Napa Valley Transportation Authority

625 Burnell Street
Napa, CA 94559

NAPA VALLEY TRANSPORTATION AUTHORITY

Agenda - Final

Thursday, October 7, 2021
2:00 PM

JoAnn Busenbark Boardroom

Technical Advisory Committee (TAC)

**********COVID 19 SPECIAL NOTICE**********

PUBLIC MEETING GUIDELINES FOR PARTICIPATING VIA PHONE/VIDEO CONFERENCING

Consistent with California Assembly Bill 361 and Government Code Section 54953, due to the COVID-19 State of Emergency and the recommendations for physical distancing, the Napa Valley Transportation Authority (NVTA) Technical Advisory Committee (TAC) meeting will be held virtually. To maximize public safety while still maintaining transparency, members of the public may observe and participate in the meeting from home. The public is invited to participate telephonically or electronically via the methods below:

1) To join the meeting via Zoom video conference from your PC, Mac, iPad, iPhone or Android at the noticed meeting time, go to https://zoom.us/join and enter meeting ID 97545900346

2) To join the Zoom meeting by phone dial 1 669 900 6833, enter meeting ID: 975 4590 0346 If asked for the participant ID or code, press #.

Public Comments
Members of the public may comment on matters within the purview of the Committee that are not on the meeting agenda during the general public comment item at the beginning of the meeting. Comments related to a specific item on the agenda must be reserved until the time the agenda item is considered and the Chair invites public comment. Members of the public are welcome to address the Committee, however, under the Brown Act Committee members may not deliberate or take action on items not on the agenda, and generally may only listen.

Instructions for submitting a Public Comment are on the next page.

Members of the public may submit a public comment in writing by emailing info@nvta.ca.gov by 9:00 a.m. on the day of the meeting with PUBLIC COMMENT as the subject line (for comments related to an agenda item, please include the item number). All written comments should be 350 words or less, which corresponds to approximately 3 minutes or less of speaking time. Public comments emailed to info@nvta.ca.gov after 9 a.m. the day of the meeting will be entered into the record but not read out loud. If authors of the written correspondence would like to speak, they are free to do so and should raise their hand and the Chair will call upon them at the appropriate time.

1. To comment during a virtual meeting (Zoom), click the "Raise Your Hand" button (click on the "Participants" tab) to request to speak when Public Comment is being taken on the Agenda item. You must unmute yourself when it is your turn to make your comment for up to 3 minutes. After the allotted time, you will then be re muted. Instructions for how to "Raise Your Hand" are available at https://support.zoom.us/hc/en us/articles/205566129 Raise Hand In Webinar.

2. To comment by phone, press "*9" to request to speak when Public Comment is being taken on the Agenda item. You must unmute yourself by pressing "*6" when it is your turn to make your comment, for up to 3 minutes. After the allotted time, you will be re muted.

Instructions on how to join a Zoom video conference meeting are available at:
https://support.zoom.us/hc/en us/articles/201362193 Joining a Meeting

Instructions on how to join a Zoom video conference meeting by phone are available at:
https://support.zoom.us/hc/en us/articles/201362663 Joining a meeting by phone

Note: The methods of observing, listening, or providing public comment to the meeting may be altered due to technical difficulties or the meeting may be cancelled, if needed.

All materials relating to an agenda item for an open session of a regular meeting of the NVTA TAC are posted on the NVTA website 72 hours prior to the meeting at: https://nctpa.legistar.com/Calendar.aspx or by emailing info@nvta.ca.gov to request a copy of the agenda.

Materials distributed to the members of the Committee present at the meeting will be available for public inspection after the meeting. Availability of materials related to agenda items for public inspection does not include materials which are exempt from public disclosure under Government Code sections 6253.5, 6254, 6254.3, 6254.7, 6254.15, 6254.16, or 6254.22.

Americans with Disabilities Act (ADA): This Agenda shall be made available upon request in alternate formats to persons with a disability. Persons requesting a disability related modification or accommodation should contact Kathy Alexander, NVTA Deputy Board Secretary, at (707) 259-8627 during regular business hours, at least 48 hours prior to the time of the meeting.

Note: Where times are indicated for agenda items, they are approximate and intended as estimates only, and may be shorter or longer as needed.

Acceso y el Titulo VI: La NVTA puede proveer asistencia/facilitar la comunicación a las personas discapacitadas y los individuos con conocimiento limitado del inglés quienes quieran dirigirse a la Autoridad. Para solicitar asistencia, por favor llame al número (707) 259 8627. Requerimos que solicite asistencia con tres días hábiles de anticipación para poderle proveer asistencia.

Ang Accessibility at Title VI: Ang NVTA ay nagkakaloob ng mga serbisyo/akomodasyon kung hilingin ang mga ito, ng mga taong may kapansanan at mga indibiduwal na may limitadong kaalaman sa wikang Ingles, na nais na matugunan ang mga bagay bagay na may kinalaman sa NVTA TAC. Para sa mga tulong sa akomodasyon o pagsasalin wika, mangyari lang tumawag sa (707) 259 8627. Kakailanganin namin ng paunang abiso na tatlong araw na may pasok sa trabaho para matugunan ang inyong kahilingan.

1. Call To Order

2. Roll Call

3. Introductions

4. Public Comment

5. Committee Member and Staff Comments

6. STANDING AGENDA ITEMS

6.1 County Transportation Agency Report (Danielle Schmitz)

6.2 Project Monitoring Funding Programs* (Alberto Esqueda)

6.3 Caltrans' Report* (Daniel Chang)

6.4 Vine Trail Update (Trevor Hawkes)

6.5 Transit Update (Rebecca Schenck)

6.6 Measure T Update (Alberto Esqueda)

Note: Where times are indicated for the agenda items they are approximate and intended as estimates only, and may be shorter or longer, as needed.

7. PRESENTATIONS

7.1 ABAG-MTC Parking Policy Technical Assistance (Diana Meehan)
(Page 8)

Body: James Choe, Climate Program Manager with MTC/ABAG Regional Planning, will provide TAC with a presentation and overview of the updated parking policies.

Recommendation: Information only

Estimated Time: 2:30 p.m.

Attachments: Staff Report.pdf

8. CONSENT AGENDA

8.1 **Meeting Minutes of September 2, 2021 Technical Advisory Committee Meeting (Kathy Alexander)** ***(Pages 9-12)***

Recommendation: TAC action will approve the September 2, 2021 meeting minutes.

Estimated Time: 2:55 p.m.

Attachments: Draft Minutes.pdf

9. REGULAR AGENDA ITEMS

9.1 **AB 361 Requirements for Remote Public Meetings (Kathy Alexander)** ***(Pages 13-15)***

Recommendation: That the TAC review the AB 361 requirements for remote public meeting, the current state emergency or local order(s), determine if the emergency situations continue to exist that warrant relaxed remote meeting requirements and approve holding the next TAC meeting via teleconference.

Estimated Time: 2:55 p.m.

Attachments: Staff Report.pdf

9.2 **Transportation Fund for Clean Air (TFCA) Program Manager Fund Project List for Fiscal Year Ending (FYE) in 2022 (Diana Meehan)** ***(Pages 16-28)***

Recommendation: That the TAC recommend the Napa Valley Transportation Authority (NVTA) Board approve the Transportation Fund for Clean Air (TFCA) Program Manager Fund Project List for Fiscal Year Ending (FYE) in 2022.

Estimated Time: 3:00 p.m.

Attachments: Staff Report.pdf

9.3 **Approval of 2022 Regional Transportation Improvement Program (RTIP) and Approach to Fund Soscol Junction Shortfall (Danielle Schmitz)** ***(Pages 29-33)***

Recommendation: That the Technical Advisory Committee (TAC) recommend to the Napa Valley Transportation Authority (NVTA) Board staff's approach to fill any shortfall on Soscol Junction through the following methods in priority order:

1) G-12 - Delegation Authority to Adjust Project Allocations
2) Advancement of Additional Regional Transportation Improvement Program (RTIP)
3) Letter of No Prejudice (LONP) against Future Regional Measure (RM) 3 funds

Estimated Time: 3:05 p.m.

Attachments: Staff Report.pdf

9.4 **One Bay Area Grant Cycle 3 (OBAG 3) (Danielle Schmitz)** ***(Pages 34-36)***

Recommendation: Information only

Estimated Time: 3:15 p.m.

Attachments: Staff Report.pdf

9.5 **Legislative Update* (Kate Miller)**

Recommendation: That the TAC receive the state and federal legislative updates. Information only

Estimated Time: 3:20 p.m.

9.6 **October 20, 2021 NVTA Board Meeting and NVTA-TA Board Meeting Draft Agendas* (Kate Miller)**

Recommendation: That the TAC receive the October 20, 21 NVTA Board and NVTA-TA Board meeting draft agendas. Information only

Estimated Time: 3:25 p.m.

10. FUTURE AGENDA ITEMS

11. ADJOURNMENT

11.1 Approval of Next Regular Meeting Date of November 4, 2021 and Adjournment.

I, Kathy Alexander, hereby certify that the agenda for the above stated meeting was posted at a location freely accessible to members of the public at the NVTA offices, 625 Burnell Street, Napa, CA by 5:00 p.m., on Friday, October 1, 2021.

Kathy Alexander (e-sign) 10/01/2021

Kathy Alexander, Deputy Board Secretary

*Information will be available at the meeting

Glossary of Acronyms

AB 32	Global Warming Solutions Act
ABAG	Association of Bay Area Governments
ADA	American with Disabilities Act
ATAC	Active Transportation Advisory Committee
ATP	Active Transportation Program
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit District
BATA	Bay Area Toll Authority
BRT	Bus Rapid Transit
BUILD	Better Utilizing Investments to Leverage Development
CAC	Citizen Advisory Committee
CAP	Climate Action Plan
Caltrans	California Department of Transportation
CASA	Committee to House the Bay Area
CEQA	California Environmental Quality Act
CIP	Capital Investment Program
CMA	Congestion Management Agency
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMP	Congestion Management Program
CalSTA	California State Transportation Agency
CTP	Countywide Transportation Plan
COC	Communities of Concern
CTC	California Transportation Commission
DAA	Design Alternative Analyst
DBB	Design-Bid-Build
DBF	Design-Build-Finance
DBFOM	Design-Build-Finance-Operate-Maintain
DED	Draft Environmental Document
EIR	Environmental Impact Report
EJ	Environmental Justice
FAS	Federal Aid Secondary
FAST	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year
GHG	Greenhouse Gas
GGRF	Greenhouse Gas Reduction Fund
GTFS	General Transit Feed Specification
HBP	Highway Bridge Program
HBRR	Highway Bridge Replacement and Rehabilitation Program
HIP	Housing Incentive Program
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
HR3	High Risk Rural Roads
HSIP	Highway Safety Improvement Program
HTF	Highway Trust Fund
HUTA	Highway Users Tax Account
IFB	Invitation for Bid
ITIP	State Interregional Transportation Improvement Program
ITOC	Independent Taxpayer Oversight Committee
IS/MND	Initial Study/Mitigated Negative Declaration
JARC	Job Access and Reverse Commute
LCTOP	Low Carbon Transit Operations Program
LIFT	Low-Income Flexible Transportation
LOS	Level of Service
LS&R	Local Streets & Roads
MaaS	Mobility as a Service
MAP 21	Moving Ahead for Progress in the 21st Century Act
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
ND	Negative Declaration
NEPA	National Environmental Policy Act
NOAH	Natural Occurring Affordable Housing
NOC	Notice of Completion
NOD	Notice of Determination
NOP	Notice of Preparation
NVTA	Napa Valley Transportation Authority
NVTA-TA	Napa Valley Transportation Authority-Tax Agency
OBAG	One Bay Area Grant
PA&ED	Project Approval Environmental Document

Glossary of Acronyms

P3 or PPP	Public-Private Partnership
PCC	Paratransit Coordination Council
PCI	Pavement Condition Index
PCA	Priority Conservation Area
PDA	Priority Development Areas
PIR	Project Initiation Report
PMS	Pavement Management System
Prop. 42	Statewide Initiative that requires a portion of gasoline sales tax revenues be designated to transportation purposes
PSE	Plans, Specifications and Estimates
PSR	Project Study Report
PTA	Public Transportation Account
RACC	Regional Agency Coordinating Committee
RFP	Request for Proposal
RFQ	Request for Qualifications
RHNA	Regional Housing Needs Allocation
RM2	Regional Measure 2 (Bridge Toll)
RM3	Regional Measure 3
RMRP	Road Maintenance and Rehabilitation Program
ROW	Right of Way
RTEP	Regional Transit Expansion Program
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
SAFE	Service Authority for Freeways and Expressways
SAFETEA-LU	Safe, Accountable, Flexible, and Efficient Transportation Equity Act-A Legacy for Users
SB 375	Sustainable Communities and Climate Protection Act 2008
SB 1	The Road Repair and Accountability Act of 2017
SCS	Sustainable Community Strategy
SHA	State Highway Account
SHOPP	State Highway Operation and Protection Program
SNTDM	Solano Napa Travel Demand Model
SR	State Route
SRTS	Safe Routes to School
SOV	Single-Occupant Vehicle
STA	State Transit Assistance
STIC	Small Transit Intensive Cities
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TCM	Transportation Control Measure
TCRP	Traffic Congestion Relief Program
TDA	Transportation Development Act
TDM	Transportation Demand Management Transportation Demand Model
TE	Transportation Enhancement
TEA	Transportation Enhancement Activities
TEA 21	Transportation Equity Act for the 21st Century
TFCA	Transportation Fund for Clean Air
TIGER	Transportation Investments Generation Economic Recovery
TIP	Transportation Improvement Program
TIRCP	Transit and Intercity Rail Capital Program
TLC	Transportation for Livable Communities
TLU	Transportation and Land Use
TMP	Traffic Management Plan
TMS	Transportation Management System
TNC	Transportation Network Companies
TOAH	Transit Oriented Affordable Housing
TOD	Transit-Oriented Development
TOS	Transportation Operations Systems
TPA	Transit Priority Area
TPI	Transit Performance Initiative
TPP	Transit Priority Project Areas
VHD	Vehicle Hours of Delay
VMT	Vehicle Miles Traveled

October 7, 2021
TAC Agenda Item 7.1
Continued From: New
Action Requested: INFORMATION

NAPA VALLEY TRANSPORTATION AUTHORITY
TAC Agenda Letter

TO: Technical Advisory Committee

FROM: Kate Miller, Executive Director

REPORT BY: Diana Meehan, Senior Planner/Program Administrator
(707) 259-8327 / Email: dmeehan@nvta.ca.gov

SUBJECT: ABAG-MTC Parking Policy Technical Assistance

RECOMMENDATION

Information only

EXECUTIVE SUMMARY

The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) are developing a guide "playbook" to assist local jurisdictions with implementation of updated parking policies in support of vehicle trip reduction.

James Choe, Climate Program Manager with MTC/ABAG Regional Planning, will provide TAC with a presentation and overview of the guidebook.

FISCAL IMPACT

Is there a Fiscal Impact? No.

ATTACHMENT

None

Napa Valley Transportation Authority

625 Burnell Street
Napa, CA 94559

Meeting Minutes - Draft
Technical Advisory Committee (TAC)

Thursday, September 2, 2021 **2:00 PM** **REFER TO COVID-19 SPECIAL NOTICE**

1. Call To Order

Chair Hecock called the meeting to order at 2:01 p.m.

2. Roll Call

Present:	11 -	Hecock
		Ahmann Smithies
		Clark
		Lucido
		Arias
		Hawkes
		Ferons
		Rayner
		Weir
		Rincon-Ibarra
		Levine
Non-Voting:	3 -	Chang
		Lederer
		Ramirez
Absent:	3 -	Cooper
		Heidary
		Lu

3. Introductions

Chair Hecock invited all in attendance to introduce themselves.

Also present:
Frank Lucido, County of Napa
Ricky Gao, Caltrans
Graham Wadsworth, County of Napa
Chuck McMinn, Napa Valley Vine Trail Coalition
Philip Sales, Napa Valley Vine Trail Coalition
Nick Fisher, Syar Industries
Justin Hole
Pedro Quintana, Caltrans

NVTA Staff:
Kate Miller
Antonio Onorato
Sanjay Mishra
Rebecca Schenck
Alberto Esqueda
Roxanna Moradi
Victoria Ortiz

Kathy Alexander

4. Public Comment

Public Comment was received from Justin Hole.

5. Committee Member and Staff Comments

None

6. STANDING AGENDA ITEMS

6.1 County Transportation Agency Report (Kate Miller)

Kate Miller reported that the Bay Area County Transportation Agency executive directors did not meet in August, however, she provided an update on the upcoming One Bay Area Grant Cycle 3 (OBAG 3).

6.2 Project Monitoring Funding Programs (Alberto Esqueda)

Alberto Esqueda provided an update on three projects on the Caltrans Inactive list.

6.3 Caltrans' Report (Daniel Chang)

Kate Miller introduced Ricky Gao, Caltrans Project Manager for Napa and State Route 37.

Daniel Chang reviewed the Caltrans report.

6.4 Vine Trail Update

Sanjay Mishra noted he would provide a Vine Trail update during his presentation.

6.6 Measure T Update (Alberto Esqueda)

Alberto Esqueda noted that the County of Napa and the City of St. Helena are slated for performance audits. Additionally he reminded the jurisdictions that January 1 - June 30 2021 progress reports are due September 30.

Kate Miller introduced Victoria Ortiz, who will be assuming Measure T responsibilities.

7. CONSENT AGENDA

7.1 Meeting Minutes of July 2, 2021 TAC Meeting (Kathy Alexander) *(Pages 8-12)*

MOTION by LUCIDO, SECOND by AHMANN SMITHIES to APPROVE the July 1, 2021 Meeting Minutes. Motion passed with the following vote:

Aye: 11 - Vice Chair Hecock, Member Ahmann Smithies, Member Clark, Member Lucido, Member Arias, Alternate Member Hawkes, Member Ferons, Member Rayner, Member Weir, Member Rincon-Ibarra, and Member Levine

Absent: 2 - Member Cooper, Alternate Member Heidary, and Member Lu

8. PRESENTATIONS

This was read into the record.

8.1 NVTA Project Update (Sanjay Mishra)*

Sanjay Mishra provided updates on the following projects:

- Soscol Junction
- Vine Bus Maintenance Facility
- Vine Trail -St. Helena to Calistoga
- Imola Park and Ride Improvements
- SR 29 American Canyon Improvements
- Imola Avenue Complete Street Improvements
- SR 29 - Adaptive Signal Control & Transit Signal Priority (American Canyon Road to Napa Junction)
- SR 37 Corridor

8.2 Measure X and NVTA-Tax Agency Board Retreat (Kate Miller) *(Pages 13-21)*

Kate Miller provided an overview of the presentation that will be provided at the NVTA-Tax Agency Board Retreat on September 13, 2021.

9. REGULAR AGENDA ITEMS

9.1 Paving Project Material Availability (Alberto Esqueda) *(Pages 22-23)*

The TAC discussed with Nick Fisher of Syar Industries the shortage of hot mix asphalt that delayed a County project, and how to best communicate the asphalt needs for upcoming projects.

Mr. Fisher noted that in addition to a very high demand for asphalt, the quality of rock being mined from one of their quarries is not meeting their standards for asphalt mix. He indicated that if the jurisdictions would provide a list of upcoming projects, and approximate date and tonnage needed 2-4 times per year, it would be extremely helpful in their scheduling process, as well as an estimated date when the project is closer to being paved.

The jurisdictions agreed to forward the project information to NVTA on a quarterly basis, which will be consolidated and forwarded to Syar.

9.2 Designation of TAC Representative and Alternate for the Napa Valley Vine Trail Coalition (NVVTC) Board (Alberto Esqueda) *(Pages 24-25)*

Alberto Esqueda provided a background of the TAC representative on the Napa Valley Vine Trail Coalition (NVVTC) Board and the TAC members who have served most recently. Former TAC Chair Joe Tagliaboschi retired in July, creating a vacancy for the TAC designate on the NVVTC Board. He noted that Member Rayner currently serves as the alternate.

Chair Hecock called for volunteers or nominations.

Member Hawkes volunteered to serve as the TAC designate, Member Rayner volunteered to continue to serve as the alternate.

MOTION by LUCIDO, SECOND by ARIAS to APPOINT Member Hawkes as the designate on the

Napa Valley Vine Trail Coalition Board and Member Rayner as the alternate. Motion passed with the following vote:

Aye: 11 - Vice Chair Hecock, Member Ahmann Smithies, Member Clark, Member Lucido, Member Arias, Alternate Member Hawkes, Member Ferons, Member Rayner, Member Weir, Member Rincon-Ibarra, and Member Levine

Absent: 2 - Member Cooper, Alternate Member Heidary, and Member Lu

9.3 Vine Transit Update (Rebecca Schenck) *(Pages 26-31)*

Rebecca Schenck provided an update on the Vine Transit Operations through the fourth quarter of Fiscal Year (FY) 20/21 as well as the services changes that went into effect August 15, 2021.

9.4 Legislative Update* (Kate Miller)

Kate Miller reviewed the Legislative Update.

9.5 September 13, 2021 NVTA Board Meeting and NVTA-TA Board Retreat Draft Agendas* (Kate Miller)

Kate Miller reviewed the September 13, 2021 NVTA Board Meeting and NVTA-TA Board Retreat draft agendas.

10. FUTURE AGENDA ITEMS

None

11. ADJOURNMENT

11.1 Approval of Next Regular Meeting Date of October 7, 2021 and Adjournment.

Meeting adjourned at 3:33 p.m.

_____

Kathy Alexander, Deputy Board Secretary

October 7, 2021
TAC Agenda Item 9.1
Continued From: New
Action Requested: APPROVE

NAPA VALLEY TRANSPORTATION AUTHORITY

Technical Advisory Committee Agenda Memo

TO: Technical Advisory Committee

FROM: Kate Miller, Executive Director

REPORT BY: Danielle Schmitz
(707) 259-5968 / Email: dschmitz@nvta.ca.gov

SUBJECT: AB 361 Requirements for Remote Public Meetings

RECOMMENDATION

That the TAC review the AB 361 requirements for remote public meetings, the current state emergency or local order(s), determine if the emergency situations continue to exist that warrant relaxed remote meeting requirements and approve holding the next TAC meeting via teleconference.

FISCAL IMPACT

Is there a Fiscal Impact? No

BACKGROUND

Executive Order N-08-21 issued by Governor Newsom in March 2020 allowed legislative bodies to hold meetings via teleconference and make meetings accessible electronically through September 30, 2021, without violating the Brown Act. Effective October 1, 2021, AB 361 will allow local legislative bodies to continue to allow remote meetings during a proclaimed state of emergency, if state or local officials have imposed or recommended measures that warrant holding meetings remotely.

On September 27, 2021 the Napa County Executive Officer and Public Health Officer issued a recommendation that this practice be permitted by all public boards and commissions that that wish to continue meeting remotely, in whole or in part, in order to help minimize the spread and transmission of COVID-19.

NVTA's legal counsel provided NVTA with a list of requirements for holding remote meetings under AB 361 and recommendations to meet the requirements. They include:

- That the legislative body confirms every 30 days, or each time it meets, that emergency situation(s) continue to exist warranting relaxed remote meeting requirements.
- Agencies cannot require that written comments be submitted in advance of a meeting, agencies may only close the comment period at the same time it is closed during the meeting.
- The public must be given an opportunity to comment directly during the meeting and public comment periods. There must be a live time, call in or internet based public comment option.
- In the event of a disruption in broadcasting the meeting, the legislative body shall take no further action until meeting access is restored to the public.

Additionally, the following Brown Act teleconference meeting rules that were relaxed due to the COVID-19 Emergency Executive Orders have been continued under AB 361 (Government Code Section 54593):

- The requirement to identify on the agenda each teleconference location for each member of the Board participating in the meeting by teleconference has been waived;
- The requirement that each teleconference location be accessible to the public has been waived ;
- The requirement that members of the public be able to address the Board at each teleconference location has been waived;
- The requirement that local agencies post agendas at all teleconference locations has been waived;
- The requirement that at least a quorum of the Board participate from locations within the boundaries of the territory over which they exercise jurisdiction has been waived; and,
- The requirement that there must be a physical meeting location open to the public to attend the meeting and comment during the meeting has been waived.

ATTACHMENT(S)

September 27, 2021 County of Napa Memorandum

A Tradition of Stewardship
A Commitment to Service

County Executive Office

1195 Third Street
Suite 310
Napa, CA 94559
www.countyofnapa.org

Main: (707) 253-4421
Fax: (707) 253-4176

Minh C. Tran
County Executive Officer

MEMORANDUM

To:	Board of Supervisors Other Boards and Commissions	From:	Minh C. Tran, County Executive Officer Karen Relucio, M.D., Public Health Officer

Date:	September 27, 2021	Re:	Recommendation for Continued Remote Attendance at Brown Act Meetings

Executive Order N-08-21 issued by Governor Newsom allows legislative bodies to hold meetings via teleconference and make meetings accessible electronically through September 30, 2021, without violating the Brown Act. Effective, October 1, 2021, AB 361 will allow local legislative bodies to continue to allow remote meetings during a proclaimed state of emergency, if "state or local officials have imposed or recommended measures to promote social distancing."

Because the State of California has continued to permit remote attendance at boards and commission meetings, the Napa County Executive Officer and Public Health Officer jointly recommend that this practice be permitted by all boards and commissions that may prefer to continue meeting remotely, in whole or in part, in order to help minimize the spread and transmission of COVID-19. According to 8 CCR 3205(c)(5)(D) of the Cal/OSHA regulations, "the fact that particles containing the virus can travel more than six feet, especially indoors, so physical distancing, face coverings, increased ventilation indoors, and respiratory protection decrease the spread of COVID-19 but are most effective when used in combination."

October 7, 2021
TAC Agenda Item 9.2
Continued From: New
Action Requested: APPROVE

NAPA VALLEY TRANSPORTATION AUTHORITY
TAC Agenda Letter

TO: Technical Advisory Committee

FROM: Kate Miller, Executive Director

REPORT BY: Diana Meehan, Senior Planner
(707) 259-8327 / Email: dmeehan@nvta.ca.gov

SUBJECT: Transportation Fund for Clean Air (TFCA) Program Manager Fund Project List for Fiscal Year Ending (FYE) in 2022

RECOMMENDATION

That the TAC recommend the Napa Valley Transportation Authority (NVTA) Board approve the Transportation Fund for Clean Air (TFCA) Program Manager Project List for Fiscal Year Ending (FYE) in 2022.

EXECUTIVE SUMMARY

On February 17, 2021 the NVTA Board approved the expenditure plan and opened a call for projects for the TFCA Program Manager Funds which closed on March 19, 2021. One project was submitted by the City of Napa for FYE 2022, no projects were submitted for FYE 2023 or FYE 2024. NVTA is proposing to use the remaining portion of the 2022 TFCA funds for the City of St. Helena Main Street Pedestrian Improvements project.

The proposed final list of projects for FYE 2022 is shown in Table 1 below. Projects have undergone a cost effective analysis and are eligible to receive funds. Approved projects must be submitted to the BAAQMD by November 1, 2021 to meet the programming deadline. If funds are not programmed by the Air District deadline, funds may be reprogrammed to another county.

Table 1: Proposed FYE 2022 TFCA Program Manager Projects

FYE 2022 TFCA Expenditures	**Amount**
Administration Costs for FYE 2022	$17,485
City of Napa-Westwood Sidewalk Project	$40,360
City of St. Helena-Main St. Sidewalk Project	$149,344
TOTAL	**207,189**

*FYE 2022 funds must be programmed no later than November 1, 2021.

FISCAL IMPACT

Is there a Fiscal Impact? Yes, TFCA eligible projects totaling $207,189 (including administrative costs) will be funded with FYE 2022 TFCA Program Manager funds.

Is it currently budgeted? Yes.

Where is it budgeted? TFCA FYE 2022 funds.

Future fiscal impact? No.

Consequences if not approved? TFCA FYE 2022 Projects will not be funded and Napa County funds may be programmed to another county.

BACKGROUND AND DISCUSSION

The Transportation Fund for Clean Air (TFCA) is a grant program, funded by a $4 surcharge on motor vehicles registered in the Bay Area. This generates approximately $22 million per year in revenues. The purpose of the TFCA program is to provide grants to implement the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions, and thereby improve air quality. Forty percent of the DMV funds generated in Napa are returned to the NVTA for distribution to local projects. The remaining sixty percent is allocated by the BAAQMD under the Regional Program. Projects must have an air quality benefit and be cost effective. Air District rules and statutes only allow funds to be retained for two years unless an extension is requested. Bicycle projects are not allowed an extension and funds programmed to bicycle projects must be expended in two years.

NVTA adopts a list of projects annually to be funded by the TFCA Program Manager funds. In 2018, staff proposed programming TFCA funds for a three-year cycle similar to the State Transportation Improvement Program (STIP) in order aid in local planning processes. The first three-year programming cycle was successful because jurisdictions

submitted project applications for the first year, and NVTA had larger capital projects that were eligible for TFCA in the outer two years of the cycle. However, in this cycle, only a single application was received requesting funds in the first year, and no requests were made for the outer years. Staff reviewed existing projects within the county that have funding shortfalls, and is recommending programming the remaining FYE 2022 funds to the City of St. Helena Main Street Sidewalk Project. If the additional funds are not programmed, Napa County may lose them to another county.

The TFCA program can fund a wide range of project types, including the construction of new bicycle lanes; shuttle and feeder bus services to train stations; ridesharing programs to encourage carpool and transit use; bicycle facility improvements such as bicycle racks and lockers; electric vehicles and electric vehicle infrastructure; and arterial management projects that reduce traffic congestion such as signal interconnect projects.

SUPPORTING DOCUMENT

Attachment: (1) FYE 2022 TFCA Application

Project Information Form

A. Project Number: 22NAP01

B. Project Title: Westwood Avenue Sidewalk Improvements

C. Project Category (project will be evaluated under this category): 9b.

D. TFCA County Program Manager Funds Allocated: $40,360

E. TFCA Regional Funds Awarded (if applicable): $_____

F. Total TFCA Funds Allocated (sum of C and D): $40,360

G. Total Project Cost: $640,360

H. Project Description:

The City of Napa will use TFCA funds to construct sidewalks on both sides of Westwood Avenue between Laurel Street and Chelsea Avenue. This project is located in the Westwood neighborhood of the City of Napa. Westwood Avenue does not currently have continuous sidewalks. This project would construct approximately 2,000ft of pedestrian facilities to close gaps in the existing pedestrian network in order to connect with nearby transit stops, Napa Valley Language Academy elementary school, employment destinations, and neighborhood serving retail.

Per 2019 American Community Survey 5-year data and local school data, the population of workers aged 16+ in the project area is 2670 and the student body of Napa Valley Language Academy is 658.

I. Final Report Content: Final Report form and final Cost Effectiveness Worksheet

The "Trip Reduction" final Report form and final Cost Effectiveness Worksheet will be completed and submitted after project completion.

J. Attach a completed Cost-Effectiveness Worksheet and any other information used to evaluate the proposed project.

See attached for the project's completed Cost-Effectiveness Worksheet.

K. If a **ridesharing, shuttle and feeder bus service, transit information, or smart growth project,** explain how the number of vehicle trips that will be reduced by the project was estimated, and provide supporting information and data to justify the estimate.

The project assumed 53 one-way commute trips and 26 one-way school trips. The following supporting information and data was used to justify those estimates:

Commute Trips:

- *Per 2019 American Community Survey (ACS) 5-year data, there are 2670 workers ages 16+ in the project area.*
- *Per 2019 ACS data, 1.5% of workers in the project area currently commute via walking compared to 2.5% Citywide.*

- *Per 2019 ACS data, 9.3% of workers in the project area have a commute of <10 minutes and 9.9% have a commute of 10-14 minutes.*
- *Project assumes a 1% commute mode shift**
- *Calculation: 2670 x 1% = 26.7 (two-way trips) = 53.4 (one-way trips)*

School Trips:

- *Napa Valley Language Academy (NVLA) elementary school has 658 students.*
- *Based on pre-pandemic hand count tallies and parent surveys, the percent of students at NVLA who walk to school is 2.32% lower than the district average.*
- *Project assumes a 2% walk mode shift**
- *Calculation: 658 x 2% = 13.16 (two-way trips) = 26.32 (one-way trips)*

**The project area is located within a regionally designated Community of Concern, which was included in the Napa Valley Community Based Transportation Plan (CBTP). Community outreach conducted as part of the CBTP identified that nearly 20% of comments received indicated a desire for increased pedestrian safety and improved pedestrian access to schools and transit stops. Thus there is high-demand for pedestrian improvements in the project area which supports the mode shift assumptions used.*

L. If an **arterial management or signal timing project**, confirm that the data for traffic volume and average vehicle speed be generated concurrently (i.e., during the exact same day and time period).

N/A.

M. Has or will this project receive any other TFCA funds, such as Regional Funds?

No.

N. Comments (if any):

The project area is located within a regionally significant Community of Concern (census tract 2008.04) as designated by the Metropolitan Transportation Commission. The project area meets this designation because it exceeds the established concentration thresholds for the disadvantage factors of minority, low-income households, limited English proficiency, and single-parent family.

O. 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)

Yes, the project is located within an AB1550 Low-income Community.

RIDESHARING, BICYCLE, SHUTTLE, AND SMART GROWTH PROJECTS
FYE 2022 TFCA County Progam Manager Fund Worksheet

Version 2022.2, Updated 1/4/21

General Information Tab: Complete areas shaded in yellow.

Project Number (22XXXYY)	22NAP01
Project Title	Westwood Avenue Sidewalk Improvements
Project Type Code (e.g., 7a)	9b
County (2-3 character abbreviation)	NAP
Worksheet Calculated By	Lorien Clark
Date of Submission	3/19/2021
Project Sponsor	
Project Sponsor Organization	City of Napa
Public Agency? (Y or N)	Y
Contact Name	Rosalba Ramirez
Email Address	rramirez@cityofnapa.org
Phone Number	707-257-9520
Mailing Address	P.O. Box 660
City	Napa
State	CA
Zip	94559
Project Schedule	
Project Start Date	10/1/2021
Project Completion Date	6/30/2022
Final Report to CMA	10/31/2022

RIDESHARING, BICYCLE, SHUTTLE, AND SMART GROWTH PROJECTS

FYE 2022 TFCA County Progam Manager Fund W

Version 2022.2, Updated 1/4/21

Program Manager Proj.#:	22NAP01
Route Name:	Westwood Ave

Calculations Tab: Complete areas shaded in yellow only.

SAMPLE ENTRIES ARE SHOWN IN LIGHT BLUE

Cost Effectiveness Inputs	
Project Operational Start Year:	2022
# Years Effectiveness:	10
Project Operational End Year:	2032
Total Cost for route:	640,360
Total Cost for route 40%:	40,360
Total Cost for route 60%:	NA
Total TFCA Cost for route:	$40,360.00

Emission Reduction Calculations

Step 1 - Emissions for Eliminated Trips

A	B	C	D	E	F	G	H	I
# Trips/Day (1-way)	Days/Yr	Trip Length (1-way)	VMT	ROG Emissions (gr/yr)	NOx Emissions (gr/yr)	Exhaust &Trip End PM10 Emissions (gr/yr) *	Other PM10 Emissions (gr/yr) *	CO2 Emissions (gr/yr)
100	250	16	304294	28,483	20,992	596	76,739	73,119,878
53	240	1	12,720	4,157	1,689	83	3,208	3,644,107
26	180	1	4,680	1,530	622	30	1,180	1,340,756
			0	0	0	0	0	0
			0	0	0	0	0	0
		Total	17,400	5,687	2,311	113	4,388	4,984,863

Step 2 - Emissions for New Trips to Access Transit/Ridesharing

50	250	3	304294	25,307	20,123	534	76,739	72,490,780
			0	0	0	0	0	0
			0	0	0	0	0	0
		Total	0	0	0	0	0	0

Step 3A - Emissions for Shuttle/Vanpool Vehicles up to GVW of 14,000 lbs.

A	B	C	D	E	F	G	H	I	J	K	L	M	N
		0.1	See Emission Factor Tab, ARB Table 2 or 7										
# Vehicles, Model Year	Emission Std.	Vehicle GVW	ROG Factor (gr/mi)	NOx Factor (g/mi)	Exhaust PM10 Factor (g/mi)	**Total** PM10 Factor (g/mi)	CO2 Factor (g/mi) (See CO2 Table for LD and LHD)	Total Annual VMT (sum all vehicles)	ROG Emissions (gr/yr)	NOx Emissions (gr/yr)	Exhaust PM10 Emissions (gr/yr)	Other PM10 Emissions (gr/yr)	CO2 Emissions (gr/yr)
2, 2005	LEV	10,001-14,000	0.23	0.40	0.12	0.32	860	8000	1,840	3,200	960	1,600	6,880,000
									0	0	0	0	0
									0	0	0	0	0
							Total	0	0	0	0	0	0

Step 3B - Emissions for Buses

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
			See Emission Factors Tab, Emissions for Buses Table													
Vehicle Ref #	Engine Year, Make, & Model	Odometer reading	ROG Factor (gr/mi)	ROG DR (g/10k miles)	NOx Factor (g/mi)	Nox DR (g/10k miles	Exhaust PM10 Factor (g/mi)	Exhaust PM DR (g/10k miles)	**Other** PM10 Factor (g/mi)	CO2 Factor (g/mi)	Total Annual VMT (sum all vehicles)	ROG Emissions (gr/yr)	NOx Emissions (gr/yr)	Exhaust PM10 Emissions (gr/yr)	Other PM10 Emissions (gr/yr)	CO2 Emissions (gr/yr)
												0.00	0	0	0	0
												0.00	0	0	0	0
												0.00	0	0	0	0
										Total	0	0	0	0	0	0

Cost Effectiveness Results	Annual	Lifetime	
1. VMT Reduced	17,400.00	174,000.00	Miles
2. Trips Reduced	12,720.00	127,200.00	Trips
3. ROG Emissions Reduced	0.0063	0.063	Tons
4. NOx Emissions Reduced	0.0025	0.025	Tons
5. PM Emissions Reduced	0.0050	0.050	Tons
6. PM Weighted Emissions Reduced	0.0073	0.073	Tons
7. CO2 Emissions Reduced	5.4948	54.948	Tons
8. Emission Reductions (ROG, NOx & PM)	0.0138	0.138	Tons
9. TFCA Project Cost - Cost Effectiveness (ROG, Nox & PM)		292,946.25	/Ton
10. TFCA Project Cost - Cost Effectiveness (ROG, NOx & Weighted PM). THIS VALUE MUST MEET POLICY REQUIREMENTS.		**$249,992**	**/Ton**

Notes & Assumptions

Provide all assumptions, rationales, and references for figures used in calculations.

Two key compoonents in calculating cost-effectiveness are the number of vehicle trips eliminated per day and the trip length.
A frequently used proxy is the % of survey respondents who report they would have driven alone if not for the service being provided.
If survey data is not available, alternative **supporting documentation must be provided to justify the inputs used in the CE calculations**.

Trips Eliminated Per Day
This is 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**.

Trip Length
Only use the trip length of the **vehicle trip avoided** by only the riders or participants that would otherwise have driven alone.

Policy 11. Duplication
MTC's regional ridehsaring program provides funding to counties. This funding may contain TFCA funding, which, if used in combination with TFCA funding, may violate Policy 11. Duplication.

Project Assumptions:	**Rationales:**
Years of Effectiveness = 10	10 years is consistent with the max years of effectiveness for a Class I project. Concrete sidewalk typically has a longer life than an asphalt path.
Commute Trips: Trip Length (1-way) = 1 mile Days/Year = 240 # trips/day (1-way) = 53	Per 2019 American Community Survey (ACS) 5-year data, there are 2670 workers ages 16+ in the project area. Per 2019 ACS data, 1.5% of workers in the project area currently commute via walking compared to 2.5% Citywide. Per 2019 ACS data, 9.3% of workers in the project area have a commute of <10 minutes and 9.9% have a commute of 10-14 minutes. Project assumes a 1% commute mode shift* *calculation:* 2670 x 1% = 26.7 (two-way trips) = 53.4 (one-way trips)
School Trips: Trip Length (1-way) = 1 mile Days/Year = 180 # trips/day (1-way) = 26	Napa Valley Language Academy (NVLA) elementary school has 658 students. Based on pre-pandemic hand count tallies and parent surveys, the percent of students at NVLA who walk to school is 2.32% lower than the district average. Project assumes a 2% walk mode shift* *calculation:* 658 x 2% = 13.16 (two-way trips) = 26.32 (one-way trips)

*The project area is located within a regionally designated Community of Concern, which was included in the Napa Valley Community Based Transportation Plan (CBTP). Community outreach conducted as part of the CBTP identified that nearly 20% of comments received indicated a desire for increased pedestrian safety and improved pedestrian access to schools and transit stops. Thus there is high-demand for pedestrian improvements in the project area which supports the mode shift assumptions used.

RIDESHARING, BICYCLE, SHUTTLE, AND SMART GROWTH PROJECTS

FYE 2022 Worksheet, Version 2022.1, Updated 1/4/21

Average Auto (passenger cars, light duty trucks, and motorcycles) Emission Factors

	ROG		NOx		PM_{10}			CO2		CH4	
Emission Year	Trip Fac.	Run Emis. (VMT)	Trip Fac.	Run Emis. (VMT)	Exhaust	Tire,Brakes, Road PM	PM Commute Trip End	Trip Fac.	Run Emis. (VMT)	Trip Fac.	Run Emis. (VMT)
2021	0.325	0.085	0.095	0.086	0.002	0.252186	0.005438	60.049283	282.164944	0.067090	0.005642
2022	0.325	0.085	0.095	0.086	0.002	0.252186	0.005438	58.242517	273.490495	0.062092	0.005202
2023	0.267	0.075	0.074	0.067	0.002	0.252186	0.005438	56.442597	264.762115	0.057566	0.004826
2024	0.267	0.075	0.074	0.067	0.002	0.252186	0.005438	54.647913	256.042015	0.053422	0.004508
2025	0.267	0.075	0.074	0.067	0.002	0.252186	0.005438	52.858848	247.313875	0.049589	0.004239
2026	0.267	0.075	0.074	0.067	0.002	0.252186	0.005438	51.212913	239.653340	0.046197	0.004022
2027	0.267	0.075	0.074	0.067	0.002	0.252186	0.005438	49.715023	232.749083	0.043219	0.003835
2028	0.227	0.068	0.060	0.055	0.001	0.252186	0.004350	48.351677	226.576243	0.040579	0.003676
2029	0.227	0.068	0.060	0.055	0.001	0.252186	0.004350	47.109586	221.068316	0.038219	0.003539
2030	0.227	0.068	0.060	0.055	0.001	0.252186	0.004350	45.988842	216.181726	0.036097	0.003423
2031	0.227	0.068	0.060	0.055	0.001	0.252186	0.004350	44.974267	211.856042	0.034182	0.003322
2032	0.227	0.068	0.060	0.055	0.001	0.252186	0.004350	44.062562	208.050360	0.032473	0.003235
2033	0.196	0.063	0.049	0.048	0.001	0.252186	0.004350	43.247236	204.721787	0.030956	0.003161
2034	0.196	0.063	0.049	0.048	0.001	0.252186	0.004350	42.518682	201.821812	0.029593	0.003096
2035	0.196	0.063	0.049	0.048	0.001	0.252186	0.004350	41.872073	199.315739	0.028374	0.003040
2036	0.196	0.063	0.049	0.048	0.001	0.252186	0.004350	41.301898	197.166261	0.027286	0.002991

Sources: ROG, NOX and PM10 (converted from PM2.5) are from CARB Cost Effectiveness Tables November 2020 - Table 3. CO2 and CH4 are from EMFAC2017 (v1.0.2) Emission Rates. Weighted averages of LDA, LDT1, LDT2, MCY. Data extracted on 9/18/19 and QA'd on 9/19/19 by SN

Light duty auto fuel efficiency (modeled)

	Gasoline Fuel Efficiency				Diesel Fuel Efficiency			
Emission Year	LDA mile/ gal	LDT1 mile/ gal	LDT2 mile/ gal	MCY mile/ gal	LDA mile/ gal	LDT1 mile/ gal	LDT2 mile/ gal	MCY mile/ gal
2021	31.07612823	26.7382681	24.52000756	37.16842229	47.50148	47.50148	47.5014804	47.5014804
2022	31.91570522	27.4093657	25.32896617	37.1769972	48.69225	48.692245	48.6922451	48.6922451
2023	32.80780426	28.1215955	26.18301387	37.18511856	49.97029	49.970289	49.9702887	49.9702887
2024	33.75016315	28.8726975	27.08037502	37.18776969	51.34233	51.342333	51.3423333	51.3423333
2025	34.74943753	29.669728	28.02740702	37.1838482	52.81715	52.81715	52.8171499	52.8171499
2026	35.70276228	30.4283507	28.94505849	37.18143797	54.2386	54.238603	54.238603	54.238603
2027	36.61144906	31.1569872	29.83915017	37.18000332	55.60675	55.60675	55.6067496	55.6067496
2028	37.46475361	31.8457267	30.69605943	37.17481405	56.89743	56.89743	56.8974299	56.8974299
2029	38.25949121	32.4959074	31.51362317	37.1671075	58.08745	58.08745	58.0874499	58.0874499
2030	38.99143456	33.1032794	32.28632034	37.16253599	59.18851	59.18851	59.1885097	59.1885097
2031	39.65997599	33.6705511	33.01345588	37.15805629	60.17224	60.172238	60.1722383	60.1722383
2032	40.26564771	34.1917657	33.68858339	37.14959129	61.07857	61.078569	61.0785686	61.0785686
2033	40.80891655	34.6690038	34.30774599	37.13542319	61.87757	61.877571	61.8775708	61.8775708
2034	41.2920562	35.1070206	34.87076695	37.12277776	62.58723	62.587232	62.5872324	62.5872324
2035	41.71753484	35.5021795	35.37546177	37.10770642	63.20997	63.209969	63.2099692	63.2099692
2036	42.08743484	35.8597771	35.8213026	37.0925393	63.74876	63.748758	63.7487583	63.7487583
2037	42.40401627	36.1769667	36.20890636	37.0772538	64.20806	64.208063	64.2080631	64.2080631
2038	42.67125672	36.458369	36.54328402	37.06111268	64.59407	64.594071	64.5940708	64.5940708

Sources: EMFAC2017 (v1.0.2) Emissions. Data extracted on 9/18/19 and QA'd on 9/19/19 by SN

CARB - Table 2 Emission Factors for Cleaner Vehicles

For Light-Duty and Medium-Duty Trucks/SUVs (Chassis-Certified)

Baseline (Older) Technology Vehicle

Baseline is California Vehicle Exhaust Standards ("LEV II") for average chassis-certified trucks for model year 2010. Factors assume emissions at 50,000 mile standard for the first 50,000 miles of the car's life (assumed to be 120,000 miles) and emissions at the 120,000 mile standard for the last 70,000 miles of the car's life.

Average New Truck in 2010
Emission factors in grams/mile

Weight (lbs.)[1]	ROG	NOx	PM2.5		PM10		CO_2
			Exhaust	Total[note]	Exhaust	Total	
Up to 8500	0.051	0.06	0.01	0.06	0.01	0.29	546
8501-10,000	0.148	0.195	0.07	0.13	0.07	0.68	735
10,001-14,000	0.173	0.39	0.07	0.14	0.07	0.70	824

Source: DRAFT CARB Emission Factors Tables - September 2019 - Methods for the Cost Effectiveness of Funding Air Quality Projects

Note: Total PM factors include motor vehicle exhaust, tire wear, brake wear, and entrained road dust

Replacement (Newer) Technology Cleaner Vehicle

Cleaner Vehicle Emission Factors are from the California Vehicle Exhaust Standards for MYs after 2016 ("LEV III") evaluated for calendar year 2019.

Project Average New Trucks in 2019
Emission factors in grams/mile

Weight (lbs.)[1]	ROG	NOx	PM2.5		PM10		CO_2
			Exhaust	Total	Exhaust	Total	
Up to 8500	0.04	0.054	0.003	0.049	0.00	0.25	546
8501-10,000	0.104	0.149	0.008	0.072	0.01	0.37	735
10,001-14,000	0.155	0.245	0.010	0.079	0.01	0.41	824

Zero-emission light-duty and medium-duty vehicle (ZEV)
Emission factors in grams/mile

Weight (lbs.)[1]	ROG	NOx	PM2.5		PM10		CO_2
			Exhaust	Total[3]	Exhaust	Total	
Up to 8500	0	0	0	0.046	0.00	0.24	92
8501-10,000	0	0	0	0.064	0.00	0.34	92
10,001-14,000	0	0	0	0.069	0.00	0.37	144

Source: California Air Resources Board - Methods to Find the Cost-Effectiveness of Funding Air Quality Projects, Table 2. Document updated May 2013.

[1] Gross vehicle weights can be associated with passenger capacity as follows: 5751-8500, roughly 8 passengers; 8501-10,000, roughly 10-15 passengers; 10,001-14,000, roughly 20 passengers or more.
[3] Total PM factors include exhaust, brake wear, and entrained road dust.

Table 3.2-16 PM Size Fraction Profiles for Gasoline and Diesel Vehicles in EMFAC 2014

	PM10			PM2.5			PM2.5 to PM10		
Process	GAS - CAT	GAS - NCAT	Diesel	GAS - CAT	GAS - NCAT	Diesel	GAS - CAT	GAS - NCAT	Diesel
Running Exhaust	0.894	0.961	0.994	0.822	0.917	0.917	1.087591241	1.0479826	1.083969466
Idle Exhaust	0.894	0.961	0.994	0.822	0.917	0.917	1.087591241	1.0479826	1.083969466
Start Exhaust	0.894	0.961	0.994	0.822	0.917	0.917	1.087591241	1.0479826	1.083969466
Brake Wear	1	1	1	0.25	0.25	0.25	4	4	4
Tire Wear	0.98	0.98	0.98	0.42	0.42	0.42	2.333333333	2.3333333	2.333333333

Other PM10, Diesel Fleet

	PM10	PM10	PM10	PM10
	LHDT1	LHDT2	MHDT	HHDT
	8501-10000 lbs	10001-14000 lbs	14-33	33+
Brake wear (BW)	0.07644	0.08918	0.13034	0.06079
Tire wear (TW)	0.01200	0.01200	0.01200	0.03545
Road Dust (RD)	0.14667	0.14667	0.14667	0.14667
BW + TW + RD:	0.2351	0.2478	0.2890	0.2429

Source for BW and TW: EMFAC 2017, Average of statewide BAAQMD fleet (all model years), aggregate all model years, aggregate all speeds

Source for RD: Methods to Find the Cost-Effectiveness of Funding Air Quality Projects (May 2013), Table 1, PM2.5 converted to PM10

Other PM10, Gasoline Fleet

	PM10
	MDV, LHD1, LHD2, Urban Buses
Brake wear (BW)	0.04188
Tire wear (TW)	0.00800
Road Dust (RD)	0.14667
BW + TW + RD:	0.1965

Other PM10, Natural

	PM10
	HHDT + Urban Buses
Brake wear (BW)	0.06520
Tire wear (TW)	0.03478
Road Dust (RD)	0.14667
BW + TW + RD:	0.2466

Other PM10, Electric

	PM10
	MDV + Urban Buses
Brake wear (BW)	0.03731
Tire wear (TW)	0.00863
Road Dust (RD)	0.14667
BW + TW + RD:	0.1926

Source for BW and TW: EMFAC 2017, Average of BAAQMD Gasoline Fleet
Source for RD: Methods to Find the Cost-Effectiveness of Funding Air Quality Projects (May 2013), Table 1, PM2.5 converted to PM10

Conversion from PM2.5 to PM10, Autos

Process	Proportion distribution	PM2.5	Conversion factor PM2.5 to PM10	PM10
Exhaust	N/A	0.002	1.087591241	0.00218
BW + TW	100%	0.024	N/A	N/A
Brake wea	82%	0.019704	4	0.0788
Tire wear	18%	0.004296	2.333333333	0.0100
Road Dus	N/A	0.028	6.666666667	0.1867
			Total PM2.5	0.0540
			Total PM10	0.2777
		Total conversion factor PM2.5 to PM 10		5.1423
		BW TW RD only conversion factor PM2.5 to PM 10		5.2982

Sources:
Proportion distribution of BW and TW - EMFAC 2014 Emission Inventory, Calendar Year 2015, LDA, LDT1, LDT2, and MYC, PMTW and PMBW

Conversion factor for RD - methodology and factor from Dennis Wade, ARB, confirmed by Amir Fanai, 2014, Conversion = PM2.5/Factor
PM2.5 figures from Table 3A, email from Dennis Wade, 1/28/16

Additional Resources:

Dennis Wade: ARB - 916-327-2963 (EMFAC)

Annie Huang: ARB - 916-323-8475 (emissions inventory)

Emission Factors from Appendix D: Tables for Emission Reduction and Cost-Effectiveness Calculations (Carl Moyer Program)

Table D-1 Heavy Duty Vehicles 14,001 - 33,000 pounds (GVWR)

Engine Model Year	NOx(b)		ROG(b),(c)		PM(b),(i)	
	EF(d)	DR(e)	EF(d)	DR(e)	EF(d)	DR(e)
Pre-1987	14.52	0.031	0.89	0.051	0.713	0.0283
1987-90	14.31	0.041	0.7	0.06	0.774	0.0252
1991-93	10.7	0.054	0.37	0.031	0.425	0.0193
1994-97	10.51	0.063	0.27	0.036	0.241	0.0129
1998-02	10.33	0.072	0.28	0.036	0.266	0.0116
2003-06	6.84	0.071	0.23	0.021	0.175	0.0067
2007-09	3.99	0.09	0.18	0.007	0.014	0.0008
2007+(f)(0.21-0.50 g/	1.27	0.079	0.06	0.002	0.002	0.0001
2010-12(0.20 g/bhp-h	1.03	0.079	0.06	0.002	0.002	0.0001
2013+(g)(0.20 g/bhp-h	1.03	0.045	0.06	0.001	0.002	0.0001
2016+(h)(0.10 g/bhp-h	0.52	0.023	0.06	0.001	0.002	0.0001
2016+(h)(0.05 g/bhp-h	0.26	0.011	0.06	0.001	0.002	0.0001
2016+(h)(0.02 g/bhp-h	0.1	0.005	0.06	0.001	0.002	0.0001

Table D-2 Heavy-Duty Vehicles
Over 33,000 pounds GVWR
Emission Factors (g/mile)(a) (EF) and Deterioration Rates (g/mile-10k miles) (DR)

Engine Model Year	NOx(b)		ROG(b),(c)		PM(b),(i)	
	EF(d)	DR(e)	EF(d)	DR(e)	EF(d)	DR(e)
Pre-1987	21.37	0.018	1.38	0.031	1.26	0.02
1987-90	21.07	0.024	1.08	0.037	1.369	0.0178
1991-93	18.24	0.037	0.78	0.027	0.574	0.0104
1994-97	17.92	0.043	0.58	0.031	0.377	0.008
1998-02	17.61	0.049	0.6	0.031	0.415	0.0073
2003-06	11.66	0.049	0.49	0.018	0.267	0.0041
2007-09	6.8	0.077	0.39	0.007	0.022	0.0006
2007+(f)(0.21-0.50 g/	2.17	0.068	0.13	0.002	0.004	0.0001
2010-12(0.2 g/bhp-hr	1.76	0.068	0.13	0.002	0.004	0.0001
2013+(g)(0.2 g/bhp-hr	1.76	0.039	0.13	0.001	0.004	0.0001
2016+(h)(0.10 g/bhp-h	0.88	0.019	0.13	0.001	0.004	0.0001
2016+(h)(0.05 g/bhp-h	0.44	0.01	0.13	0.001	0.004	0.0001
2016+(h)(0.02 g/bhp-h	0.18	0.004	0.13	0.001	0.004	0.0001

(a) EMFAC 2014 Zero-Mile Based Emission Factors. Factors are based on diesel engines. Same factors used for alternative fuel engines due to limited alternative fuel data in EMFAC.
(b) Emission factors incorporate the ultra low-sulfur diesel fuel correction factors listed in Table D-22.
(c) EMFAC provides HC emission factors which are converted into ROG. ROG = HC * 1.26639.
(d) Emission Factors are based on zero-mile rates contained in EMFAC 2014.
(e) Deterioration Rate are per 10,000 miles.
(f) All model year 2007 and newer engines with Family Emission Limits (FEL) from 0.21 g/bhp-hr to
0.50 g/bhp-hr NOx must use different emission factors from those listed for model years 2010 and newer engines certified to 0.20 g/bhp-hr NOx standards. FEL emission factors are based on EMFAC factors for model year 2010-2012 engines that include weighted averaging of 0.5, 0.35, and 0.20 g/bhp- hr NOx standards based on sales.
(g) Deterioration rates for 2013+ engines incorporate use of on-board diagnostic system.
(h) Factors for 2016+ engines are reduced values of 2013 factors by 50 percent, 75 percent, and
90 percent to correspond with 0.10 g/bhp-hr NOx, 0.05 g/bhp-hr NOx, and 0.02 g/bhp-hr NOx optional low NOx standards, respectively.
(i) Factors for 2006 or older engines are for unfiltered trucks.

Table D-3 Diesel Urban Buses (g/mile)

Engine Model Year	NOx(b)	ROG(b),(c)	PM(b),(e)
Pre-1987	42.97	1.88	0.929
1987-1990	37.39	1.87	0.878
1991-1993	23.72	1.84	0.835
1994-1995	27.71	1.81	1.015
1996-1998	36.46	1.81	1.217
1999-2002	18.97	1.81	0.417
2003	13.02	0.77	0.084
2004-2006	3.56	0.08	0.084
2007+(0.20 g/bhp-hr f	1.9	0.03	0.011
2016+(d)(0.10 g/bhp-h	0.95	0.03	0.011
2016+(d)(0.05 g/bhp-h	0.47	0.03	0.011
2016+(d)(0.02 g/bhp-h	0.19	0.03	0.011

(a) EMFAC 2014 Zero-Mile Based Emission Factors.
(b) Emission factors incorporate the ultra low-sulfur diesel fuel correction factors listed in Table D-22.
(c) EMFAC provides HC emission factors which are converted into ROG. ROG = HC * 1.26639.
(d) Factors for 2016+ engines are reduced values of 2007 factors by 50 percent, 75 percent, and 90 percent to correspond with 0.10 g/bhp-hr NOx, 0.05 g/bhp-hr NOx, and 0.02 g/bhp-hr NOx optional low NOx standards, respectively.
(e) Factors for 2006 or older engines are for unfiltered trucks.

Table D-4 Alternative Fuel Urban Buses (g/mile)

Engine Model Year	NOx	ROG(b)	PM(d)
Pre-2003	21.6	2.68	0.043
2003-06	15.4	3.87	0.023
2007+(0.20 g/bhp-hr f	0.65	0.04	0.001
2016+(c)(0.10 g/bhp-h	0.33	0.04	0.001
2016+(c)(0.05 g/bhp-h	0.16	0.04	0.001
2016+(c)(0.02 g/bhp-h	0.07	0.04	0.001

(a) EMFAC 2014 Zero-Mile Based Emission Factors.
(b) EMFAC provides HC emission factors which are converted into ROG.
ROG (Pre-2007 engines) = HC * 0.16137. ROG (2007+ engines) = HC * 0.013972..
(c) Factors for 2016+ engines are reduced values of 2007 factors by 50 percent, 75 percent, and 90 percent to correspond with
0.10 g/bhp-hr NOx, 0.05 g/bhp-hr NOx, and 0.02 g/bhp-hr NOx optional low NOx standards, respectively.
(d) Factors for 2006 or older engines are for unfiltered trucks.

Table D-5
Diesel Refuse Trucks
Emission Factors (g/mile)

Engine Model Year	NOx(b)	ROG(b),(c)	PM(b),(g)
pre-1994	34.69	0.01	0.346
1994-97	31.53	0.01	0.137
1998-02	31.25	0.01	0.144
2003-06	21.39	0.01	0.086
2007-09	11.25	0.14	0.008
2007+(d)(0.21-0.50 g/	1.23	0.26	0.008
2010+(e)(0.20 g/bhp-h	1.09	0.04	0.008
2016+(f)(0.10 g/bhp-h	0.54	0.04	0.008
2016+(f)(0.05 g/bhp-h	0.27	0.04	0.008
2016+(f)(0.02 g/bhp-h	0.11	0.04	0.008

Note: These emission factors are not applicable to transfer trucks. Transfer trucks must use the emission factors from Table D-1 or D-2. Per EMFAC 2014, solid waste collection vehicles are considered to be well-maintained and have negligible deterioration which is why only zero-mile emission factors are to be used in calculations for solid waste collection vehicle projects.
(a) EMFAC 2014 Zero-Mile Based Emission Factors.
(b) Emission factors incorporate the ultra low-sulfur diesel fuel correction factors listed in Table D-22.
(c) EMFAC provides HC emission factors which are converted into ROG. ROG = HC * 1.26639.
(d) All model year 2007 and newer engines with Family Emission Limits (FEL) from 0.21 g/bhp-hr to 0.50 g/bhp-hr NOx must use different emission factors from those listed for model years 2010 and newer engines certified to 0.20 g/bhp-hr NOx standards. FEL emission factors are based on EMFAC factors for model year 2010-2012 engines that include weighted averaging of 0.5, 0.35, and 0.20 g/bhp-hr NOx standards based on sales.
(e) These 2010+ emission factors are based only on engines certified to the 0.20 g/bhp-hr NOx standard.
(f) Factors for 2016+ engines are reduced values of 2013 factors by 50 percent, 75 percent, and 90 percent to correspond with 0.10 g/bhp-hr NOx, 0.05 g/bhp-hr NOx, and 0.02 g/bhp-hr NOx optional low NOx standards, respectively.
(g) Factors for 2006 or older engines are for unfiltered trucks.

Table D-6 Alternative Fuel Refuse Trucks Emission Factors (g/mile)

Engine Model Year	NOx	ROG(b)	PM(d)
Pre-2007	53.2	9.86	0.091
2007-09	18.8	3.68	0.004
2010+(0.20 g/bhp-hr N	0.88	0.14	0.004
2016+(c)(0.10 g/bhp-h	0.44	0.14	0.004
2016+(c)(0.05 g/bhp-h	0.22	0.14	0.004
2016+(c)(0.02 g/bhp-h	0.09	0.14	0.004

Note: These emission factors are not applicable to transfer trucks. Transfer trucks must use the emission factors from Table D-1 or D-2. Per EMFAC 2014, solid waste collection vehicles are considered to be well-maintained and have negligible deterioration which is why only zero-mile emission factors are to be used in calculations for solid waste collection vehicle projects.
(a) EMFAC 2014 Zero-Mile Based Emission Factors.

(b) EMFAC provides HC emission factors which are converted into ROG.
ROG (Pre-2007 engines) = HC * 0.16137. ROG (2007+ engines) = HC * 0.013972.
(c) Factors for 2016+ engines are reduced values of 2010 factors by 50 percent, 75 percent, and 90 percent to correspond with 0.10 g/bhp-hr NOx, 0.05 g/bhp-hr NOx, and 0.02 g/bhp-hr NOx optional low NOx standards, respectively.
(d) Factors for 2006 or older engines are for unfiltered trucks.

Table D-7
OFF-ROAD PROJECTS AND
NON-MOBILE AGRICULTURAL PROJECTS
Off-Road Diesel Engines Default Load Factors

Category	Equipment Type	Load Factor
Airport Ground Support	Aircraft Tug	0.54
	Air Conditioner	0.75
	Air Start Unit	0.9
	Baggage Tug	0.37
	Belt Loader	0.34
	Bobtail	0.37
	Cargo Loader	0.34
	Cargo Tractor	0.36
	Forklift	0.2
	Ground Power Unit	0.75
	Lift	0.34
	Passenger Stand	0.4
	Service Truck	0.2
	Other Ground Support Equipment	0.34
Agricultural (Mobile, Portable or Stationary)	Agricultural Mowers	0.43
	Agricultural Tractors	0.7
	Balers	0.58
	Combines/Choppers	0.7
	Chippers/Stump Grinders	0.73
	Generator Sets	0.74
	Hydro Power Units	0.48
	Irrigation Pump	0.65
	Shredders	0.4
	Sprayers	0.5
	Swathers	0.55
	Tillers	0.78
	Other Agricultural	0.51
Construction	Air Compressors	0.48
	Bore/Drill Rigs	0.5
	Cement & Mortar Mixers	0.56
	Concrete/Industrial Saws	0.73
	Concrete/Trash Pump	0.74
	Cranes	0.29
	Crawler Tractors	0.43
	Equipment	0.78
	Excavators	0.38
	Graders	0.41
Construction	Off-Highway Tractors	0.44
	Off-Highway Trucks	0.38
	Pavers	0.42
	Other Paving	0.36
	Pressure Washer	0.3
	Rollers	0.38
	Rough Terrain Forklifts	0.4
	Rubber Tired Dozers	0.4
	Rubber Tired Loaders	0.36
	Scrapers	0.48
	Signal Boards	0.78
	Skid Steer Loaders	0.37
	Surfacing Equipment	0.3
	Tractors/Loaders/Backhoe	0.37
	Trenchers	0.5
	Welders	0.45
	Equipment	0.42
Industrial	Aerial Lifts	0.31
	Forklifts	0.2
	Sweepers/Scrubbers	0.46
	Other General Industrial	0.34
	Other Material Handling	0.4
Logging	Fellers/Bunchers	0.71
	Skidders	0.74
Oil Drilling	Drill Rig	0.5
	Lift (Drilling)	0.6
	Swivel	0.6
	Workover Rig (Mobile)	0.5
	Other Workover Equipment	0.6
Cargo Handling	Container Handling Equipment	0.59
	Cranes	0.2
	Excavators	0.55
	Forklifts	0.3
	Other Cargo Handling Equipment	0.51
	Sweeper/Scrubber	0.68
	Tractors/Loaders/Backhoes	0.55
	Yard Trucks	0.39
Other	All	0.43

Table D-8
Uncontrolled Off-Road Diesel Engines
Emission Factors (g/bhp-hr) (EF) and Deterioration Rates (g/bhp-hr-hr) (DR)

Horsepower	Model Year	NOx		ROG		PM10		
		EF	DR	EF	DR	EF	DR	
25-49	Pre- 1988	6.51	0.000098	1.68	0.00021	0.547	0.0000424	
	1988+	6.42	0.000097	1.64	0.00021	0.547	0.0000424	
20-119	Pre- 1988	12.09	0.00028	1.31	0.000061	0.605	0.000044	
	1988+	8.14	0.00019	0.9	0.000042	0.497	0.0000361	
120+	Pre- 1970	13.02	0.0003	1.2	0.000056	0.554	0.0000403	
	1970-1979	11.16	0.00026	0.91	0.000042	0.396	0.0000288	
	1980-1987	10.23	0.00024	0.8	0.000037	0.396	0.0000288	
	1988+	7.6	0.00018	0.62	0.000029	0.274	0.0000199	
25-49	1	5.26	0.000098	1.32	0.00017	0.48	0.0000372	
	2	4.63	0.000093	0.22	0.00005	0.28	0.0000218	
	4 (Interim)	4.55	0.000095	0.09	0.000036	0.128	0.0000096	
	4 (Final)	2.75	0.000057	0.09	0.000036	0.009	0.000001	
50-74	1	6.54	0.00015	0.9	0.000042	0.552	0.0000402	
	2	4.75	0.000071	0.17	0.000025	0.192	0.0000141	
	3(b)	2.74	0.000036	0.09	0.000023	0.192	0.0000141	
	4 (Interim)	2.74	0.000036	0.09	0.000023	0.112	0.000008	
	4 (Final)	2.74	0.000036	0.09	0.000023	0.009	0.0000009	
75-99	1	6.54	0.00015	0.9	0.000042	0.552	0.0000402	
	2	4.75	0.000071	0.17	0.000025	0.192	0.0000141	
	3	2.74	0.000036	0.09	0.000023	0.112	0.000008	
	4 (Phase-Out)	2.74	0.000036	0.09	0.00003	0.009	0.0000009	
	4 (Phase-In or Alt. NOx)	2.15	0.000027	0.08	0.000021	0.009	0.0000009	
	4 (Final)	0.26	0.0000035	0.05	0.000015	0.009	0.0000009	
100-174	1	6.54	0.00015	0.62	0.000029	0.304	0.0000221	
	2	4.15	0.00006	0.15	0.000023	0.128	0.0000094	
	3	2.32	0.00003	0.09	0.00003	0.112	0.000008	
	4 (Phase-Out)	2.32	0.00003	0.09	0.00003	0.009	0.0000004	
	4 (Phase-In or Alt. NOx)	2.15	0.000027	0.08	0.00002	0.009	0.0000004	
	4 (Final)	0.26	0.000004	0.05	0.000011	0.009	0.0000004	
175-299		1	5.93	0.00014	0.29	0.000013	0.12	0.0000064
		2	4.15	0.00006	0.11	0.000022	0.088	0.0000046
		3	2.32	0.00003	0.09	0.000023	0.088	0.0000046
		4 (Phase-Ou	2.32	0.00003	0.09	0.000023	0.009	0.0000003
		4 (Phase-In o	1.29	0.000017	0.06	0.000017	0.009	0.0000003
		4 (Final)	0.26	0.0000036	0.05	0.000011	0.009	0.0000003
300-750		1	5.93	0.000099	0.29	0.00001	0.12	0.0000064
		2	3.79	0.00005	0.09	0.000023	0.088	0.0000044
		3	2.32	0.00003	0.09	0.000023	0.088	0.0000044
		4 (Phase-Ou	2.32	0.00003	0.09	0.000023	0.009	0.0000003
		4 (Phase-In o	1.29	0.000017	0.06	0.000017	0.009	0.0000003
		4 (Final)	0.26	0.0000036	0.05	0.000011	0.009	0.0000003
751+		1	5.93	0.000099	0.29	0.00001	0.12	0.0000064
		2	3.79	0.00005	0.09	0.000023	0.088	0.0000044
		4 (Interim)	2.24	0.000028	0.06	0.000017	0.051	0.0000021
		4 (Final)	2.24	0.000028	0.05	0.000011	0.017	0.0000009

Note: Engines participating in the "Tier 4 Early Introduction Incentive for Engine Manufacturers" program per California Code of Regulations, Title 13, section 2423(b)(6) are eligible for funding provided the engines are certified to the final Tier 4 emission standards. The Air Resources Board (ARB) Executive Order indicates engines certified under this provision. The emission rates for these engines shall be equivalent to the emission factors associated with Tier 3 engines.
Note: For equipment with baseline engines certified under the flexibility provisions per California Code of Regulations, Titles 13, section 2423(d), baseline emission rates shall be determined by using the previous applicable emission standard or Tier for that engine model year and horsepower rating. The ARB Executive Order indicates engines certified under this provision.
(a) Emission factors were converted using the ultra low-sulfur diesel fuel correction factors listed in Table D-23.
(b) Alternate compliance option.

Table 12
LARGE SPARK IGNITION ENGINES
Table D-10
Off-Road LSI Equipment Default Load Factors

Category	Equipment Type	Load Factor
Agriculture (Mobile, Portable or Stationary)	Agricultural Tractors	0.62
	Balers	0.55
	Combines/Choppers	0.74
	Chipper/Stump Grinder	0.78
	Generator Sets	0.68
	Sprayers	0.5
	Swathers	0.52
	Pumps	0.65
	Other Agricultural Equipme	0.55
Airport Ground Support	A/C Tug	0.8
	Baggage Tug	0.55
	Belt Loader	0.5
	Bobtail	0.55
	Cargo Loader	0.5
	Forklift	0.3
	Ground Power Unit	0.75
	Lift	0.5
	Passenger Stand	0.59
	Other Ground Support Equ	0.5
Construction	Air Compressors	0.56
	Asphalt Pavers	0.66
	Bore/Drill Rigs	0.79
	Concrete/Industrial Saws	0.78
	Concrete/Trash Pump	0.69
	Cranes	0.47
	Gas Compressor	0.85
	Paving Equipment	0.59
	Pressure Washer	0.85
	Rollers	0.62
	Rough Terrain Forklifts	0.63
	Rubber Tired Loaders	0.54
	Skid Steer Loaders	0.58
	Tractors/Loaders/Backhoes	0.48
Construction	Trenchers	0.66
	Welders	0.51
	Other Construction	0.48
Industrial	Aerial Lifts	0.46
	Forklifts	0.3
	Sweepers/Scrubbers	0.71
	Other Industrial	0.54

Table D-11a Off-Road and LSI Engines (g/bhp-hr) and deteorioration rates (g/bhp-hr-hr)
Gasoline

Horsepower	Model Year	NOx		ROG		PM10	
		EF	DR	EF	DR	EF	DR
25-50	Uncontrolled pre-2004	8.01	0.0000406	3.76	0.000412	0.06	0
	Controlled 2001 - 2006	1.33	0.000471	0.71	0.000169	0.06	0
	Controlled 2007 - 2009	0.89	0.0001192	0.473	0.000064	0.06	0
	Controlled 2010+	0.27	0.000025	0.142	0.000013	0.06	0
51-120	Uncontrolled Pre-2004	11.84	0.0000601	2.63	0.000287	0.06	0
	Controlled 2001 - 2006	1.78	0.000207	0.26	0.000081	0.06	0
	Controlled 2007 - 2009	1.17	0.000066	0.13	0.000074	0.06	0
	Controlled 2010+	0.35	0.00003	0.03	0.000014	0.06	0
121+	Uncontrolled pre-2004	12.94	0.000127	1.61	0.000042	0.06	0
	Controlled 2001 - 2006	1.94	0.000278	0.16	0.000102	0.06	0
	Controlled 2007 - 2009	1.17	0.000066	0.13	0.000074	0.06	0
	Controlled 2010+	0.35	0.00003	0.03	0.000014	0.06	0

Table D-11b Off-Road LSI Engines Emission Factors (g/bhp/-hr) and Deteorioration Rates (g/bhp-hr-hr)
Alternative Fuels

Horsepower	Model Year	NOx		ROG		PM10	
		EF	DR	EF	DR	EF	DR
	Uncontrolled pre-2004	13	0.0000662	1.38	0.000151	0.06	0
	Controlled 2001 - 2006	1.95	0.000276	0.14	0.000106	0.06	0
	Controlled 2007 - 2009	1.3	0.0000011	0.093	0.000172	0.06	0
25-50	Controlled 2010+	0.39	0.0000002	0.028	0.000036	0.06	0
	Uncontrolled pre-2004	10.53	0.0000533	1.55	0.000169	0.06	0
	Controlled 2001 - 2006	1.58	0.00035	0.16	0.000103	0.06	0
	Controlled 2007 - 2009	1.04	0.0000125	0.1	0.000047	0.06	0
51-120	Controlled 2010+	0.31	0.000038	0.03	0.000014	0.06	0
	Uncontrolled pre-2004	10.51	0.000104	1.38	0.000035	0.06	0
	Controlled 2001 - 2006	1.58	0.000264	0.14	0.000106	0.06	0
	Controlled 2007 - 2009	1.04	0.0000125	0.1	0.000047	0.06	0
121+	Controlled 2010+	0.31	0.000038	0.03	0.000014	0.06	0

Table D-12
Emission Factors for Off-Road LSI Engine Retrofits (g/bhp-hr)

Fuel	Verified Value	NOx	ROG	PM10
Gasoline	3	1.78	0.26	0.06
	2.5	1.48	0.22	0.06
	2	1.19	0.17	0.06
	1.5	0.89	0.13	0.06
	1	0.59	0.09	0.06
	0.6	0.35	0.03	0.06
	0.5	0.29	0.03	0.06
Alt Fuel	3	1.58	0.16	0.06
	2.5	1.32	0.13	0.06
	2	1.05	0.11	0.06
	1.5	0.79	0.08	0.06
	1	0.53	0.05	0.06
	0.6	0.31	0.03	0.06
	0.5	0.26	0.03	0.06

Table D-13a Off-Road LSI Engines Crtified to Optional Standards (g/hbp-hr) and Deteorioration Rates (g/bhp-hr-hr)
Gasoline

Horsepower	Optional Standard	NOx		ROG		PM10	
		EF	DR	EF	DR	EF	DR
25-50	0.4	0.18	0.000017	0.09	8.7E-06	0.06	0
	0.2	0.09	0.000008	0.05	4.3E-06	0.06	0
	0.1	0.04	0.000005	0.02	2.7E-06	0.06	0
51-120	0.4	0.24	0.000021	0.04	3.4E-06	0.06	0
	0.2	0.12	0.00001	0.02	1.7E-06	0.06	0
	0.1	0.06	0.000005	0.01	9E-07	0.06	0
121+	0.4	0.26	0.000022	0.02	1.7E-06	0.06	0
	0.2	0.13	0.000011	0.01	9E-07	0.06	0
	0.1	0.06	0.000005	0.01	9E-07	0.06	0
25-50	0.4	0.26	0.000022	0.02	1.7E-06	0.06	0
	0.2	0.13	0.000011	0.01	9E-07	0.06	0
	0.1	0.07	0.000006	0	0	0.06	0
51-120	0.4	0.21	0.000031	0.02	0.000003	0.06	0
	0.2	0.11	0.000015	0.01	1.3E-06	0.06	0
	0.1	0.05	0.000007	0.01	1.3E-06	0.06	0
121+	0.4	0.21	0.000034	0.01	1.6E-06	0.06	0
	0.2	0.11	0.000015	0.01	1.3E-06	0.06	0
	0.1	0.05	0.00001	0	0	0.06	0

ALL ENGINES
Table D-21
Fuel Consumption Rate Factors (bhp-hr/gal)

Category	Horsepower/Application	Fuel Consumption Rate
Non-Mobile Agricultur	ALL	17.5
Locomotive	Line Haul and Passenger (	20.8
	Line Haul and Passenger (	18.2
	Switcher	15.2
Other	< 750 hp	18.5
	> 750 hp	20.8

REFERENCES
The information in these tables has already been incorporated into the preceding emission factor tables. These tables are included for informational purposes.

Table D-22
Fuel Correction Factors On-Road Diesel Engines

Model Year	NOx	PM10	HC
Pre- 2007	0.93	0.72	0.72
2007+	0.93	0.8	0.72

Thursday, October 7, 2021
TAC Agenda Item 9.3
Continued From: NEW
Action Requested: Approval

NAPA VALLEY TRANSPORTATION AUTHORITY

Technical Advisory Committee Agenda Memo

TO:	Technical Advisory Committee (TAC)
FROM	Kate Miller, Executive Director
REPORT BY:	Danielle Schmitz – Director, Capital Development and Planning (707) 259-5968 | dschmitz@nvta.ca.gov
SUBJECT:	Approval of 2022 Regional Transportation Improvement Program (RTIP) and Approach to Fund Soscol Junction Shortfall

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RECOMMENDATION

That the Technical Advisory Committee (TAC) recommend to the Napa Valley Transportation Authority (NVTA) Board staff's approach to fill any shortfall on Soscol Junction through the following methods in priority order:

1) G-12 – Delegation Authority to Adjust Project Allocations
2) Advancement of Additional Regional Transportation Improvement Program (RTIP)
3) Letter of No Prejudice (LONP) against Future Regional Measure (RM) 3 funds

EXECUTIVE SUMMARY

In 2019 the Napa Valley Transportation Authority (NVTA) Board approved the 2020 Regional Transportation Improvement Program (RTIP), advancing future RTIP capacity in the amount of $20 million to the Soscol Junction Project. This action has resulted in no new funding capacity in the 2022 RTIP.

Soscol Junction is ready to list and is going to the October California Transportation Commission meeting for construction allocation. Caltrans recently identified unexpected costs to the project in the amount of $3-5 million dollars in the following areas:

1. Temporary Shoring
2. CHP Enforcement
3. Imported Borrow
4. Roadway Excavation
5. Contingency

NVTA staff is working with Caltrans to reduce these costs but understands there may be a project funding shortfall that could impact future RTIP funding. To mitigate impacts as much as possible, staff is recommending the following actions to cover any shortfall.

1. Request a G-12 Delegation Authority for the project which will allow NVTA to go to the CTC and request up to $2.6 million in additional allocation. This additional allocation will not impact Napa County's RTIP shares.

2. Request to advance more RTIP funds – if not successful with the G-12 delegation authority, staff will request to advance additional RTIP funds which will likely delay receiving any RTIP funds another cycle – out to 2030.

3. LONP – NVTA has $20 million dollars in RM 3 funds for SR 29 improvements including Soscol Junction. NVTA submitted a request to MTC for a LONP against future RM 3 funds. Once approved, NVTA can expend funds on Soscol Junction to cover any shortfall and be reimbursed when RM 3 funds come to fruition. It should be noted, this could impact other eligible projects on the SR 29 corridor. The NVTA Board would have to approve any RM 3 expenditures, including using the LONP.

NVTA staff is hopeful that continued discussion with Caltrans will mitigate any funding shortfalls and that the TAC approves staff's overall approach to first use the G-12 delegation authority to mitigate any impacts before using RTIP and RM 3 funds.

FISCAL IMPACT

Is there a fiscal impact? No

BACKGROUND AND DISCUSSION

The STIP is a multi-year capital improvement program comprised of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources. The STIP is composed of two sub-elements: the Regional Transportation Improvement Program (RTIP) and the Interregional Transportation Improvement Program (ITIP).

The Metropolitan Transportation Commission (MTC) in cooperation with NVTA and the other Bay Area County Transportation Agencies (CTAs) is preparing the 2022 Regional Transportation Improvement Program (RTIP). MTC is responsible for developing regional project priorities for the 9-County Bay Area. MTC submits the biennial RTIP to the California Transportation Commission (CTC) for inclusion in the State Transportation Improvement Plan (STIP). The 2022 RTIP covers fiscal years 2022-23 through 2026-27.

MTC released the 2022 RTIP county targets in August 2021. New projects, as well as existing projects with updated electronic Project Programming Request (ePPR) forms are due to MTC by the end of October. NVTA staff will be bringing an item before the Board

in October approving the Project Programming and Monitoring (PPM) amounts for Napa County for the 2022 RTIP cycle (FYs 2022-2027). There are no new RTIP funds for project capacity, though the jurisdictions are encouraged to review the existing RTIP project list. Project sponsors have the opportunity to update existing project funding plans and schedules.

In 2019, the NVTA Board approved advancing $20 million in RTIP funds to Soscol Junction, resulting in no new RTIP capacity for Napa County in the 2022 RTIP. This item, if approved, would allow NVTA to advance additional funding should no other mechanism to address the anticipated Soscol Junction Project shortfall be identified.

SUPPORTING DOCUMENTS

Attachment: (1) Napa County 2022 RTIP Projects
(2) 2022 RTIP County Fund Estimates
(3) California Transportation Commission Resolution G-19-12
https://catc.ca.gov/-/media/ctc-media/documents/programs/stip/stip-g12-revised-guidelines-062619-a11y.pdf

Napa 2022 RTIP Projects - FYs 2022-23 to 2026-27 ($1,000s)

ID	Project Name	Sponsor	Description	Cycle	Previous	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	2022 RTIP Request	Total Project Cost	Notes
1	Planning, Programming and Monitoring	NVTA	PPM	2022	$153	$52	$51	$50	$48	$48	$96		New funds $96,000 programmed in last two years
2	Silverado Five- Way Inetersection Improvements	City of Napa	Intersection geometry improvements, lane widening, travel lane reconfiguration, and signal modification	2018			$1,153					$10,500	Needs additional funds
3	Devlin Road and Vine Trail Extension	American Canyon	Extending Devlin Rd. and Vine Trail approximately 2,500 feet to the south, connecting at Green Island Road	2018	$4,151							$5,000	In construction phase
4	Soscol Junction	NVTA	Intersection improvements at SR 29/SR221/Soscol Ferry Road; construct a north/south overpass on SR 29 and construct two roundabouts – one to the east and one to the west of the overpass – to allow multi-modal turning operations on and off SR 29, SR 221 and Soscol Ferry Road.	2018	$35,603							$64,000	$20 million in 2020 STIP advanced to project with a total of $35 million in STIP
5	Napa Valley Vine Trail St. Helena to Calistoga	NVTA	Class I multipurpose path between Calistoga and St. Helena	2018	$98							$10,400	
										Total	$96		

Metropolitan Transportation Commission

2022 RTIP Fund Estimate County Targets

Numbers based on FINAL 2022 STIP FE (Published 8/13/2021)

8/31/2021
All numbers in thousands

Table 1: County Share Targets

Draft	Through FY 2026-27 New Distrib.	Advanced, Carryover, and Lapsed	Regional Set-aside*	MTC PPM** FY 2025-26 & FY 2026-27	2022 STIP CTA Target***
Alameda	**22,035**	0	(5,063)	(355)	**16,617**
Contra Costa	**15,118**	45,890	(31,090)	(230)	**29,688**
Marin	**4,131**	(22,406)	(571)	(65)	**0**
Napa	**2,724**	(19,683)	(376)	(40)	**0**
San Francisco	**11,202**	1,548	(1,548)	(180)	**11,022**
San Mateo	**11,415**	3,912	(1,598)	(186)	**13,543**
Santa Clara	**26,162**	5,932	(3,632)	(414)	**28,048**
Solano	**6,854**	(29,263)	(945)	(109)	**0**
Sonoma	**8,423**	231	(4,577)	(131)	**3,946**
County Totals	**108,064**	**(13,839)**	**(49,400)**	**(1,710)**	**102,864**

Note: Counties with negative balance have a "$0" new share.
* Regional set-aside includes $31M from ARRA/Caldecott payback, $15M from SFOBB Bike/Ped Access projects, and $3.4M from MSN B2 payback (SON)
** Assumes 2% Escalation Rate for New Fys (reduced from 3.5%)
*** Does not include new CTA PPM programming

Table 2: Planning, Programming, and Monitoring Amounts
FY 2022-23, FY 2023-24

	PPM Limit FY 2022-23 through FY 2023-24	MTC PPM FY 2022-23 through FY 2023-24	Programmed CTA PPM Current Share Period		PPM FY 2022-23 through FY 2023-24 CTA Share
			FY 2022-23	FY 2023-24	
Alameda	**327**	**327**	0	0	**0**
Contra Costa	**636**	**212**	356	68	**0**
Marin	**61**	**61**	0	0	**0**
Napa	**139**	**37**	51	51	**0**
San Francisco	**472**	**167**	259	46	**0**
San Mateo	**481**	**173**	262	46	**0**
Santa Clara	**494**	**382**	112	0	**0**
Solano	**288**	**100**	159	29	**0**
Sonoma	**398**	**120**	278	0	**0**
County Totals	**3,296**	**1,579**	**1,477**	**240**	**0**

Note: Counties may redistribute PPM amounts across both fiscal years

Table 3: Planning, Programming, and Monitoring Amounts
FY 2024-25, FY 2025-26, FY 2026-27

	PPM Limit FY 2024-25 through FY 2026-27	MTC PPM FY 2024-25 through FY 2026-27	Programmed CTA PPM FY25 to FY28 Share Period			PPM Available for FY25 to FY28 Share Period CTA Share***
			FY 2024-25	FY 2025-26	FY 2026-27	
Alameda	**1,668**	**527**	394	0	0	**747**
Contra Costa	**1,143**	**342**	275	0	0	**526**
Marin	**313**	**97**	74	0	0	**142**
Napa	**206**	**60**	50	0	0	**96**
San Francisco	**847**	**268**	199	0	0	**380**
San Mateo	**863**	**277**	201	0	0	**385**
Santa Clara	**1,978**	**615**	469	0	0	**894**
Solano	**518**	**162**	123	0	0	**233**
Sonoma	**637**	**194**	153	0	0	**290**
County Totals	**8,173**	**2,542**	**1,938**	**0**	**0**	**3,693**

Note: Counties may redistribute and program PPM share across all three fiscal years
*** CTA PPM share has not been subtracted from 2022 STIP CTA target identified in Table 1

J:\PROJECT\Funding\RTIP\22 RTIP\FE Targets\[2022 Estimated STIP FE Targets.xlsx]2022 RTIP FE 2021-8-13

Thursday, October 7, 2021
TAC Agenda Item 9.4
Continued From: NEW
Action Requested: Information Only

NAPA VALLEY TRANSPORTATION AUTHORITY

Technical Advisory Committee Agenda Memo

TO:	Technical Advisory Committee (TAC)
FROM	Kate Miller, Executive Director
REPORT BY:	Danielle Schmitz – Director, Capital Development and Planning (707) 259-5968 | dschmitz@nvta.ca.gov
SUBJECT:	One Bay Area Grant (OBAG) Cycle 3

RECOMMENDATION

Information only

EXECUTIVE SUMMARY

The Metropolitan Transportation Commission (MTC) is setting the framework for the One Bay Area Grant (OBAG) Cycle 3 call for projects which will take place next year in 2022. OBAG guidelines develop the investment strategy for federal Surface Transportation Block Grant funds programmed by MTC. OBAG 3 policy considerations are oriented around preserving the effectiveness of past OBAG programs, this includes focusing investments in Priority Development Areas (PDAs), and incorporating recent policy initiatives such as regional safety/vision zero policies and the Transit Transformation Action Plan. MTC staff is still developing the draft framework including funding targets with anticipated finalization of the guidelines by December 2021. County Transportation Agencies (CTAs) have been meeting with MTC and providing input on the framework.

A major change to OBAG 3 is there will be a two-phased project selection process. This is because MTC's federal certification review in 2020 highlighted the need to clarify and better document MTC's OBAG programming responsibilities, including areas of project selection and funding distribution. The corrective action requires MTC to change the project selection process under OBAG 3. MTC cannot sub-allocate OBAG funds by formula, and cannot delegate final project selection authority to the county level. MTC will perform final prioritization and selection of projects within the county programs. Napa Valley Transportation Authority (NVTA) and partner CTAs are working with MTC on

developing the guidelines for this two-phased programming effort. NVTA is vocalizing the importance that CTAs have discretion over phase 1 of the call for projects and are able to define things like proximate access to PDAs within the program. It is anticipated that eligible project types will be similar to previous cycles and transit projects, safe routes to school, multimodal operational improvements, and local street and road projects will be eligible. NVTA is also advocating for the Priority Conservation Area (PCA) set-aside for the North Bay Counties. NVTA staff will continue to bring OBAG 3 updates to TAC throughout the next year.

FISCAL IMPACT

Is there a fiscal impact? No

BACKGROUND AND DISCUSSION

The One Bay Area Grant (OBAG) program is the policy and programming framework for investing federal Surface Transportation Block Grant Program (STP), Congestion Mitigation and Air Quality Improvement (CMAQ), and other fund programs throughout the San Francisco Bay Area. MTC established the OBAG program in 2013 to strengthen the connection between transportation investments and regional goals for focused growth in PDAs, near affordable housing. OBAG is delivered through two program components, the county program and the regional program. The programs reinforce the region's growth objectives by focusing projects that reduce vehicle miles traveled, while continuing to deliver on important regional initiatives like state of good repair.

The County Program is designed for local transportation investments that support housing development and reduce vehicle travel. The regional program invests in ongoing transportation programs as well as new initiatives outlined in Plan Bay Area. The regional program has invested in a broad array of transportation initiatives such as PDA planning, Priority Conservation Area (PCA) grants, Bay Bridge Forward and other highway operation improvements, and transit capital investments like BART.

Table 1. OBAG 3 Timeline

Date	Milestone
July 2021	MTC Commission Overview and Discussion
July-Sept 2021	Develop draft program framework, including funding levels, program categories, and policy changes
October 2021	MTC Commission – Review and discussion of draft OBAG 3 framework
December 2021	MTC review and approval of final OBAG 3 program framework
January – December 2022	County Program – call for projects and Regional Program – program definition and programming actions
Spring 2023	MTC review and approval of OBAG 3 County Program projects

SUPPORTING DOCUMENTS

Attachment: (1) MTC OBAG 3 Considerations PowerPoint
https://mtc.legistar.com/LegislationDetail.aspx?ID=5127080&GUID=54CF0B2B-0ECB-4B62-A786-1E0586849F92