible projects are those that conform to the provisions of the HSC section 44241, Air District Board-adopted policies, and Air District guidance. On a case-by-case basis, County Program Managers must receive approval by the Air District for projects that are authorized by the HSC section 44241 and achieve Board-adopted TFCA cost-effectiveness but do not fully meet other Board-adopted Policies.
4. **Consistent with Existing Plans and Programs:** All projects must comply with the Transportation Control and Mobile Source Control Measures included in the Air District's most recently approved strategies for achieving and maintaining State and national ozone standards ([2017 Clean Air Plan](#)), those plans and programs established pursuant to HSC sections 40233, 40717, and 40919; and, when specified, other adopted federal, State, regional, and local plans and programs.
5. **Eligible Recipients:** Grant recipients must be responsible for the implementation of the project, have the authority and capability to complete the project, and be an applicant in good standing with the Air District (Policies #8-10).
 - a. **Public agencies** are eligible to apply for all project categories.
 - b. **Non-public entities** are eligible to apply for only new alternative-fuel (light, medium, and heavy-duty) vehicle and infrastructure projects, and advanced technology demonstrations that are permitted pursuant to HSC section 44241(b)(7).
6. **Readiness:** Projects must commence by the end of calendar year 2023 or within 24 months from the date of execution of the funding agreement with the subgrantee. For purposes of this policy, “commence” means a tangible preparatory action taken in connection with the project’s operation or implementation, for which the grantee can provide documentation of the commencement date and action performed. “Commence” includes, but is not limited to, the issuance of a purchase order to secure project vehicles and equipment, commencement of first- and last-mile connections and ridesharing service, or the delivery of the award letter for a construction contract.

7. **Maximum Two Years Operating Costs for Service-Based Projects:** Unless otherwise specified in policies #22 through #33, TFCA County Program Manager Funds may be used to support up to two years of operating costs for service-based projects (e.g., ridesharing, first- and last-mile connections service). Grant applicants that seek TFCA funds for additional years must reapply for funding in the subsequent funding cycles.

APPLICANT IN GOOD STANDING

8. **Independent Air District Audit Findings and Determinations:** Grantees who have failed either the financial statement audit or the compliance audit for a prior TFCA-funded project awarded by either County Program Managers or the Air District are excluded from receiving an award of any TFCA funds for three (3) years from the date of the Air District's final audit determination in accordance with HSC section 44242 or for a duration determined by the Air District Air Pollution Control Officer (APCO). Existing TFCA funds already awarded to the project sponsor will not be released until all audit recommendations and remedies have been satisfactorily implemented. A failed financial statement audit means a final audit report that includes an uncorrected audit finding that confirms an ineligible expenditure of TFCA funds. A failed compliance audit means an uncorrected audit finding that confirms a program or project was not implemented in accordance with the applicable Funding Agreement or grant agreement.

A failed financial statement or compliance audit of the County Program Manager or its grantee may subject the County Program Manager to a reduction of future revenue in an amount equal to the amount which was inappropriately expended pursuant to the provisions of HSC section 44242(c)(3).

9. **Authorization for County Program Manager to Proceed:** Only a fully executed Funding Agreement (i.e., signed by both the Air District and the County Program Manager) constitutes the Air District's award of County Program Manager Funds. County Program Managers may incur costs (i.e., contractually obligate itself to allocate County Program Manager Funds) only after the Funding Agreement with the Air District has been executed.
10. **Maintain Appropriate Insurance:** Both the County Program Manager and each grantee must obtain and maintain general liability insurance, workers compensation insurance, and additional insurance as appropriate for specific projects, with required coverage amounts provided in Air District guidance and final amounts specified in the respective grant agreements.

INELIGIBLE PROJECTS

11. **Duplication:** Projects that have previously received any TFCA funds, e.g., TFCA Regional Funds or County Program Manager Funds, and that do not propose to achieve additional emission reductions are not eligible.
12. **Planning Activities:** The costs of preparing or conducting feasibility studies are not eligible. Planning activities are not eligible unless they are directly related to the implementation of a specific project or program.
13. **Reserved.**
14. **Cost of Developing Proposals and Grant Applications:** The costs to prepare proposals and/or grant applications are not eligible.

USE OF TFCA FUNDS

15. **Combined Funds:** TFCA County Program Manager Funds may not be combined with TFCA Regional Funds to fund a County Program Manager Fund project. Projects that are funded by the TFCA County Program Manager Fund are not eligible for additional funding from other funding sources that claim emissions reduction credits. However, County Program Manager-funded projects may be combined with funds that do not require emissions reductions for funding eligibility.

16. **Administrative Costs:** The County Program Manager may not expend more than 6.25 percent of its County Program Manager Funds for its administrative costs. The County Program Manager's costs to prepare and execute its Funding Agreement with the Air District are eligible administrative costs. Interest earned on County Program Manager Funds shall not be included in the calculation of the administrative costs. To be eligible for reimbursement, administrative costs must be clearly identified in the expenditure plan application and in the Funding Agreement, and must be reported to the Air District.
17. **Expend Funds within Two Years:** County Program Manager Funds must be expended within two (2) years of receipt of the first transfer of funds from the Air District to the County Program Manager in the applicable fiscal year, unless a County Program Manager has made the determination based on an application for funding that the eligible project will take longer than two years to implement. Additionally, a County Program Manager may, if it finds that significant progress has been made on a project, approve no more than two one-year schedule extensions for a project. Any subsequent schedule extensions for projects can only be given on a case-by-case basis, if the Air District finds that significant progress has been made on a project.
18. **Unallocated Funds:** Pursuant to HSC 44241(f), any County Program Manager Funds that are not allocated to a project within six months of the Air District Board of Directors approval of the County Program Manager's Expenditure Plan may be allocated to eligible projects by the Air District. The Air District shall make reasonable effort to award these funds to eligible projects in the Air District within the same county from which the funds originated.
19. Reserved.
20. Reserved.
21. Reserved.

ELIGIBLE PROJECT CATEGORIES

Clean Air Vehicle Projects

22. Alternative Fuel Light- and Medium-Duty Vehicles:

These projects are intended to accelerate the deployment of zero- and partial-zero emissions motorcycles, cars, and light-duty vehicles. All of the following conditions must be met for a project to be eligible for TFCA funds:

- a. Vehicles must have a gross vehicle weight rating (GVWR) of 8,500 lbs. or lower;
- b. Vehicles may be purchased or leased;
- c. Eligible vehicle types include plug-in hybrid-electric, plug-in electric, fuel cell vehicles, and neighborhood electric vehicles (NEV) as defined in the California Vehicle Code. Vehicles must also be approved by the CARB;
- d. Vehicles that are solely powered by gasoline, diesel, or natural gas, and retrofit projects are not eligible;
- e. The total amount of TFCA funds awarded may not exceed 90% of the project's eligible cost; the sum of TFCA funds awarded with all other grants and applicable manufacturer and local/state/federal rebates and discounts may not exceed total project costs;
- f. Grantees may request authorization of up to 100% of the TFCA Funds awarded for each vehicle to be used to pay for costs directly related to the purchase and installation of alternative fueling infrastructure and/or equipment used to power the new vehicle; and

- g. Projects that seek to scrap and replace a vehicle in the same weight-class as the proposed new vehicle may qualify for additional TFCA funding. Costs related to the scrapping and/or dismantling of the existing vehicle are not eligible for reimbursement with TFCA funds.

23. Reserved.

24. Alternative Fuel Heavy-Duty Trucks and Buses:

These projects are intended to accelerate the deployment of qualifying alternative fuel vehicles that operate within the Air District's jurisdiction by encouraging the replacement of older, compliant trucks and buses with the cleanest available technology. If replacing heavy-duty vehicles and buses with light-duty vehicles, light-duty vehicles must meet Policy #22. All of the following conditions must be met for a project to be eligible for TFCA Funds:

- a. Each vehicle must be new and have a GVWR greater than 8,500 lbs.;
- b. Vehicles may be purchased or leased;
- c. Eligible vehicle types include plug-in hybrid, plug-in electric, and fuel cell vehicles. Vehicles must also be approved by the CARB;
- d. Vehicles that are solely powered by gasoline, diesel, or natural gas and retrofit projects are not eligible;
- e. The total amount of TFCA funds awarded may not exceed 100% of the project's eligible cost for School Buses and 90% of the project's eligible cost for all other vehicle types; the sum of TFCA funds awarded combined with all other grants and applicable manufacturer and local/state/federal rebates and discounts may not exceed total project costs;
- f. Grantees may request authorization of up to 100% of the TFCA Funds awarded for each vehicle to be used to pay for costs directly related to the purchase and installation of alternative fueling infrastructure and/or equipment used to power the new vehicle; and
- g. Projects that seek to scrap and replace a vehicle in the same weight-class as the proposed new vehicle may qualify for additional TFCA funding. Costs related to the scrapping and/or dismantling of the existing vehicle are not eligible for reimbursement with TFCA funds.

- 25. On-Road Truck Replacements:** These projects will replace Class 6, Class 7, and Class 8 diesel-powered trucks that have a gross vehicle weight rating (GVWR) of 19,501 lbs. or greater (per vehicle weight classification definition used by Federal Highway Administration (FHWA) with new or used trucks that have an engine certified to the 2010 CARB emissions standards or cleaner. The existing truck(s) to be replaced must be registered with the California Department of Motor Vehicles (DMV) to an address within the Air District's jurisdiction and must be scrapped after replacement.

- 26. Alternative Fuel Infrastructure:** These projects are intended to accelerate the adoption of zero-emissions vehicles through the deployment of alternative fuel infrastructure, i.e., electric vehicle charging sites, hydrogen fueling stations.

Eligible refueling infrastructure projects include new dispensing and charging facilities, or additional equipment or upgrades and improvements that expand access to existing alternative fuel fueling/charging sites. This includes upgrading or modifying private fueling/charging sites or stations to allow public and/or shared fleet access. TFCA funds may be used to cover the cost of equipment and installation. TFCA funds may also be used to upgrade infrastructure projects previously funded with TFCA funds as long as the equipment was maintained and has exceeded the duration of its useful life after being placed into service.

Equipment and infrastructure must be designed, installed, and maintained as required by the existing recognized codes and standards and as approved by the local/state authority.

TFCA funds may not be used to pay for fuel, electricity, operation, and maintenance costs.

Trip Reduction Projects

27. Existing Ridesharing Services: The project provides carpool, vanpool, or other rideshare services.

Projects that provide a direct or indirect financial transit or rideshare subsidy are also eligible under this category. Projects that provide a direct or indirect financial transit or rideshare subsidy *exclusively* to employees of the grantee are not eligible.

28. Existing First- and Last-Mile Connections:

The project reduces single-occupancy vehicle trips by providing short-distance connections between mass transit and commercial hubs or employment centers. All the following conditions must be met for a project to be eligible for TFCA funds:

- a. The service must provide direct connections between stations (e.g., rail stations, ferry stations, Bus Rapid Transit (BRT) stations, or airports) and a distinct commercial or employment location.
- b. The service's schedule, which is not limited to commute hours, must be coordinated to have a timely connection with corresponding mass transit service.
- c. The service must be available for use by all members of the public.
- d. TFCA funds may be used to fund only shuttle services to locations that are under-served and lack other comparable service. For the purposes of this policy, "comparable service" means that there exists, either currently or within the last three years, a direct, timed, and publicly accessible service that brings passengers to within one-third (1/3) mile of the proposed commercial or employment location from a mass transit hub. A proposed service will not be deemed "comparable" to an existing service if the passengers' proposed travel time will be at least 15 minutes shorter and at least 33% shorter than the existing service's travel time to the proposed destination.
- e. Reserved.
- f. Grantees must be either: (1) a public transit agency or transit district that directly operates the service; or (2) a city, county, or any other public agency.
- g. Applicants must submit a letter of concurrence from all transit districts or transit agencies that provide service in the area of the proposed route, certifying that the service does not conflict with existing service.
- h. Each route must meet the cost-effectiveness requirement in Policy #2. Projects that would operate in Highly Impacted Communities or Episodic Areas as defined in the Air District Community Air Risk Evaluation (CARE) Program, or in Priority Development Areas (PDAs), may qualify for funding at a higher cost-effectiveness limit (see Policy #2).

29. Pilot Projects:

a. Pilot First- and Last-Mile Connections:

The project provides new first- and last-mile connections service that is at least 70% unique and operates where no other service was provided within the past three years. In addition to meeting the conditions listed in Policy #28 for First- and Last-Mile Connections, project applicants must also comply with the following application criteria and agree to comply with the project implementation requirements:

- i. Demonstrate the project will reduce single-occupancy vehicle trips and result in a reduction in emissions of criteria pollutants.

- ii. Provide data and/or other evidence demonstrating the public's need for the service, such as a demand assessment survey and letters of support from potential users.
- iii. Provide a written plan showing how the service will be financed in the future and require minimal, if any, TFCA funds to maintain its operation after the pilot period.
- iv. If the local transit provider is not a partner, the applicant must demonstrate that they have attempted to have the service provided by the local transit agency. The transit provider must have been given the first right of refusal and determined that the proposed project does not conflict with existing service;
- v. Projects located in Highly Impacted Communities as defined in the Air District CARE Program and/or a Planned or Potential PDA may receive a maximum of two years of TFCA County Program Manager Funds under the Pilot designation. For these projects, the project applicants understand and must agree that such projects will be evaluated every year, and continued funding will be contingent upon the projects meeting the following requirements:
 - 1. During the first year and by the end of the second year of operation, projects must not exceed a cost-effectiveness of \$500,000/ton
 - 2. Projects entering a third year of operation and beyond are subject to all of the requirements, including cost-effectiveness limit, of Policy #28 (existing First- and Last-Mile Connections).
- vi. Projects located outside of CARE areas and PDAs may receive a maximum of two years of TFCA County Program Manager Funds under this designation. For these projects, the project applicant understands and must agree that such projects will be evaluated every year, and continued funding will be contingent upon the projects meeting the following requirements:
 - 1. By the end of the first year of operation, projects shall meet a cost-effectiveness of \$500,000/ton, and
 - 2. By the end of the second year of operation, projects shall meet all of the requirements, including cost-effectiveness limit, of Policy #28 (existing First- and Last-Mile Connections).

b. Pilot Trip Reduction:

The project reduces single-occupancy commute vehicle trips by encouraging mode-shift to other forms of shared transportation. Pilot projects are defined as projects that serve an area where no similar service was available within the past three years, or that will result in significantly expanded service to an existing area. Funding is designed to provide the necessary initial capital to a public agency for the start-up of a pilot project so that by the end of the third year of the trip reduction project's operation, the project will be financially self-sustaining or require minimal public funds, such as grants, to maintain its operation.

- i. Applicants must demonstrate the project will reduce single-occupancy commute vehicle trips and result in a reduction in emissions of criteria pollutants;
- ii. The proposed service must be available for use by all members of the public;
- iii. Applicants must provide a written plan showing how the service will be financed in the future and require minimal, if any, TFCA funds to maintain its operation by the end of the third year;
- iv. If the local transit provider is not a partner, the applicant must demonstrate that they have attempted to have the service provided by the local transit agency. The

transit provider must have been given the first right of refusal and determined that the proposed project does not conflict with existing service;

- v. Applicants must provide data and any other evidence demonstrating the public's need for the service, such as a demand assessment survey and letters of support from potential users;
- vi. Pilot trip reduction projects that propose to provide ridesharing service projects must comply with all applicable requirements in policy #27.

30. Bicycle Projects:

These projects expand public access to bicycle facilities. New bicycle facility projects or upgrades to an existing bicycle facility that are included in an adopted countywide bicycle plan, Congestion Management Program (CMP), countywide transportation plan (CTP), city plan, or the Metropolitan Transportation Commission's (MTC) Regional Bicycle Plan and/or Regional Active Transportation Plan are eligible to receive TFCA funds. Projects that are included in an adopted city general plan or area-specific plan must specify that the purpose of the bicycle facility is to reduce motor vehicle emissions or traffic congestion.

a. Bicycle Parking:

The project expands the public's access to new bicycle parking facilities (e.g., electronic bicycle lockers, bicycle racks), which must be publicly accessible and available for use by all members of the public. Eligible projects are limited to the purchase and installation of the following types of bike parking facilities that result in motor vehicle emission reductions:

- i. Bicycle racks, including bicycle racks on transit buses, trains, shuttle vehicles, and ferry vessels;
- ii. Electronic bicycle lockers; and
- iii. Capital costs for attended bicycle storage facilities.

b. Bikeways:

The project constructs and/or installs bikeways for the purpose of reducing motor vehicle emissions or traffic congestion. Bikeways for exclusively recreational use are ineligible. Projects are limited to the following types of bikeways:

- i. Class I Bikeway (bike path), new or upgrade improvement from Class II or Class III bikeway;
- ii. New Class II Bikeway (bike lane);
- iii. New Class III Bikeway (bike route); and
- iv. Class IV Bikeway (separated bikeway), new or upgrade improvement from Class II or Class III bikeway.

All bikeway projects must, where applicable, be consistent with design standards published in the California Highway Design Manual or conform to the provisions of the Protected Bikeway Act of 2014. Projects must have completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement.

31. Bike Share:

Projects that make bicycles available to individuals for shared use for completing first- and last-mile trips in conjunction with regional transit and stand-alone short distance trips are eligible for TFCA funds, subject to all the following conditions:

- a. Projects must either increase the fleet size of existing service areas or expand existing service areas to include new Bay Area communities.
- b. Projects must have a completed and approved environmental plan and a suitability study demonstrating the viability of bicycle sharing.
- c. Projects must have shared membership and/or be interoperable with the Bay Area Bike Share (BABS) project when they are placed into service, in order to streamline transit for end users by reducing the number of separate operators that would comprise bike trips. Projects that meet one or more of the following conditions are exempt from this requirement:
 - i. Projects that do not require membership or any fees for use;
 - ii. Projects that were provided funding under MTC's Bike Share Capital Program to start a new or expand an existing bike share program; or
 - iii. Projects that attempted to coordinate with, but were refused by, the current BABS operator to have shared membership or be interoperable with BABS. Applicants must provide documentation showing proof of refusal.

TFCA funds may be awarded to pay for up to five years of operations, including the purchase of two-wheeled or three-wheeled vehicles (self-propelled or electric), plus mounted equipment required for the intended service and helmets.

32. Arterial Management:

Arterial management grant applications must identify a specific arterial segment and define what improvement(s) will be made to affect traffic flow on the identified arterial segment. Projects that provide routine maintenance (e.g., responding to citizen complaints about malfunctioning signal equipment) are not eligible to receive TFCA funds. Incident management projects on arterials are eligible to receive TFCA funds. Transit improvement projects include, but are not limited to, bus rapid transit and transit priority projects. Signal timing projects are eligible to receive TFCA funds. Each arterial segment must meet the cost-effectiveness requirement in Policy #2.

33. Infrastructure Improvements for Trip Reduction:

The project expands the public's access to alternative transportation modes through the design and construction of physical improvements that support development projects that achieve motor vehicle emission reductions.

- a. The development project and the physical improvement must be identified in an approved area-specific plan, redevelopment plan, general plan, bicycle plan, pedestrian plan, traffic-calming plan, or other similar plan.
- b. The project must implement one or more transportation control measures (TCMs) in the most recently adopted Air District plan for State and national ambient air quality standards. Pedestrian projects are eligible to receive TFCA funds.
- c. The project must have a completed and approved environmental plan. If a project is exempt from preparing an environmental plan as determined by the public agency or lead agency, then that project has met this requirement.

34. Telecommuting: Implementation of demonstration projects in telecommuting. No funds expended under this policy shall be used for the purchase of personal computing equipment for an individual's home use.

Appendix E: Glossary of Terms

The following is a glossary of terms found in the TFCA County Program Policies:

Community Air Risk Evaluation (CARE) Areas – Areas identified where air pollution contributes most to health impacts and where populations are most vulnerable to air pollution.

Environmental plan - A completed and approved plan to mitigate environmental impacts as required by the result of the review process of all applicable local, state, and federal environmental reviews (e.g., CEQA, NEPA). For the purpose of the County Program Manager Fund, projects requiring a completed and approved environmental plan must complete all required environmental review processes. Any project that is exempt from preparing an environmental plan, as determined by an environmental review process, has met the requirement of having a completed and approved environmental plan.

Final audit determination - The determination by the Air District of a County Program Manager or Project Sponsor's TFCA program or project, following completion of all procedural steps set forth in HSC section 44242(a) – (c).

Funding Agreement - The agreement executed by and between the Air District and the County Program Manager for the allocation of TFCA County Program Manager Funds for the respective fiscal year.

Grant Agreement - The agreement executed by and between the County Program Manager and a Project Sponsor.

Implementation Period – Status starts once Grant Agreement has been executed and project is being implemented. Status ends once Operational Period starts, i.e. once a service project starts its operation, a vehicle/equipment/facility project is purchased, installed, constructed, and placed into public service.

Operational Period – This status starts once a project has completed installation/construction/procurement and has placed equipment/vehicles/facilities into public service and ends once years of effectiveness has been met. For service projects, the operational period starts when the project starts providing service and ends once project has met its years of effectiveness.

Priority Development Areas (PDAs) – Areas within existing communities that local city or county governments have identified and approved for future growth. These areas typically are accessible by one of more transit services, and are often located near established job centers, shipping districts, and other services.

Project Sponsor - Recipient of an award of TFCA Funds from the County Program Manager to carry out a TFCA project and who executes a grant agreement with the County Program Manager to implement that project. A project sponsor is also known as a grantee.

Project Useful Life (see Years of Effectiveness)

TFCA funds - Project Sponsor's allocation of funds, or grant, pursuant to an executed grant agreement awarded pursuant to the County Program Manager Fund Funding Agreement.

TFCA-generated funds - The Transportation Fund for Clean Air (TFCA) program funds generated by the \$4 surcharge on motor vehicle registration fees that are allocated through the Regional Fund and the County Program Manager Fund.

Weighted PM10 - Weighted particulate matter less than 10 microns in diameter (PM10) is calculated by multiplying the tailpipe PM emissions by a factor of 20, which is consistent with CARB methodology for estimating PM10 emissions for the Carl Moyer Program.

Years of Effectiveness - Equivalent to the administrative period of the grant and used in calculating a project's Cost Effectiveness. This is different than how long the project will physically last.

Appendix F: Insurance Guidelines

This appendix provides guidance on the insurance coverage and documentation typically required for TFCA County Program Manager Fund projects. Note that the Air District reserves the right to specify different types or levels of insurance in the Funding Agreement.

The typical Funding Agreement requires that each Project Sponsor provide documentation showing that they meet the following requirements for each of their projects. The County Program Manager is not required to meet these requirements itself, unless it is acting as a Project Sponsor.

1. Liability Insurance:

Corporations and Public Entities - a limit of not less than \$1,000,000 per occurrence. Such insurance shall be of the type usual and customary to the business of the Project Sponsor, and to the operation of the vehicles, engines or equipment operated by the Project Sponsor.

Single Vehicle Owners - a limit of not less than \$750,000 per occurrence. Such insurance shall be of the type usual and customary to the business of the Project Sponsor, and to the operation of the vehicles, engines or equipment operated by the Project Sponsor.

2. Property Insurance:

New Equipment Purchases - an amount of not less than the insurable value of Project Sponsor's vehicles, engines or equipment funded under this Agreement, and covering all risks of loss, damage or destruction of such vehicles, engines or equipment.

Retrofit Projects - 2003 model year vehicles or engines or newer in an amount of not less than the insurable value of Project Sponsor's vehicles, engines or equipment funded under this Agreement, and covering all risks of loss, damage or destruction of such vehicles, engines or equipment.

3. Workers Compensation Insurance:

Construction projects – including but not limited to bike/pedestrian paths, bike lanes, smart growth and vehicle infrastructure, as required by California law and employers' insurance with a limit not less than \$1 million.

4. Acceptability of Insurers:

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A: VII. The Air District may, at its sole discretion, waive or alter this requirement or accept self-insurance in lieu of any required policy of insurance.

The following table lists the type of insurance coverage generally required for each project type. The requirements may differ in specific cases. County Program Managers should contact the Air District liaison with questions, especially about unusual projects.

Project Category	Liability	Property	Workers Compensation
Vehicle purchase and lease	X	X	
Engine retrofits	X	X	
Operation of shuttle services	X		X
Operation of vanpools	X		
Construction of bike/pedestrian path or overpass	X		X
Construction of bike lanes	X		X
Construction of cycle tracks/separated bikeways	X		X
Construction of smart growth/traffic calming projects	X		X
Construction of vehicle fueling/charging infrastructure	X	X	X
Arterial management/signal timing	X		X
Purchase and installation of bicycle lockers and racks	X	X	X
Transit marketing programs	X		
Ridesharing projects	X		X
Bike Share projects	X	X	X
Transit pass subsidy or commute incentives	X		
Guaranteed Ride Home Program	X		

Appendix G: Sample Project Information Form

- A. Project Number: _____
Use consecutive numbers for projects funded, with year, county code, and number, e.g., 23MAR01, 23MAR02 for Marin County. Zero (e.g., 23MAR00) is reserved for County Program Manager TFCA funds allocated for administration costs.
- B. Project Title: _____
Provide a concise, descriptive title for the project (e.g., “Elm Ave. Signal Interconnect” or “Purchase Ten Gasoline-Electric Hybrid Light-Duty Vehicles”).
- C. Project Category (project will be evaluated under this category): _____
- D. TFCA County Program Manager Funds Allocated: \$ _____
- E. TFCA Regional Funds Awarded (if applicable): \$ _____
- F. Total TFCA Funds Allocated (sum of C and D): \$ _____
- G. Total Project Cost: \$ _____
- H. Project Description:
Project Sponsor will use TFCA funds to _____. Include information sufficient to evaluate the eligibility and cost-effectiveness of the project. Please provide answers for who, what, when, and where for the project. Examples of the information needed include but are not limited to: what will be accomplished by whom, how many pieces of equipment are involved, how frequently it is used, the location, the length of roadway segments, the size of target population, etc. Background information should be brief. For shuttle/feeder bus projects, indicate the hours of operation, frequency of service, and rail station and employment areas served.
- I. Final Report Content: Final Report form and final Cost Effectiveness Worksheet
Reference the appropriate Final Report form that will be completed and submitted after project completion. See www.baaqmd.gov/tfca4pm for a listing of the following reporting forms:
- Trip Reduction
 - Clean Air Vehicles
 - Bicycle Projects
 - Arterial Management Projects
 - Repower and Retrofit
- J. Attach a completed Cost-Effectiveness Worksheet and any other information used to evaluate the proposed project. *For example, for vehicle projects, include the California Air Resources Board Executive Orders for all engines and diesel emission control systems. Note, Cost-Effectiveness Worksheets are not needed for TFCA County Program Managers’ own administrative costs.*
- K. Has or will this project receive any other TFCA funds, such as Regional Funds?
- L. Comments (if any):
- M. Please indicate if the project is located in a SB535 Disadvantaged Community and/or AB1550 Low-income Community (Please use the map to find your project’s location:
<https://ww3.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm>)

Section 2. Project Category Specific Questions

(Pending review)

Appendix H: Instructions for Cost-Effectiveness Worksheets

Cost-Effectiveness Worksheets are used to calculate project emission reductions and TFCA cost-effectiveness (TFCA \$/ton of emission reductions). County Program Managers must submit Cost-Effectiveness Worksheets for each new project and each project receiving additional TFCA funds, along with Project Information Forms, no later than six months after Air District Board approval of the County Program Manager's Expenditure Plan. County Program Managers must also submit Worksheets with Final Report Forms as follows:

- **For service projects** (e.g., ridesharing, shuttle, bike share projects), post-project evaluations should be completed using the Cost-Effectiveness Worksheet version from the **year service was available to the public**. (This version may be the same as the one used in the pre-project evaluation).
- **For all other projects** (e.g. vehicle replacement, EV charging station), post-project evaluations should be completed using the version of the Cost-Effectiveness Worksheet for the year the purchased, installed, or constructed project became available for use by the public.

The Air District provides Microsoft Excel worksheets for download on their Box account (link is provided via email to the County Program Managers). Worksheets must be completed for all project types with the exception of TFCA County Program Manager administrative costs.

Worksheet Name	Project Type
Trip Reduction FYE 2023	• Ridesharing • Shuttles • Bicycle Parking, Bikeways, Bike Share • Smart Growth, Traffic Calming, Transit Bus Signal Priority (also for Transit Rail Vehicles) • Pilot Trip Reduction • Telecommuting
Arterial Management FYE 2023	• Arterial Management: Signal Timing
LD & HD Vehicle FYE 2023	• Alternative-Fuel Light-Duty and Light Heavy-Duty Vehicles
Heavy-Duty Vehicle FYE 2023	• Alternative-Fuel Low-Mileage Utility Trucks - Idling Service • Alternative-Fuel Heavy-Duty Trucks, Buses
EV Infrastructure FYE 2023	• Alternative Fuel Infrastructure

Make entries in the yellow-shaded areas only in the worksheets. Begin each new filename with the application number (e.g., 23MAR04) as described below. Each worksheet contains separate tabs for: Instructions (no user input), General Information, Calculations, Notes and Assumptions, and Emission Factors (no user input).

County Program Managers must provide all relevant assumptions used to determine the project's cost-effectiveness in the Notes & Assumptions tab. If a County Program Manager seeks to use different default values or methodologies, it is advisable that they consult with the Air District before project approval, in order to avoid the risk of funding projects that are not eligible for TFCA funds.

The Air District encourages County Program Managers to assign the shortest duration possible for the # Years Effectiveness value for a project to meet the cost-effectiveness requirement. This practice will help to minimize both the Project Sponsor and County Program Manager's administrative burdens.

Instructions Specific to Each Project Type

Ridesharing and Shuttle Projects

Two key components in calculating cost-effectiveness are the number of vehicle trips eliminated per day and the trip length. **The number of vehicle trips eliminated is the number of trips by participants that would have driven as a single occupant vehicle if not for the service; it is not the same as the total number of riders or participants.** A frequently used proxy is the percentage of survey respondents who report that they would have driven alone if not for the service provided. For calculating the length of trip, only use the length of the vehicle trip avoided by only the riders that otherwise would have driven alone.

In addition, **each shuttle route must meet the cost-effectiveness criteria** (Policy #2). If a project consists of more than one route, one worksheet should be submitted with all routes listed, **and** a separate worksheet must be prepared showing the cost-effectiveness of each route (i.e., as determined by that route's ridership, funding allocation, etc.).

Annually funded service projects with a one-year project useful life and that do propose surplus emissions reduction may continue receiving funds.

Note that MTC's regional rideshare program (i.e., 511.org) provides funding to counties. This funding may also contain some TFCA funding, which, if used in combination with this TFCA funding, may violate Policy 11. Duplication.

Pilot Trip Reduction Projects

Two key components in calculating cost-effectiveness are the number of vehicle trips eliminated per day and the trip length. **The number of vehicle commute trips eliminated is the number of trips by participants that would have driven as a single occupant vehicle if not for the service; it is not the same as the total number of riders or participants.** If a survey was conducted on potential demand, a frequently used proxy is the percentage of survey respondents who report that they would have driven alone if not for the service provided. If survey data is not available, alternative supporting documentation must be provided to justify the inputs used in the cost-effectiveness worksheet. For calculating the length of trip, only use the length of the vehicle trip avoided by only the riders that otherwise would have driven alone.

Arterial Management Projects

Please note that **each segment must meet the cost-effectiveness criteria** (Policy #2). If a project consists of more than one segment being considered for funding, one worksheet should be submitted with all segments listed, **and** a separate worksheet must be prepared showing the cost-effectiveness of each segment (i.e., as determined by that segment's traffic speed improvements, funding allocation, etc.).

For a signal timing project to qualify for four (4) years effectiveness, the signals must be retimed after two (2) years.

Transit Signal Priority

For the length of trip, a good survey practice is to determine the length of automobile trip avoided by just those riders that otherwise would have driven, rather than by all riders.

Smart Growth and Traffic Calming

Projects must reduce vehicle trips by increasing pedestrian/bicycle travel and transit use. Projects that only involve slowing automobile traffic briefly (e.g., via speed bumps) tend to not be cost-effective, as the acceleration following deceleration increases emissions. Due to the variety of potential Smart Growth and Traffic Calming projects, there currently are no default assumptions provided for emission reduction inputs aside from years effectiveness. A primary component in calculating cost-effectiveness is the number of vehicle trips eliminated as a result of the project.

Vehicle and Fueling Infrastructure Projects

The investment in each individual vehicle must be shown to be cost-effective (Policy #2). The worksheet calculates the cost-effectiveness of each vehicle separately, so only one worksheet is required when more than one vehicle is being considered for funding.

TFCA Policies require that all projects including those subject to emission reduction regulations, contracts, or other legally binding obligations achieve *surplus* emission reductions—that is, reductions that go beyond what is required. **Therefore, vehicles with engines certified as Family Emission Limit (FEL) engines are not eligible for funding because the engine is certified for participation in an averaging, banking, and trading program in which emission benefits are already claimed by the manufacturer.**

Because TFCA funds may only be used to fund early-compliance emissions reductions, and because of the various fleet rule requirements, calculating cost-effectiveness for vehicle grant projects can be complex, and it is recommended that it be done only by someone familiar with all applicable regulations and certifications.

Additionally, electric vehicle infrastructure generally does not qualify for more than \$6,000 per single-port Level 2 (6.6KW) charging station, \$8,000 per dual-port Level 2 charging station, and \$35,000 per DC fast charging station; County Program Managers should consult with the Air District on such projects, as the evaluation methodologies are evolving. Also, any questions should be raised to Air District staff well before project approval deadlines in order to assure project eligibility. Below is general guidance for charging type based on the duration the vehicle is parked at that specific location:

Category	Typical Venues	Available Charging Time	Charging Method (Primary/Secondary)
Opportunity and Destination	• Shopping Centers	0.5 – 2 hours	Level 2/DC Fast
	• Airport (short term parking)	< 1 hour	Level 2/DC Fast
	• Other	< 1 hour	Level 2/DC Fast
	• Cultural and Sports Centers	2 – 5 hours	Level 2/Level 1
	• Parking Garages	2 – 10 hours	Level 2/Level 1
	• Hotels/Recreation Sites	4 – 72 hours	Level 2/Level 1
	• Airports (long term parking)	8 – 72+ hours	Level 1/Level 2
Corridor/Pathway	• Interstate Highways	< 0.5 hours	DC Fast/
	• Commuting/Recreation Roads	< 0.5 hours	DC Fast/Level 2
Emergency	• Fixed	< 0.1 hours	DC Fast
	• Mobile	< 1 hour	Level 2/DC Fast

For more information, please refer to the [Bay Area EV Readiness Plan](#).

The cost-effectiveness of fueling infrastructure is based on the vehicles that will use the funded facility. For these projects, County Program Managers must exercise care that emission reductions

from the associated vehicles are only credited towards a TFCA infrastructure project and are not double counted in any other Air District grant program, either at the present time or for future vehicles that will use the facility during its years of effectiveness.

The total mileage a vehicle can travel may be limited by regulation, and the product of Years Effectiveness and Average Annual Miles cannot exceed that mileage (e.g., some cities limit the lifetime miles a taxicab can travel).

Heavy-duty vehicle, buses, and infrastructure projects: The California Air Resources Board (CARB) [Carl Moyer Program Guidelines](#) document is the source for the formulas and factors used in the Heavy-Duty Vehicle worksheet. Note that there are some differences between the TFCA and Moyer programs; consult Air District staff with any questions. At a minimum, a funded vehicle must have an engine complying with the model year 2010 and later emission standards. Vehicles that are funded by the TFCA shall not be co-funded with other funding sources that claim emissions credits.

Note that the Innovative Clean Transit (ICT) regulation requires all public transit agencies to gradually transition to a 100-percent zero-emission bus fleet. The zero-emission bus purchase requirement begin in 2023 for large transit agencies and 2026 for small transit agencies. A vehicle purchased to comply with ICT regulation is not considered surplus of emission reductions and therefore is not eligible for TFCA funding. Vehicle purchased that is above and beyond this requirement would be eligible for TFCA funding if the project meets all other requirements.

Zero Emission Bus Purchase Schedule (% of Total New Bus Purchases)

YEAR	LARGE TRANSIT	SMALL TRANSIT
2023	25%	-
2024	25%	-
2025	25%	-
2026	50%	25%
2027	50%	25%
2028	50%	25%
2029	100%	100%

For more information and updates on this regulation, visit the [Innovative Clean Transit Regulation website](#).

Documentation and Recordkeeping

Beginning in FYE 2012, Project files must be maintained by County Program Managers and Project Sponsors for a minimum of *five years* following completion of the Project Years of Effectiveness, versus three years as before. Project files must contain all related documentation including copies of CARB executive orders, quotes, mileage logs, fuel usage (if cost-effectiveness is based on fuel use), photographs of engines and frames that were required to be scrapped, and financial records, in order to document the funding of eligible and cost-effective projects. The record retention requirement can be satisfied with electronic files that are safely stored with data backup.

Guidance on inputs for the worksheets are as follows:

Instructions Tab

Provides instructions applicable to the relevant project type(s).

General Information Tab

Project Number, which has three parts:

1st – fiscal year in which project will be funded (e.g., 23 for FYE 2023).

2nd – County Program Manager; use the following abbreviations:

ALA – Alameda	CC – Contra Costa	MAR – Marin
NAP – Napa	SF – San Francisco	SM – San Mateo
SC – Santa Clara	SOL – Solano	SON – Sonoma

3rd – two-digit number identifying project; 00 is reserved for County Program Manager administrative costs.

Example: 23MAR04 = fiscal year ending **2023**, **Marin**, Project **#04**.

Project Title: *Short and descriptive* title of project, matching that on the Project Information Form.

Project Type Code: Insert **one and only one** of the following codes for the corresponding project type. If a project has multiple parts, use the code for the main component. Note that not all listed project types may be allowed in the current funding cycle.

Code	Project Type	Code	Project Type
0	Administrative costs	6c	Shuttle services – NG powered
	Alternative Fuel Heavy-Duty Trucks and Buses or On-Road Truck Replacements	6d	Shuttle services – EV powered
1a	NG buses (transit or shuttle buses)	6e	Shuttle services – Fuel cell powered
1b	EV buses	6f	Shuttle services – Hybrid vehicle
1c	Hybrid buses	6g	Shuttle services – Other fuel type
1d	Fuel cell buses	6h	Shuttle services w/TFCA purchased retrofit
1e	Buses – Alternative fuel	6i	Shuttle services – fleet uses various fuel types
2a	NG school buses		Bikeways and Bicycle Parking
2b	EV school buses	7a	Class 1 bicycle paths
2c	Hybrid school buses	7b	Class 2 bicycle lanes
2d	Fuel cell school buses	7c	Class 3 bicycle routes, bicycle boulevards
2e	School buses – Alternative fuel	7d	Bicycle lockers and cages
3a	Other heavy-duty – NG (street sweepers, garbage trucks)	7e	Bicycle racks
3b	Other heavy-duty – EV	7f	Bicycle racks on buses
3c	Other heavy-duty – Hybrid	7g	Attended bicycle parking (“bike station”)
3d	Other heavy-duty – Fuel cell	7h	Other type of bicycle project (e.g., bicycle loop detectors)
3e	Other heavy-duty - Alternative fuel (High Mileage)	7i	Bike share
3f	Other heavy-duty - Alternative fuel (Low Mileage)	7j	Class 4 cycle tracks or separated bikeways
	Alternative Fuel Light- and Medium-Duty Vehicles		Arterial Management
4a	Light-duty vehicles – NG	8a	Signal timing (Regular projects to speed traffic)
4b	Light-duty vehicles – EV	8b	Arterial Management – transit vehicle priority
4c	Light-duty vehicles – Hybrid	8c	Bus Stop Relocation
4d	Light-duty vehicles – Fuel cell	8d	Traffic roundabout
4e	Light-duty vehicles – Other clean fuel		Infrastructure Improvements for Trip Reduction
	Ridesharing Projects	9a	Smart growth – traffic calming
5a	Implement TROs (pre-1996 projects only)	9b	Smart growth – pedestrian improvements
5b	Regional Rideshare Program	9c	Smart growth – other types

Code	Project Type	Code	Project Type
5c	Incentive programs (for any alternative mode)	Miscellaneous	
5d	Guaranteed Ride Home programs	10a	Rail-bus integration
5e	Ridesharing – Vanpools (if cash incentive only, use 5c)	10b	Transit information / marketing
5f	Ridesharing – School carpool match	11a	Telecommuting demonstration
5g	Other ridesharing / trip reduction projects	11b	Congestion pricing demonstration
Bike Share		11c	Other demonstration project
5h	Trip reduction bicycle projects (e.g., police on bikes)	Alternative Fuel Infrastructure	
Last-Mile Connections		12a	Natural gas infrastructure
6a	Shuttle services – diesel powered	12b	Electric vehicle infrastructure
6b	Shuttle services – gasoline powered	12c	Alternative fuel infrastructure

County:	Use the same abbreviations as used in Project Number.
Worksheet Calculated by:	Name of person completing the worksheet.
Date of Submission:	Date submitted to the County Program Manager.
Project Sponsor Organization:	Organization responsible for the project.
Contact Name:	Name of individual responsible for implementing the project. Include all contact information requested (email, phone, address).
Project Start Date:	Date work begins on a project. Note: Project must meet Readiness Policy (Policy #6).
Project Completion Date:	Date the project was completed.
Final Report to CMA:	Date the Final Report was received by the County Program Manager. Note: County Program Managers must expend funds within two years of receipt, unless an application states that the project will take a longer period of time and is approved by the County Program Manager or the Air District.

Calculations Tab

Because the worksheets have many interrelated formulas and references, users must not add or delete rows or columns, or change any formulas, without consulting with the Air District. Several cells have input choices or information built in, as pull-down menus or comments in Excel. Pull-down menus are accessed by clicking on the cell. Comments are indicated by a small triangle in the upper right corner of a cell, and are made visible by resting the cursor over the cell.

Cost-Effectiveness Inputs

# Years of Effectiveness:	Equivalent to the administrative period of the grant. See inputs table below. The best practice is to use shortest value possible.
Total Project Cost:	Total cost of project including TFCA funding, sponsor funding, and funds contributed by other entities. Only include goods and services of which TFCA funding is an integral part.
TFCA Cost:	TFCA 40% County Program Manager Funds and the 60% Regional Funds (if any), listed separately.

Project Operational Start Year: The Year the Operation of project would begin (for service projects), or the Year the infrastructure is available for public use (for infrastructure projects).

Emission Reduction Calculations

Instructions and default values for each project type are provided in the table below. Default values for years of effectiveness are provided for the various project types. There are no defaults for Smart Growth projects, due to the wide variability in these projects.

Notes & Assumptions Tab

Provide an explanation of all assumptions used. If you choose to use assumptions or values different from those defaults values provided in the Air District's guidelines, **submit documentation and an explanation** about your inputs and assumptions to request approval from the Air District prior to awarding funds to the project.

Emission Factors Tab

This tab contains references for the Calculations tab. **No changes shall be made to this tab.**

Additional Information for Heavy-duty Vehicle Projects

CARB has adopted a number of standards and fleet rules that limit funding opportunities for on-road heavy-duty vehicles. See the below list of CARB rules that affect on-road heavy-duty fleets, followed by a reference sample CARB Executive Order. For assistance in determining whether a potential project is affected, contact Air District staff or consult Carl Moyer Implementation Charts at:

<http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental-docs.htm>

Summary of On-Road Heavy-Duty Fleet Rules

Vehicle Type	Subject to CARB Fleet Rule?
Urban buses	Fleet Rule for Transit Agencies
Transit Fleet Vehicles	Fleet Rule for Transit Agencies
Solid Waste Collection Vehicles, excluding transfer trucks	Solid Waste Collection Vehicle Regulation
Municipal Vehicles and Utility Vehicles	Fleet Rule for Public Agencies and Utilities
Port and Drayage Trucks	Port Truck Regulation
All other On-road heavy-duty vehicles	On-road Rule

Summary of Maximum Cost-Effectiveness & Years of Effectiveness by Project Category

Policy No.	Project Category	Maximum C-E (\$/weighted ton)	Years of Effectiveness
22	Alternative Fuel Light- and Medium-Duty Vehicles	500,000	3 years recommended, 4 years max
23	Reserved	Reserved	Reserved
24	Alternative Fuel Heavy-Duty Trucks and Buses	500,000	3 years recommended, 4 years max
25	On-Road Truck Replacements	90,000	3 years recommended, 4 years max
26	Alternative Fuel Infrastructure	500,000	3 years recommended, 4 years max
27	Ridesharing Projects – Existing	150,000	2 years max
28	First- and Last-Mile Connections – Existing	200,000; 250,000 for services in CARE Areas or PDAs	2 years max
29.a.	First- and Last-Mile Connections – Pilot not in CARE Areas or PDAs. <i>These projects will be evaluated every year.</i>	Year 1 - 500,000 Year 2 and beyond - see Policy #28 shuttle is considered existing	2 years max
	First- and Last-Mile Connections – Pilot shuttle projects located in Highly Impacted Communities as defined in the Air District CARE Program and/or a Planned or Potential PDA may receive TFCA Funds under the Pilot designation. <i>These projects will be evaluated every year.</i>	Years 1 & 2 - 500,000 Year 3 and beyond - see Policy #28 shuttle is considered existing	2 years max
29.b.	Pilot Trip Reduction	500,000	2 years max
30.a.	Bicycle Parking	250,000	3 years max
30.b.	Bikeways	500,000	10 years max
31	Bike Share	500,000	5 years max
32	Arterial Management	250,000	2 years, or 4 years with retiming at 2 years
33	Infrastructure Improvements for Trip Reduction	500,000	10 years max
34	Telecommuting	150,000	2 years max

Emission Reduction Inputs

County Program Managers must describe all relevant assumptions used to determine the project's cost-effectiveness in the Notes & Assumptions tab. If a CPM seeks to use different default values or methodologies, it is advised that the CPM consult with Air District staff, before project approval, to avoid the risk of funding projects that are not eligible for TFCA funds.

Project Type/Worksheet Name	Input Data Needed	Default Assumptions
Trip Reduction (Existing and Pilot) Worksheet = Trip Reduction FYE 2023 <i>For Pilot Trip Reduction projects, follow the instructions of the most similar project type. Any deviations from the default assumptions used must be supported by documentation or data.</i>		
Project Type = 5a-h, 8b, 9a-c, 11a-c		
<u>Ridesharing</u>	# Years of Effectiveness	Enter in Cost Effectiveness Inputs, up to 2 years
	# Trips/Day (1-way) eliminated [% of target population (# employees)]	Enter in Step 1-Column A, 1% of target population
	Days/Yr	Enter in Step 1-Column B, 240 days (max.)
	Trip Length (1-way)	Step 1-Column C, Default = 16 miles (1-way commute distance from MTC's Commute Profile)
	# New Trips/Day (1-way) to access transit	Step 2-Column A, Default = 50% of # Trips/Day Eliminated (Step 1-Column A)
	Days/Yr	Enter in Step 2-Column B, same # as Step 1-Column B
	Trip Length (1-way)	Enter in Step 2-Column C, Default = 3 miles
	<i>For ridesharing, the default maximum number of vehicle trips reduced per day is 1% of target population.</i>	
<u>School-Based Ridesharing</u>	# Years of Effectiveness	Enter in Cost Effectiveness Inputs, up to 2 yrs
	# Trips/Day (1-way) eliminated [% of target population (total # students)]	Step 1-Column A, No Default
	Days/Yr	Enter in Step 1-Column B, 180 days (max.)
	Trip Length (1-way)	Step 1-Column C, 1-3 miles
	<i>For ridesharing, the default maximum number of vehicle trips reduced per day is 1% of target population.</i>	
<u>Transit Incentive Campaigns</u>	# Years of Effectiveness	Enter in Cost Effectiveness Inputs, up to 2 yrs
	# Trips/Day (1-way) eliminated [% of target population]. Use survey data if available.	Step 1-Column A, No default
	Days/Yr	Enter in Step 1-Column B, 90 days (max.) if # Trips/Day based on % of target population. If # Trips/Day based on participants, 240 days (max.).

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	Trip Length (1-way), based on routes accessed	Step 1-Column C, No Default
	# New Trips/Day (1-way) to access transit	Step 2-Column A, 50% of # Trips/Day Eliminated (Step 1-Column A)
	Days/Yr (new trips)	Enter in Step 2-Column B - same as # days used in Step 1
	Trip Length (1-way) for new trips	Step 2-Column C, Default = 3 miles
<u>Guaranteed Ride Home Programs</u>	# Years of Effectiveness	Enter in Cost Effectiveness Inputs, up to 2 years
	# Trips/Day (1-way) eliminated	Enter in Step 1-Column A, 0.2% of target population.
	Days/Yr	Enter in Step 1-Column B, 240 days (Max.)
	Trip Length (1-way)	Step 1-Column C, Default = 16 miles
<u>Transit Vehicle Signal Prioritization</u>	# Years of Effectiveness	Enter in Cost Effectiveness Inputs, 2 yrs
	# Trips/Day (1-way) eliminated	Step 1-Column A, No Default
	Days/Yr	Enter in Step 1-Column B, 240 days (max)
	Trip Length (1-way)	Step 1-Column C, No Default Step 2-Column A, 50% of # Trips/Day Eliminated (Step 1-Column A) Step 2-Column B, same as Step 1-Column B Enter in Step 2-Column C, 3 miles
<u>Infrastructure Improvements for Trip Reduction</u> Note: Default assumption available for Years Effectiveness only. Provide detailed explanations (in Notes and Assumptions tab) of assumptions used for other inputs.	# Years of Effectiveness	Enter in Cost Effectiveness Inputs, 10 years max
Project Type =6a-i, 10a-b		
<u>Shuttle/Feeder Bus, Rail-Bus Integration, and Transit Information Systems</u>	# Years of Effectiveness	Cost Effectiveness Inputs, up to 2 years
	# Trips/Day (1-way) eliminated trips. Trips only from riders who previously would have driven.	Step 1-Column A For on-going service, use survey results For new service, use 50% of daily seating capacity of vehicle * 67% (% single-occupancy vehicles (SOV) from MTC Commuter Profile)

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	Days/Yr eliminated trips	Step 1-Column B, Enter number of operating days. Default =240 days/yr.
	Trip Length (1-way) eliminated trips. Average trip length that will be eliminated due to shuttle passengers taking train/ferry in conjunction with the shuttle.	Enter in Step 1-Column C, a survey-based distance, or, if no survey, 16 miles for shuttles and 35 miles for vanpools
	# Trips/Day (1-way) new trips to access transit	Step 2-Column A, Use survey data or, if none, a default is 50% of # Trips/Day Eliminated (Step 1-Column A)
	Days/Yr new trips	Enter in Step 2-Column B, same # as in Step 1-Column B.
	Trip Length (1-way) new trips. Average trip length of shuttle passengers that drive from home to the BART/Caltrain station.	Enter in Step 2-Column C, a survey-based distance, or, if no survey, default is 3 miles for home-to-rail trips.
	<i>When possible, emissions from shuttle vehicles should be based on the vehicle engine Executive Order. County Program Manager should consult with Air District staff for guidance.</i>	
	Follow Step 3A for vans and shuttle vehicles 14,000 lbs. and lighter. Follow Step 3B for buses	
	# Vehicles, Model Year: Number of vehicles with same model year	Step 3A - Column A, no default.
	Emission Std.: Emission Standard from list provided.	3A - Column B, no default.
	Vehicle GVW: Weight Class from list provided.	3A - Column C, no default.
	ROG, NO_x, Exhaust PM₁₀, and Total PM₁₀ Factors: enter factor from appropriate table provided on Emission Factors tab—CARB Table 2 for vehicles model year 2004 and after, or CARB Table 7 for model years 1995-2003.	3A - Column D through G, no default
	CO₂ Factor: enter factor from CO ₂ Table for Light- and Light Heavy-Duty Shuttles, on Emission Factors tab.	3A - Column H, no default.
	Total annual VMT = [length of shuttle/van trip (one-way)] X [# one-way trips per day] X [# days of service per year]. For all vehicles listed in Step 3A.	3A - Column I, no default.
	<i>If a vehicle does not match the factors provided, County Program Manager should consult with Air District staff.</i>	

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	ROG, NO_x, Exhaust PM₁₀, Other PM₁₀ and CO₂ Factors: enter factor from Emissions for Buses Table provided on Emission Factors tab.	Step 3B: Columns D through H, no default. Note that Step 3B uses Other PM ₁₀ , not Total PM ₁₀ .
	Total annual VMT = [length of shuttle/van trip (one-way)] X [# one-way trips per day] X [# days of service per year]. For all vehicles listed in Step 3B.	3B Column L, no default.
Project Type = 7a-j, 11a		
<u>Bikeways (Paths, Lanes, Routes)</u> Notes: - For Class 1 projects, use the ADT on the most appropriate parallel road. - For gap closure projects (where project will close a gap between two existing segments of bikeway), use the length for the total facility. - The maximum number of vehicle trips reduced per day is 240. The Air District generally assumes that no bike project will reduce more than 240 vehicle trips per day.	<i>Methodology to estimate number of trips reduced for bike paths, lanes, & routes is based on:</i> - Facility type (Class 1, 2, 3, or 4) - Length of the project segment - Traffic volume (ADT) on the facility	
	# Years of Effectiveness Class 1 bike path (or bike bridge) Class 2 bike lane Class 3 bike route Class 4 cycle tracks or separated bikeways	Enter in Cost Effectiveness Inputs: Not to exceed 10 years for Class 1 (trails/paths) Not to exceed 7 years for Class 2, Class 3 and Class 4
	# Trips/Day (1-way) eliminated (depends on length of project segment and ADT on project segment) Class 1 & Class 2 & Class 4 ADT ≤ 12,000 vehicles per day Class 1 & Class 2 & Class 4 ADT > 12,000 and ≤ 24,000 Class 1 & Class 2 & Class 4 ADT > 24,000 and ≤ 30,000 <i>Maximum is 30,000.</i>	Enter in Step 1-Column A: Length ≤ 1 mile = 0.4% ADT Length >1 and ≤ 2 miles = 0.6% ADT Length >2 miles = 0.8% ADT Length ≤ 1 mile = 0.3% ADT Length > 1 and ≤ 2 miles = 0.45% ADT Length > 2 miles = 0.6% ADT Length ≤ 1 mile = 0.25% ADT Length > 1 and ≤ 2 miles = 0.35% ADT Length > 2 miles = 0.45% ADT

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	Class 3 bike route or bicycle blvd	Route $\leq$ 1 mile = 0.1% ADT Route > 1 and $\leq$ 2 miles = 0.15% ADT Route > 2 miles = 0.25% ADT Use 10% of the appropriate formula above
	Upgraded Class 1 & Upgraded Class 4	
	Days/Yr	Enter in Step 1-Column B, 240 days
	Trip Length (1-way)	Enter in Step 1-Column C, 3 miles. (Not same as segment length.)
<u>Bicycle Parking</u>	# Years of Effectiveness	Enter in Cost Effectiveness Inputs, 3 yrs
	# Trips/Day (1-way) eliminated	Enter in Step 1-Column A: Capacity of lockers x 2 trip/day Capacity of cages x 0.75 trips per day Capacity of racks x 0.5 trips per day
	Days/Yr	Enter in Step 1-Column B, 240 days
	Trip Length (1-way)	Enter in Step 1-Column C, 3 miles
<u>Bike Share</u>	# Years of Effectiveness	Enter in Cost Effectiveness Inputs, max. 5 yrs
	# Trips/Day (1-way) eliminated	Enter in Step 1-Column A: Number of bikes * 1.48 trips per day * 12% (actual vehicle trips replaced based on Shaheen research dated June 2015)
	Weekdays	
	Days/Yr	Enter in Step 1-Column B, 260 days
	Trip Length (1-way)	Enter in Step 1-Column C, 16 miles
	Weekends	
	Days/Yr	Enter in Step 1-Column B, 105 days
	Trip Length (1-way)	Enter in Step 1-Column C, 3 miles
<u>Telecommuting</u> Note: Default assumption available for Years Effectiveness only. Provide detailed explanations (in Notes and Assumptions tab) of assumptions used for other inputs.	# Years of Effectiveness	Cost Effectiveness Inputs, up to 2 years
Arterial Management		
Worksheet = Arterial Management FYE 2023		
Project Type = 8a-d		

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Arterial Management (Signal Timing) Note: Data for traffic volume and vehicle speed must be generated concurrently (i.e., during the exact same day and time period)	# Years of Effectiveness	Enter in Cost Effectiveness Inputs: For signal timing/synchronization, 2 yrs or, with retiming required at 2 yrs, 4 yrs. Each project should include either 2- or 4-year segments, not both.
	Name of Arterial	Column A: Name of the arterial and the direction of travel.
	Segment Length (miles)	Enter under Column B the length of arterial over which speeds will be increased.
	Days/Yr	Enter under Column C the number of days per year over which the project would affect traffic. Default is 240 days.
	Time Period	Enter under Column D the time period over which the traffic volumes and speed will change (e.g., 4-7 PM). Include all the hours in a period that will benefit, not just the peak hour.
	Traffic Volume	Enter under Column E the traffic volume before the project for the corresponding Time Period and direction of travel that will make the stated speed change.
	Traffic Speed without the Project	Enter under Column F the average traffic speed along the length of the arterial before implementation of the project.
	Travel Speed with Project	Enter under Column G the average estimated traffic speed along the length of the arterial after implementation of the project. <i>Note: Maximum increase in speed is 25%.</i>
Alternative Fuel Heavy-Duty Vehicles and Infrastructure Worksheets = Vehicle 14,000 lbs + FYE 2023 Project Types = 1a-e, 2a-e, 3a-f, 12a-c		
Vehicle 14,000 lbs + <i>Use separate workbook and Project # for each set of vehicles with different # Years of Effectiveness or with different fuel types.</i>	Column AC, Project life (yrs.): # Years of Effectiveness.	Cost Effectiveness Inputs, 3 years is recommended - not to exceed 4 years.
	Column A, Unit #: A unique identifier. List each vehicle on a separate row.	Column A: No default
	Columns D through J, Baseline Emission Rate: NO _x , ROG, PM factors: See Moyer Table D-1, D-2 or D-4, based on your vehicle type, weight, and engine model year.	Columns D through I: For FYE 2023 alt-fuel heavy-duty vehicle projects, including urban buses, the baseline default is the Model Year 2010 emission standards (in Table D-2 this is the 2013+ (o.2 g/bhp-hr NO _x std)). Column J: If no existing vehicle is being replaced, the Baseline engine model year will be the year the new vehicle will be operational. If an existing vehicle is being replaced, the Baseline will be based on the existing engine model year of the vehicle.
	Column K, Annual VMT: Base on average vehicle miles traveled over 2 years, and document with 2 years of records.	Column K: No default.
	Column J, Baseline engine model year: Vehicle Executive Order Column L, Percent operation in Air District: Only the operation within the Air District's jurisdiction can be counted.	Column J: No default. Column L: No default.

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	Columns N through S, New Emission Rate: NO _x , ROG, and PM: Use Executive Order values.		Columns N through S: For FYE 2023 heavy-duty vehicle projects, including urban buses, the new vehicle must be certified to <i>exceed</i> the Model Year 2010 standard of 0.2 g/bhp-hr of NO _x and 0.01 g/bhp-hr of PM, which are the default values. Some exceptions apply.
	<i>Note: FEL engines are not eligible for TFCA funding.</i>		
	<i>CARB certifies engines and provides the engine manufacturers with an Executive Order (EO) for each certified engine family. An example of an EO is shown at the end of this attachment. The EO includes general information about the certified engine such as engine family, displacement, horsepower rating(s), intended service class, and emission control systems. It also shows the applicable certification emission standards as well as the average emission levels measured during the actual certification test procedure. For the purpose of the TFCA Program, the certification emission standards are used to calculate emission reductions. The certification emission standards are shown in the row titled “(DIRECT) STD” under the respective “FTP” column headings for each pollutant. For instance, the Cummins 8.3 liter natural gas engine illustrated in the sample was certified to a combined oxides of nitrogen plus non-methane hydrocarbon (NO_x+NMHC) emission standard of 1.8 g/bhp-hr, a carbon monoxide (CO) emission standard of 15.5 g/bhp-hr, and a particulate matter (PM) emission standard of 0.03 g/bhp-hr.</i>		
	<i>In the case where an EO shows emission values in the rows labeled “AVERAGE STD” and/or “FEL”, the engine is certified for participation in an averaging, banking, and trading (AB&T) program. AB&T engines (i.e., all FEL-certified engines) are not eligible to participate in the TFCA Program for new vehicle purchase projects since emission benefits from an engine certified to an FEL level are not surplus emissions.</i>		
	Column V, Replacement Vehicle Cost: Must be supported by a quote for the new alt-fuel vehicle that exceeds standards.	Column V: No Default.	
	Column W, Maximum eligible funding %	Column W: 90% maximum eligible funding as indicated in the County Program Manager policy.	
	Column AB, Project start year.	Column AB: Start year when vehicle will be on the road.	
	Column AG, 90% of eligible cost	Column AG: 90% of value from Replacement Vehicle Cost, column V.	
	Columns AP – AR, Emission Reductions.	Columns AP – AR. Calculated automatically. Enter zero (0) if a reduction cannot be claimed.	
	<i>All reductions must be surplus to any regulatory, contractual, or other legally binding requirement.</i>		
<i>Note that if ROG values are not available for both the baseline and the proposed engine, ensure value is zero (0) for ROG, as no ROG emission reductions can be claimed.</i>			
Column AW, TFCA Funding Amount: Amount of total TFCA funding. The column total must equal Total TFCA Cost from Cost-Effectiveness Inputs at top of worksheet.			
Column AX, Actual Weighted CE w/o CRF--Miles Basis (\$/ton). Cost-effectiveness based on emissions	Column AX: Calculated automatically.		

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	including weighted PM. Must meet Policy Requirements.	
	<i>Emissions and cost-effectiveness calculations can only be based on fuel usage for the following vehicles:</i> • Utility vehicles in idling service • Street sweepers • Solid waste collection vehicles <i>All other vehicles must use mileage basis. If using fuel-based calculations, usage must be based on two years of historical fuel usage documentation (e.g., fuel logs or purchase receipts.)</i>	
Alternative Fuel Vehicles and Infrastructure		
Worksheets = Vehicle 14,000 lbs & less FYE 2023, EV Infrastructure FYE 2023		
Project Types = 4a-e, 12a-c, including projects that replace heavy-duty vehicles with and buses with alternative fuel light-duty vehicles		
Alternative Fuel Vehicles and Infrastructure (Light- and Medium-Duty)	<u>Vehicles</u>	
	# Years of Effectiveness	3 years is recommended - 4 years max.
	Unit # / ID	List each vehicle separately.
	Current Standard and New Vehicle Standard	In the Baseline Emission Standard (Columns I through L) and Proposed Clean Vehicle Emission Standard (Columns M through P) refer to Emission Factor table. Vehicle replacement projects , use the existing vehicle's model year for the Baseline Emission section. Use the year of when the new vehicle will start operation for Proposed Emission section. Fleet expansion projects , use the "vehicle purchase year" for both Baseline and Proposed Emission factors.
	Cost-Effectiveness	Column U, automatically calculated. Each vehicle must meet the Policy requirements for cost-effectiveness.
	Avg Annual Miles: Base on average vehicle miles traveled over 2 years.	Column G: No default.
	<u>Infrastructure</u>	
	# Years of Effectiveness	3 recommended, 4 max
	Charger ID	List each charger separately
	Description	Enter description
Type	Select a type from types defined in Notes and Assumptions tab	
Rate (kW)	Enter the equipment's power output rate kW	
TFCA Funding	Enter total amount of TFCA funding requested for all charging stations	
Annual Usage (kWh)	(Rate kW) x (charger's estimated hours of usage per day) x (365 days per year) x (quantity of chargers)	

Sample CARB Executive Order for Heavy-Duty On-Road Engines

 CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY AIR RESOURCES BOARD	CUMMINS INC.	EXECUTIVE ORDER A-021-0571-1 New On-Road Heavy-Duty Engines Page 1 of 2 Pages
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Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: The engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE ¹	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS ²	ECS & SPECIAL FEATURES ³	DIAGNOSTIC ⁶
			Diesel	Diesel	UB	DDI, TC, CAC, ECM, EGR, OC, SCR-U, PTOX	EMD
2012	CCEXH0729XAD	11.9	Diesel	Diesel	UB		
PRIMARY ENGINE'S IDLE EMISSIONS CONTROL ⁵			ADDITIONAL IDLE EMISSIONS CONTROL ⁵				
Exempt			N/A				
ENGINE (L)		ENGINE MODELS / CODES (rated power, in hp)					
11.9		ISX11.9 385 / 3865;FR20350 (379), ISX12 385 / 3865;FR20350 (379)					

* =not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc; L=liter; hp=horsepower; kw=kilowatt; hr=hour;
¹ CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel;
² L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto;
³ ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction – urea / – ammonia; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBI=throttle body fuel injection; SFIM/FI=sequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charger; CAC=charge air cooler; EGR / EGR-C=exhaust gas recirculation / cooled EGR; PAIR/AIR=pulse/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series; AMOX=ammonia oxidation catalyst;
⁵ ESS=engine shutdown system (per 13 CCR 1956.8(a)(6)(A)(1); 30g=30 g/hr NOx (per 13 CCR 1956.8(a)(6)(C); APS =internal combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8(a)(6)(D); Exempt=exempted per 13 CCR 1956.8(a)(6)(B) or for CNG/LNG fuel systems; N/A=not applicable (e.g., Otto engines and vehicles);
⁶ EMD=engine manufacturer diagnostic system (13 CCR 1971); OBD=on-board diagnostic system (13 CCR 1971.1);

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the EURO and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, EURO and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.8 are in parentheses.)

in g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	0.14	0.14	0.20	0.20	*	*	15.5	15.5	0.01	0.01	*	*
FEL	*	*	*	*	*	*	*	*	*	*	*	*
CERT	0.04	0.01	0.12	0.09	*	*	1.1	0.00	0.004	0.002	*	*
NTE	0.21		0.30		*		19.4		0.02		*	

⁴ g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle, including RMCSET=ram mode cycle supplemental emissions testing; NTE=Not-to-Exceed; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde. (Rev.: 2007-02-26)

BE IT FURTHER RESOLVED: Certification to the FEL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

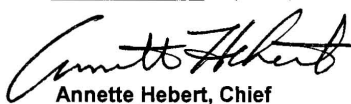
BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1971 (engine manufacturer diagnostic) and 13 CCR 2035 et seq. (emission control warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

This Executive Order hereby supersedes Executive Order A-021-057 dated December 7, 2011.

Executed at El Monte, California on this 17 day of April 2012.


Annette Hebert, Chief
Mobile Source Operations Division