

Metropolitan Transportation Commission Programming and Allocations Committee

November 4, 2015

Resolution No. 4205

Subject: Transportation Development Act (TDA) Triennial Audit report and approval of the 2015 Productivity Improvement Program (PIP).

Background: **TDA Triennial Audits**

The Transportation Development Act (TDA) requires that MTC administer triennial performance audits of the region's transit operators. Operators are divided into three groups, with one group audited each year on a three-year cycle. The audits are conducted under contract by an independent auditing firm, currently Pierlott and Associates, LLC.

The attached presentation summarizes findings for the recently completed audits, focusing on each operator's six-year trends for certain performance indicators, including cost per hour, cost per passenger and passengers per hour. In summary, service effectiveness and cost efficiency trends were mixed between FY2011-12 and FY2013-14 as shown below:

Passengers per Vehicle Service Hour Trends *Fixed-Route Service*

Agency	Productivity*	Ridership	Notes
GGBHTD	↔	↓	Small decreases in service and ridership
SamTrans	↓	↓	Small increase in service; ridership decreased
Dixon	↓	↓	Small decrease in service; ridership decreased
NCTPA	↑	↑	Service steady; small ridership increase
Rio Vista	↓	↔	Small increase in service, ridership steady
SolTrans	↑	↓	Decrease in service, small ridership decrease (FY2012-FY2014 only)
Tri Delta	↑	↑	Small decrease in service; small increase in ridership
Vacaville	↑	↑	Increases in service and ridership
WestCAT	↔	↓	Small decreases in service and ridership

**Productivity relates to the number of passengers per service hour and mile.*

Productivity Improvement Program (PIP)

In accordance with TDA legislation, MTC annually adopts a PIP, a set of projects to be undertaken by transit operators in the region within the next three years to improve productivity and lower operating costs. Historically, projects have been derived from recommendations made in the operators' most recently completed TDA audits. In coordination with the transit operators, the PIP development process was revised last year to incorporate the Transit Sustainability Project (TSP) performance metrics and targets for

the largest seven operators and specific service and institutional recommendations related to the smaller operators.

Large Operators – PIP Projects

The seven large operators (AC Transit, BART, Caltrain, Golden Gate, SamTrans, SFMTA, and SCVTA) have identified achieving a 5% reduction by FY2016-17 in one of the TSP performance metrics as their PIP project. Attachment 1 summarizes progress to date towards achieving this reduction in the three metrics: Cost per Revenue Hour, Cost per Passenger or Cost per Passenger Mile. All seven operators have achieved a 5% reduction against the baseline for FY2013-14 in at least one of the metrics. However, in general, the operators aren't seeing significant reduction in operating cost per hour. Rather, most operators are achieving the 5% performance target due to strong ridership. SamTrans gets the "gold star" for achieving the 5% reduction in all three metrics. Achieving *both* higher ridership and better cost control is the key to a more sustainable future for Bay Area public transit.

Additionally, the agencies have submitted annual updates to their TSP strategic plans that identify strategies to continue progress towards achieving the 5% reductions by FY2016-17 and beyond.

Small Operators – PIP Projects

Last year, staff worked with the smaller operators on ways to streamline the PIP and TSP process, incorporating coordination initiatives already underway at the agencies. The smaller operators have drawn upon recommendations from the TSP or other agency plans to improve productivity or lower operating costs.

A finding that an operator has made a reasonable effort in implementing its PIP project(s) is required before allocating the TDA or State Transit Assistance (STA) funds to the operator. The findings relative to FY2015-16 PIP projects will pertain to the allocation of FY2016-17 funds.

Attachment 2 summarizes the current PIP projects. Attachment A to Resolution No. 4205 provides a more detailed description of all PIP projects, including project description, goals and estimated completion date.

Issues: None.

Recommendation: Refer MTC Resolution No. 4205 to the Commission for approval

Attachments: Attachment 1 – Large Operators – TSP Performance Metric Summary
Attachment 2 – List of Operators and PIP Projects
MTC Resolution No. 4205
Presentation

Attachment 1
Large Operators – TSP Performance Metrics and Targets
FY2013-14 Performance Vs. Baseline Year

Operating Cost per Vehicle Service Hour

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest	FY 2016-17 Target (a)
	Year	Performance	FY2013-14	FY 2013-14	
AC Transit	FY2010-11	\$169.41	\$170.53	0.7%	\$160.94
BART	FY2009-10	\$277.46	\$283.12	2.0%	\$263.58
Caltrain	FY2010-11	\$345.42	\$459.98	33.2%	\$328.15
GGBHTD	FY2010-11	\$282.33	\$304.83	8.0%	\$268.21
SFMTA	FY2009-10	\$204.61	\$205.12	0.3%	\$194.38
SamTrans	FY2008-09	\$198.40	\$159.37	-19.7%	\$188.48
VTA	FY2010-11	\$185.87	\$188.42	1.4%	\$176.57

** NTD reporting direction to Caltrain varied over reporting period related to shuttle system hours and costs, resulting in a significant increase for FY2013-14 cost per hour, Caltrain rail service increase for FY2013-14 vs. baseline was 5.4%*

Operating Cost per Passenger

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest	FY 2016-17 Target (a)
	Year	Performance	FY2013-14	FY 2013-14	
AC Transit	FY2008-09	\$5.88	\$5.80	-1.3%	\$5.59
BART	FY2008-09	\$4.86	\$4.32	-11.0%	\$4.62
Caltrain	FY2009-10	\$8.33	\$6.07	-27.1%	\$7.91
GGBHTD	FY2010-11	\$11.76	\$11.61	-1.2%	\$11.17
SFMTA	FY2009-10	\$3.27	\$3.12	-4.5%	\$3.11
SamTrans	FY2010-11	\$8.59	\$8.05	-6.4%	\$8.16
VTA	FY2009-10	\$7.49	\$7.48	-0.2%	\$7.11

Operating Cost per Passenger Mile

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest	FY 2016-17 Target (a)
	Year	Performance	FY2013-14	FY 2013-14	
AC Transit	FY2009-10	\$2.01	\$1.52	-24.6%	\$1.91
BART	FY2008-09	\$0.39	\$0.33	-15.0%	\$0.37
Caltrain	FY2007-08	\$0.36	\$0.29	-19.3%	\$0.34
GGBHTD	FY2008-09	\$1.20	\$1.06	-12.1%	\$1.14
SFMTA	FY2009-10	\$1.56	\$1.46	-6.2%	\$1.48
SamTrans	FY2010-11	\$1.79	\$1.69	-5.7%	\$1.70
VTA	FY2009-10	\$1.58	\$1.36	-14.1%	\$1.51

*Note: shading indicates five percent or greater real reduction in performance
(a) Equals five percent reduction from baseline highest year in FY2013-14 dollars.*

Attachment 2 – Summary of PIP Projects

Large Operators

Agency	Project	Estimated Completion Date
AC Transit, BART, Caltrain, Golden Gate Transit, SamTrans, SFMTA, SCVTA	Transit Sustainability Project (TSP) – Achieve a 5% reduction in at least one of the Resolution 4060 – TSP Performance Measures:	End of FY2016-17 and annually thereafter

Small Operators

Regional Projects

Agency	Project	Estimated Completion Date
Various – See MTC Resolution No. 4205, Attachment A	Implement Clipper	Continuing
WETA	Fare Program Transfer Policy	Continuing
	Alameda Terminals Access Improvements	Continuing
	BayAlerts Messaging System	Completed

Alameda County

Agency	Project	Estimated Completion Date
LAVTA	Comprehensive Operational Analysis	Continuing
	Develop Transit Asset Inventory	Completed
Union City	Paratransit Plus Trip Productivity	New
	Evaluate Automatic Vehicle Location (AVL) Technology	Continuing
	Bus Schedule and Service Revisions	Completed

Contra Costa County

Agency	Project	Estimated Completion Date
CCCTA, ECCTA, WestCat in partnership w/ CCTA	Countywide Express Bus Study	Continuing
CCCTA	Improve On-time Performance	New
ECCTA	Increase Passenger Productivity and Cost-effectiveness of Paratransit Service	New
	Coordinate Intake and Processing of Paratransit Applications in Contra Costa County	Continuing

Marin County

Agency	Project	Estimated Completion Date
Marin Transit	Participate in San Rafael Bettini Transit Center Relocation Study	New
	Clipper Assessment	New
	Mobility Management Programs Cost Effectiveness	Completed

Napa County

Agency	Project	Estimated Completion Date
NCTPA	VINE Bus Stop Informational Signs Upgrade	New
	Computer Aided Dispatch/ AVL system	Continuing
	Bus Mobility Device Retrofit	Completed
	Security Cameras on VINE Transit Vehicles	Completed

Solano County

Agency	Project	Status
Solano Transportation Authority for all Solano County Operators	Solano County Mobility Management Program Enhancements	New
	I-80/I-680/I-780/State Route 12 Transit Corridor Study Update	Continuing
	Solano County Mobility Management Program	Completed
Rio Vista	Improve service efficiency and effectiveness	Completed
SolTrans	Implement Automatic Call-back System for Paratransit Customers	New
	Compressed Natural Gas (CNG) Fueling Facility	New
	AVL Implementation	Continuing
	Restructure fixed route service	Completed
City of Vacaville	Research Block Party Public Outreach Concept (New)	New
	Investigate Deviated Fixed Route in Leisure Town	Completed
	Monthly Pass Rewards Program	Completed
	Research Call-n-Ride System	Completed

Sonoma County

Agency	Project	Status
City of Petaluma	SMART Service Coordination Project	New
	AVL Implementation	Continuing
Santa Rosa	Adopt Comprehensive Operational Analysis and Service Plan	Continuing
	Implementation of Paratransit Efficiency Review Tier One Recommendations	Completed
Sonoma County	Transit Asset Management Plan	Continuing

Date: November 18, 2015
W.I.: 1514
Referred By: PAC

ABSTRACT

Resolution No. 4205

This resolution adopts MTC's FY2015-16 Productivity Improvement Program (PIP).

Further discussion of this action is contained in the Programming and Allocations Committee Summary Sheet for November 4, 2015.

Date: November 18, 2015
W.I.: 1514
Referred By: PAC

Re: MTC Productivity Improvement Program

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4205

WHEREAS, Public Utilities Code (PUC) section 99244 provides that each transportation planning agency shall annually identify, analyze, and recommend potential productivity improvements which could lower the operating costs of transit operators within the area under its jurisdiction; and

WHEREAS, as provided for in Government Code sections 66500 et seq., the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area; and

WHEREAS, PUC section 99244 provides that recommendations for improvements and productivity shall include, but not be limited to, those recommendations related to productivity made in the triennial performance audits of transit operators conducted pursuant to PUC section 99246; and

WHEREAS, in accordance with PUC section 99244, MTC is required each fiscal year, to make a finding that a transit operator has made a reasonable effort in implementing productivity improvement recommendations prior to approving the allocation of Transportation Development Act (TDA) funds in an amount greater than was allocated to the operator in the preceding fiscal year; and

WHEREAS, in accordance with PUC section 99314.7, MTC is required each fiscal year, to make a finding that a transit operator has made reasonable effort in implementing productivity improvements pursuant to PUC section 99244, prior to approving the allocation of State Transit Assistance (STA) funds to the operator for operating purposes; and

WHEREAS, in accordance with PUC section 99233.2, MTC may support the regional transportation planning process by providing technical assistance funding to transit operators or other entities to implement transit productivity improvements; now, therefore, be it

RESOLVED, that MTC adopts the productivity improvement projects set forth in Attachment A to this resolution, and incorporated herein by reference; and

RESOLVED, that MTC finds that all transit operators identified in Attachment A have made reasonable effort in implementing productivity improvements and are eligible for allocations of TDA and STA funds next fiscal year in accordance with PUC sections 99244 and 99314.7.

METROPOLITAN TRANSPORTATION COMMISSION

Dave Cortese, Chair

The above resolution was adopted by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held in
Oakland, California, on November 18, 2015.

Date: November 18, 2015
W.I.: 1514
Referred By: PAC

Attachment A
Resolution No. 4205
Page 1 of 12

Large Operators

Transit Operator: AC Transit, BART, Caltrain, Golden Gate Transit, SamTrans, SFMTA, SCVTA

Project Title: Transit Sustainability Project – Performance Measures

Project Goal: Progress towards achieving a 5% reduction by FY2016-17 in at least one of the three performance measures outlined in MTC Resolution 4060.

Project Description: MTC Resolution No. 4060 established performance measures and targets for the largest seven Bay Area transit operators to achieve a five percent (5%) reduction by FY2016-17 in one of three performance measures and with no growth beyond the Consumer Price Index (CPI) thereafter. These measures are:

- Cost Per Vehicle Service Hour;
- Cost Per Passenger; and
- Cost per Passenger Mile.

Each agency adopted a strategic plan in FY2012-13 that described how the agency intends to meet one or more of the performance targets. Beginning in FY2013-14, each agency is required to submit performance data on all three measures and targets as part of MTC's ongoing monitoring of progress towards meeting the targets.

Estimated Completion Date: End of FY 2016-17 and annual updates thereafter.

Small Operators

Regional

Transit Operator: Various (see below)

Project Title: Implement Clipper

Project Goal: Make electronic fare payment available on small operators to make fare payment easier.

Project Description: The Clipper program is the San Francisco Bay Area's regional smart card-based fare payment system. Clipper is the all-in-one transit card that keeps track of any passes, discount tickets, ride book and cash value that you load onto it while applying all applicable fares, discounts and transfer rules.

Clipper became revenue ready on FAST, Marin Transit, VINE, Soltrans, and Vacaville last fiscal year.

Estimated Revenue Ready Date:

Operator	Estimated Revenue Ready Date
CCCTA/County Connection	Fall 2015
ECCTA/Tri Delta	Fall 2015
LAVTA	Fall 2015
Petaluma	Winter 2015
Santa Rosa	Winter 2015
Sonoma County Transit	Winter 2015
Union City	Spring 2016
WestCAT	Fall 2015

Transit Operator: Water Emergency Transportation Authority (WETA)

Project Title: Fare Program Transfer Policy

Project Goal: Encourage bus-to-ferry transfer at origin stations throughout the WETA system.

Project Description: Adopt WETA Fare Program Transfer Policy to reimburse ferry riders the cost of their bus trip to the terminal, reducing the overall cost of a linked transit trip. The cost for the transfer will be split between WETA and the terminal-serving transit agency.

Estimated Completion Date: July 2016

Transit Operator: Water Emergency Transportation Authority (WETA)

Project Title: Alameda Terminals Access Improvements

Project Goal: Improve opportunities for accessing both ferry terminals in Alameda, encouraging non-automotive modes such as transit, walking and biking.

Project Description: The Alameda Terminals Access Plan, currently underway and being developed, will identify a series of capital and programmatic improvements to encourage more riders to take the ferry in Alameda. The Access Improvements will likely range from bike lane gap closures, bicycle parking, pedestrian safety improvements and bus routing and scheduling changes.

Estimated Completion Date: April 2016

Alameda County

Transit Operator: Livermore Amador Valley Transit Authority (LAVTA)

Project Title: Comprehensive Operational Analysis (Local and Corridor/Sub-Regional Bus Study)

Project Goal: Evaluate all local and express bus service operated by LAVTA for productivity and efficiency; determine gaps in service provided; make recommendations for adjustments.

Project Description: Develop an RFP and obtain project consultant to conduct study. Coordinate a technical advisory group to provide feedback on analysis. Conduct significant public outreach to gather feedback on existing and potential route structures. Identify improvements in services that can be implemented at no additional cost; look for future opportunities to expand service.

Estimated Completion Date: March 2016

Transit Operator: Union City

Project Title: Paratransit Plus Trip Productivity (NEW)

Project Goal: Increase productivity of non-ADA paratransit plus trips

Project Description: Increase the productivity of paratransit plus trips by linking all non-ADA trips with an ADA paratransit trip. Develop and implement dispatching standards for paratransit plus trips.

Estimated Completion Date: June 2016

Transit Operator: Union City

Project Title: Evaluate Automatic Vehicle Location (AVL) Technology

Project Goal: Cost-effectively enhance service performance via remote system monitoring and providing real-time information to customers.

Project Description: Evaluate feasibility of a cloud-based AVL system that can be used to monitor vehicles by transit agency. System would also provide public access to passengers can monitor vehicles for trip planning purposes. All vehicle information would be compatible with 511.org trip planner and Google Transit.

Estimated Completion Date: June 2016

Contra Costa County

Transit Operator: Central Contra Costa Transit Authority/ County Connection
Eastern Contra Costa Transit Authority/Tri-Delta
Western Contra Costa Transit Authority (WestCAT)

Project Title: Countywide Express Bus Study

Project Goal: Evaluate express bus services operated within Contra Costa County and determine gaps and service improvements in light of demographic and freeway system changes

Project Description: Work with Contra Costa Transportation Authority to obtain project consultant and conduct study of express bus service operating in Contra Costa. Participate in technical advisory committee and provide data necessary for analysis. Identify future improvements to system that may be funded with new sales tax measure funds.

Estimated Completion Date: December 2015

Transit Operator: Central Contra Costa Transit Authority (CCCTA)/ County Connection

Project Title: Improve On-Time Performance (NEW)

Project Goal: Improve on-time performance of paratransit and fixed route

Project Description: Improve on-time performance monitoring for paratransit. Modify goals and standards for on-time performance of fixed route now that 100% sampling of all stops is available. Incorporate analysis of on-time performance and ongoing monitoring into 2015 SRTP.

Estimated Completion Date: March 2016

Transit Operator: Eastern Contra Costa Transit Authority/Tri-Delta

Project Title: Increase Passenger Productivity and Cost-effectiveness of Paratransit Service (NEW)

Project Goal: Examine and develop strategies to improve paratransit productivity.

Project Description: Continuing effort to improve the recurring, TDA Performance Audit recommendation to improve paratransit efficiency which continues to slip as demand in the sub-region grows. The Scheduling Section says we need to replace our obsolete software as a first step at a cost of \$300,000 and no funding source has been identified to date.

Estimated Completion Date: December 2016

Transit Operator: Eastern Contra Costa Transit Authority/Tri-Delta

Project Title: Coordinate Intake and Processing of Paratransit Applications
Contra Costa County

Project Goal: Increase passenger productivity and improve cost effectiveness of the paratransit service.

Project Description: Work with other bus operators in CC County to standardize and economize the application, acceptance and approval process for potential paratransit users applying under ADA guidance.

Estimated Completion Date: June 2016

Marin County

Transit Operator: Marin Transit

Project Title: Participate in San Rafael Bettini Transit Center Relocation Study (*NEW*)

Project Goal: SMART train service to San Rafael and Larkspur

Project Description: When SMART service extends to Larkspur, the SMART tracks will travel north-south through the Bettini Transit Center and divide it into two sides, requiring a plan to fully or partially relocate the Transit Center in order to maintain the current level of service and to accommodate potential new bus service resulting from the opening of SMART. This study will build on the conceptual work completed in the Downtown Station Area Plan which identified a need to integrate rail and bus transit, potentially in a consolidated transit complex. The City of San Rafael is the lead agency for the study with GGBHTD and Marin Transit as partner agencies.

Estimated Completion Date: December 2015

Transit Operator: Marin Transit

Project Title: Clipper Assessment (*NEW*)

Project Goal: Increase Clipper usage on local Marin Transit services

Project Description: Since 2007 Marin Transit has monitored Clipper usage on its routes and has observed a very low rate of participation by riders in comparison to the regional Golden Gate bus and ferry service where over 90% of riders use Clipper, usage on Marin Transit routes, which serve the same geographic area, averages 12%. Marin Transit will investigate opportunities and strategies to increase Clipper usage by riders.

Estimated Completion Date: June 2016

Napa County

Transit Operator: Napa County Transportation and Planning Agency (NCTPA)

Project Title: VINE Bus Stop Informational Signs Upgrade (NEW)

Project Goal: Replace existing bus signage with new signs containing more customer service options and information.

Project Description: The new bus stop signs will inform riders at the stop of automated phone and text lines for information relating to bus service at the specific stop. The signs will also contain information for those possessing smart phones on access to service information via internet or phone application. The purpose of this is to direct some customer service questions to automated sources to reduce the amount of time spent answering routine questions by VINE staff therefore increasing customer service efficiency.

Estimated Completion Date: May 2016

Transit Operator: Napa County Transportation and Planning Agency (NCTPA)

Project Title: Computer Aided Dispatch (CAD)/ Automatic Vehicle Locator (AVL) system

Project Goal: AVL and CAD capabilities will provide the agencies with an essential tool to help improve on-time performance, improve dispatch reliability and efficiency, increase ridership, improve scheduling and planning, and improve data management and reporting.

Project Description: Napa County Transportation and Planning Agency has identified the need to implement technological tools to assist in managing their operations and serving their customers through the collection, analysis and dissemination of reliable data on its existing fleet of transit vehicles. Based on this high priority need, Napa VINE will deploy a state-of-the-art AVL System and CAD for their fixed route and demand response fleets of vehicles. All vehicle information will be compatible with 511.org trip planner and Google Transit.

Estimated Completion Date: June 2016

Solano County

Transit Operator: Solano Transportation Authority for all Solano County Operators
(Dixon, FAST, Rio Vista, Soltrans, Vacaville)

Project Title: Solano County Mobility Management Program Enhancements

Project Goal: Implement a Mobility Management Plan for Seniors, People with Disabilities and the Low-Income to assist individuals find the right transportation to maintain and/or develop their mobility.

Project Description: The four components of the Mobility Management are 1) One Stop Call Center; 2) Travel Training Program; 3) Countywide In-Person ADA Eligibility Determination; and 4) Intercity Taxi Scrip. The first three have been implemented. Solano TA will now administer the Intercity Taxi Scrip Program and incorporate non-ambulatory service into the program.

Estimated Completion Date: January 2017

Transit Operator: Solano Transportation Authority for all Solano County Operators
(Dixon, FAST, Rio Vista, Soltrans, Vacaville)

Project Title: I-80/I-680/I-780/State Route 12 Transit Corridor Study Update

Project Goal: Develop a service plan and identify capital improvements that will provide faster transit speeds, better service frequencies, and improved connections intra- and inter-regionally to support the future service projections in Solano County. Implement service changes in two phases.

Project Description: The I-80/I-680/I-780/State Route 12 Transit Corridor Study updates the Transit Corridor Studies completed in 2004 and 2006 and addresses current and future travel demand in the corridor, existing service and alternatives for serving the corridor and a recommended phased implementation plan. The Transit Corridor Study not only addresses transit services but also identifies facilities and connection improvements needed to support these services into the future. The Transit Corridor Plan will provide guidance and coordination for future investments in Solano County. Operational changes will be implemented in two phases.

Estimated Completion Date: June 2017

Transit Operator: Solano County Transit (SolTrans)

Project Title: Implement Automatic Call-back System for Paratransit Customers (*NEW*)

Project Goal: Implement an automatic call-back system for Paratransit customers to remind them of appointments in order to reduce the number of no-shows.

Project Description: Implement an automatic call-back system from Trapeze Novus to work with the Trapeze scheduling software to call paratransit customers to remind them of upcoming appointments. This will allow the customer to connect with Dispatch if they need to cancel or reschedule and should reduce the number of no-shows.

Estimated Completion Date: December 2015

Transit Operator: Solano County Transit (SolTrans)

Project Title: Compressed Natural Gas (CNG) Fueling Facility (*NEW*)

Project Goal: Design and Build a compressed natural gas fueling facility at SolTrans' operations and maintenance facility.

Project Description: SolTrans needs to replace their commuter fleet over the next 4 years and has determined that compressed natural gas is the best alternative fuel source at this time. SolTrans will design and build a CNG fueling facility at their Operations and Maintenance Facility to be ready for the new CNG buses that SolTrans will begin procuring later this year. The new CNG buses will increase operational efficiency with less maintenance needed for new buses and lower fuel costs.

Estimated Completion Date: June 2016

Transit Operator: Solano County Transit (SolTrans)

Project Title: Computer Aided Dispatch (CAD)/ Automatic Vehicle Locator (AVL) system

Project Goal: The project's goals include the ability to produce and provide to riders "real-time" predictive bus arrival information, also, the capture and access to a complete spectrum of planning data, ADA compliant visual and audible stop announcements, NTD (National Transit

Database) accepted ridership data (via automatic passenger counters installed at bus doorways) and expanded dispatch to bus communications.

Project Description: An AVL/CAD system will allow real-time monitoring for dispatchers, showing the location of current buses, who is driving, how many passengers are on board, and if the route is on-time, late, early, etc. Planners use the data to identify productive and unproductive segments of routes (using APCs) and segments needing time adjustments. Additional functions of AVL/CAD systems include data communications between bus and dispatch, automatic announcements of approaching bus stops (ADA compliance), interaction with head sign controllers, provision of data to real-time bus arrival systems (LED signs and smartphones), etc. All vehicle information will be compatible with 511.org trip planner and Google Transit.

Estimated Completion Date: January 2016

Transit Operator: City of Vacaville

Project Title: Research Block Party Public Outreach Concept

Project Goal: Increase general public transit ridership

Project Description: Research, survey, discuss with public and local representatives a "block-party outreach" concept similar to a National Night Out event - designed to encourage more ridership on City Coach Transit.

Estimated Completion Date: January 2016

Sonoma County

Transit Operator: City of Petaluma

Project Title: SMART Service Coordination Project (NEW)

Project Goal: Adjust schedules for existing route serving the SMART station to better serve passengers connecting to the train station

Project Description: SMART is anticipated to begin running service in 2016. Petaluma Transit currently serves the Transit Mall adjacent to the station, but adjustments in both the stop location and schedule should be considered in order to provide the best possible service to interagency

riders. With SMART not anticipating to provide funding for local bus transit, extensive analysis will be required to ascertain how much additional SMART-focused service can be provided without reducing service to other routes.

Estimated Completion Date: December 2016

Transit Operator: City of Petaluma

Project Title: Computer Aided Dispatch (CAD)/ Automatic Vehicle Locator (AVL) system

Project Goal: The project's goals include the ability to produce and provide to riders "real-time" predictive bus arrival information, also, the capture and access to a complete spectrum of planning data, ADA compliant visual and audible stop announcements, NTD (National Transit Database) accepted ridership data (via automatic passenger counters installed at bus doorways) and expanded dispatch to bus communications.

Project Description: An AVL/CAD system will allow real-time monitoring for dispatchers, showing the location of current buses, who is driving, how many passengers are on board, and if the route is on-time, late, early, etc. Planners use the data to identify productive and unproductive segments of routes (using APCs) and segments needing time adjustments. Additional functions of AVL/CAD systems include data communications between bus and dispatch, automatic announcements of approaching bus stops (ADA compliance), interaction with headsign controllers, provision of data to real-time bus arrival systems (LED signs and smartphones), etc. All vehicle information will be compatible with 511.org trip planner and Google Transit.

Estimated Completion Date: October 2015

Transit Operator: Santa Rosa

Project Title: Adopt Comprehensive Operational Analysis (COA) and Service Plan

Project Goal: Conduct comprehensive review and analysis of the fixed-route transit system and its efficiency and effectiveness in meeting local and regional travel needs, and identify short, medium, and long-term plans for transit system design and service delivery.

Project Description: The COA and Service Plan will evaluate how well CityBus is positioned to serve the transit markets of today and of the future, and identify both revenue-neutral and growth strategies for increasing the effectiveness and efficiency of the transit system. The project will identify short-term, revenue-neutral actions to improve current operations and effectiveness of the CityBus system, as well as a longer-range roadmap for system development and priorities for future improvements. The COA will identify options for service integration with SMART stations.

Estimated Completion Date: January 2016

Transit Operator: Sonoma County

Project Title: Adopt Transit Asset Management Plan

Project Goal: Better manage transit assets

Project Description: Sonoma County Transit will coordinate with MTC and its regional efforts to adopt a Transit Asset Management Plan for smaller transit operators.

Estimated Completion Date: November 2017



**Metropolitan Transportation Commission
Programming & Allocations Committee
November 4, 2015**

**FY2015 TDA Triennial Operator Performance Audits and
Productivity Improvement Program**

Overview

TDA Audits

- Triennial compliance audits are focused on multi-year trends and performance measures
- Current audit round: GGBHTD, SamTrans, Dixon, NCTPA, Rio Vista, SolTrans, Tri Delta Transit, Vacaville, WestCAT

Transit Sustainability Project (MTC Res. 4060) – Large Operator Performance

- Reduction from baseline of at least one cost metric by 5% by FY2016-17
- Starting in FY2018-19, MTC will link operating and capital funds administered by MTC to progress towards achieving the performance targets

Performance Metrics	
TDA Audit	TSP Large Operator Metrics
Cost Per Vehicle Service Hour	Cost Per Vehicle Service Hour
Cost Per Passenger	Cost Per Passenger
Passengers Per Vehicle Service Hour	Cost Per Passenger Mile
Passengers Per Vehicle Service Mile	
Vehicle Service Hours Per Employee	

Productivity Improvement Program (PIP)

- PIP process incorporates TSP performance metrics and recommendations

MTC FY2015 TDA Triennial Performance Audits

Audit Approach

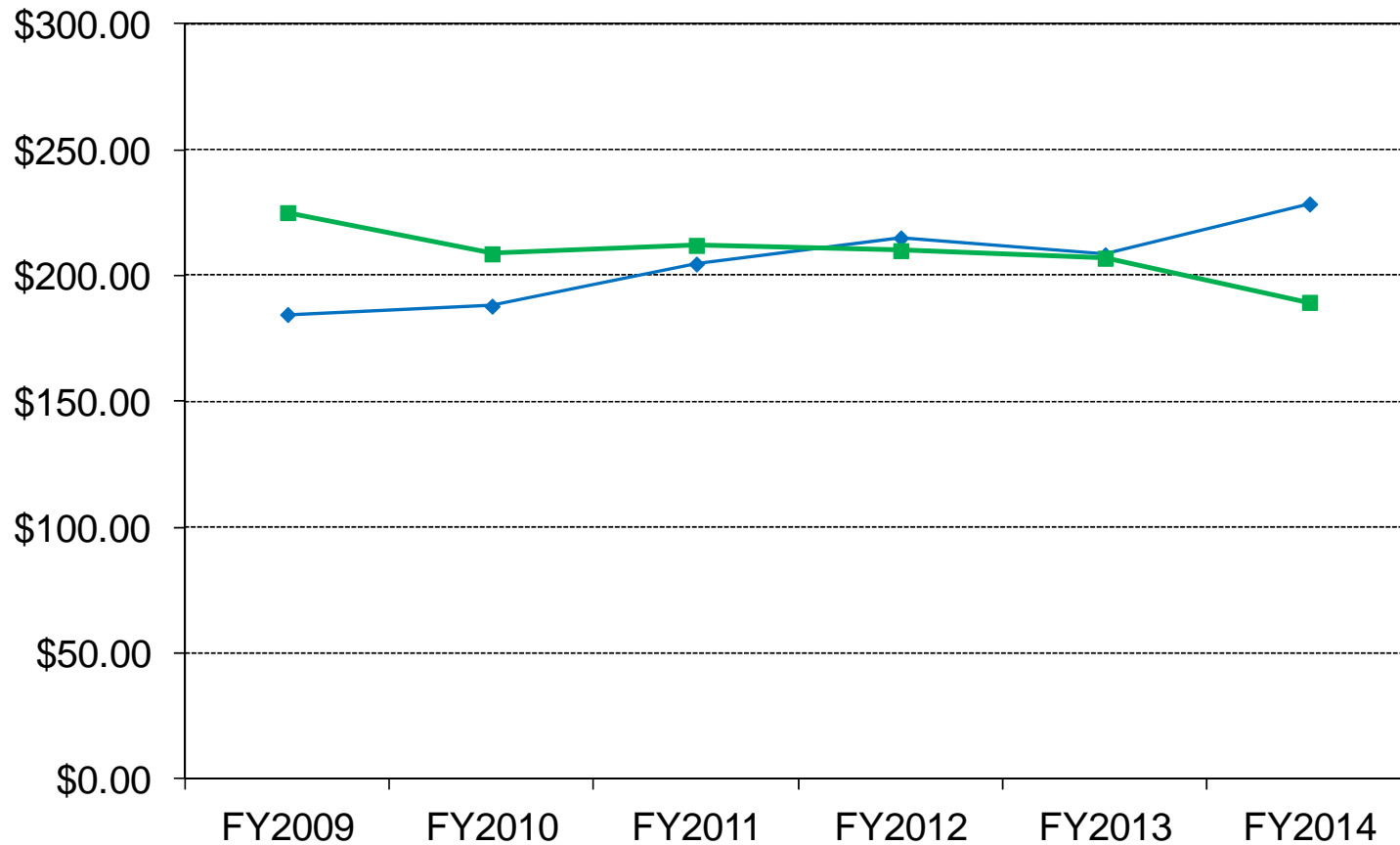
Audit Period

- FYs 2011-12, 2012-13 and 2013-14

Audit Activities

- Review of data collection, management and reporting methods.
- Five TDA performance indicators (six year trend analysis).
- Compliance with statutory and regulatory requirements.
- Review of actions taken to implement prior audit recommendations.
- Conclusions, commentary and recommendations.

Fixed-Route Bus – Larger Operators Cost per Vehicle Service Hour



FY2009-FY2014 Average Annual Change (CPI = 2.5%)	
GGBHTD 4.4%	SamTrans -3.4%

Larger Operators

Cost Per Hour Trends – Last 3 Years

(Fixed Route)

GGBHTD

- **Costs:** Total operating cost increase of 3.0% over the audit period
- **Service:** Total service hour *decrease* of 3.1% over same time period
- **Passengers:** Total *decrease* of 4.3%

Larger Operators

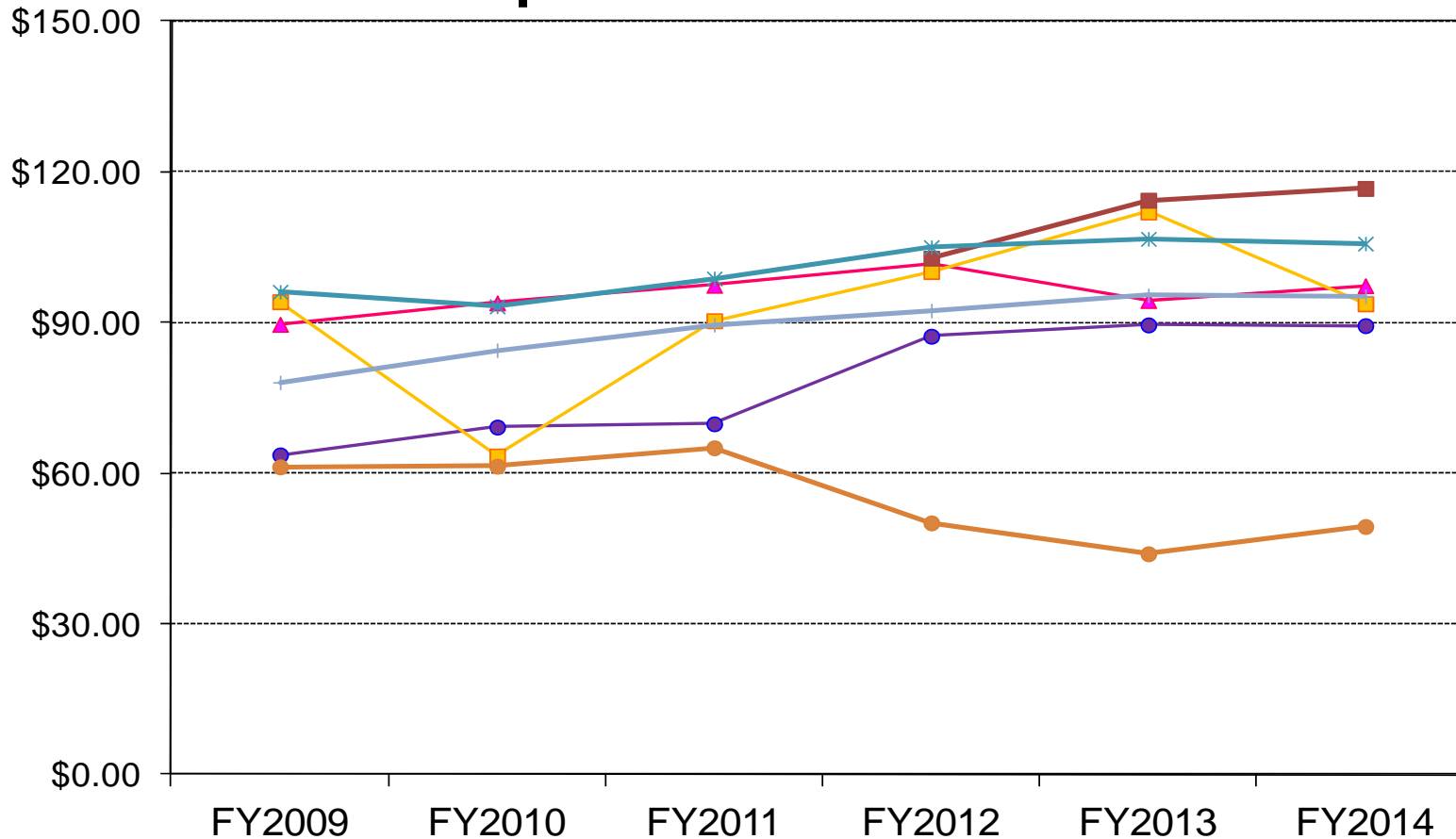
Cost Per Hour Trends – Last 3 Years *continued*

(Fixed Route)

SamTrans

- **Costs:** Total operating cost *decrease* of 5.5% over the audit period
- **Service:** Total increase of 4.7% in service hours over the same period
- **Passengers:** Total decrease of 1.9%

Fixed-Route Bus – Smaller Operators Cost per Vehicle Service Hour



FY2009-FY2014 Average Annual Change (CPI = 2.5%)

Dixon	NCTPA	Rio Vista	SolTrans (a)	Tri Delta	Vacaville	WestCAT
1.7%	7.0%	-0.1%	6.5%	1.9%	-4.2%	4.1%

(a) SolTrans performance is based on three years as compared to a 2.8% increase in CPI between FY2012 and FY2014.

Smaller Operators Cost Per Hour Trends – Last 3 years

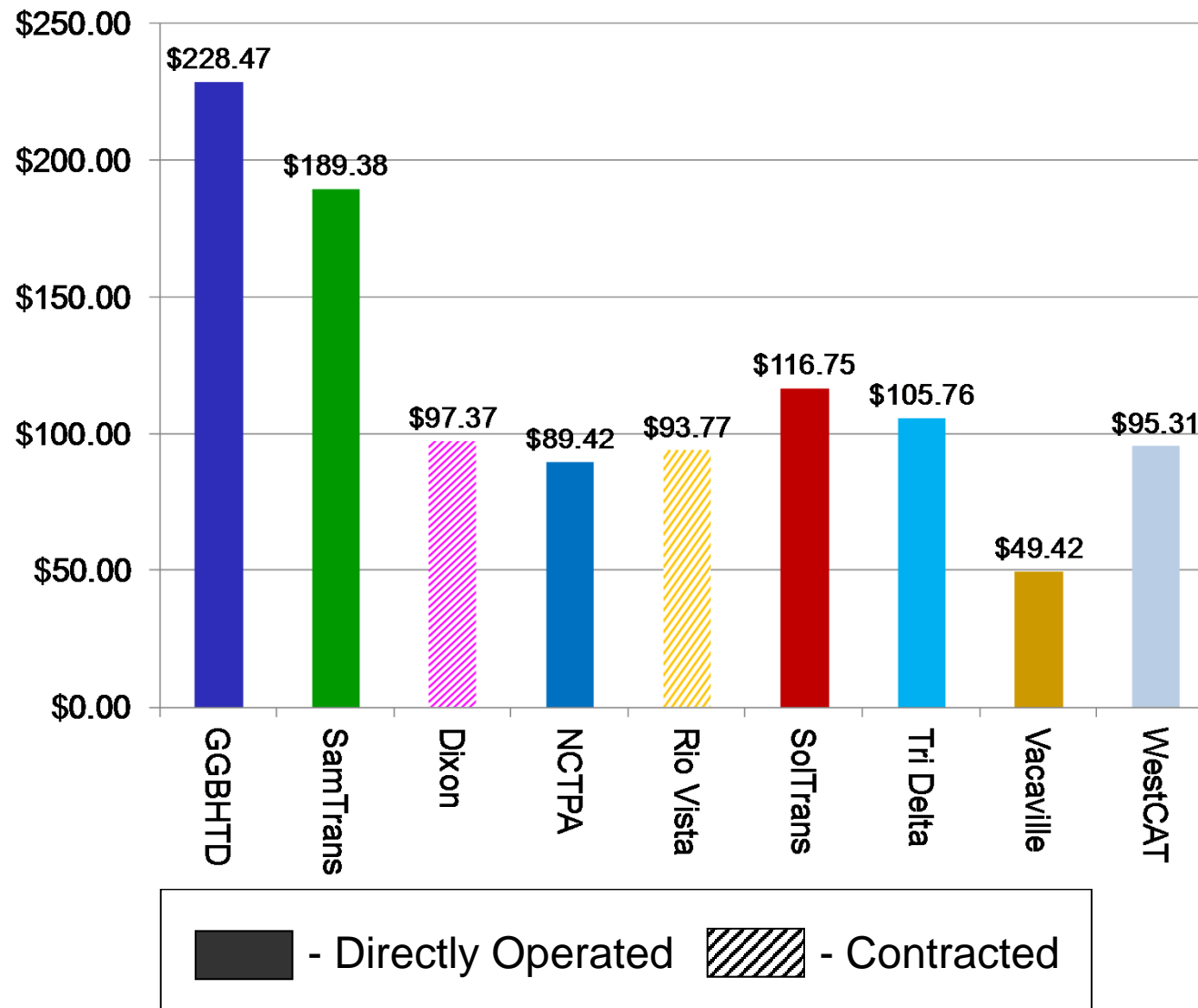
Similar Trends Among Most Operators

- Employee salary and benefit trends reflected labor agreements or city-wide policies.
- Purchased Transportation comprised the largest share of component costs, but average annual increases were generally 2% or less.

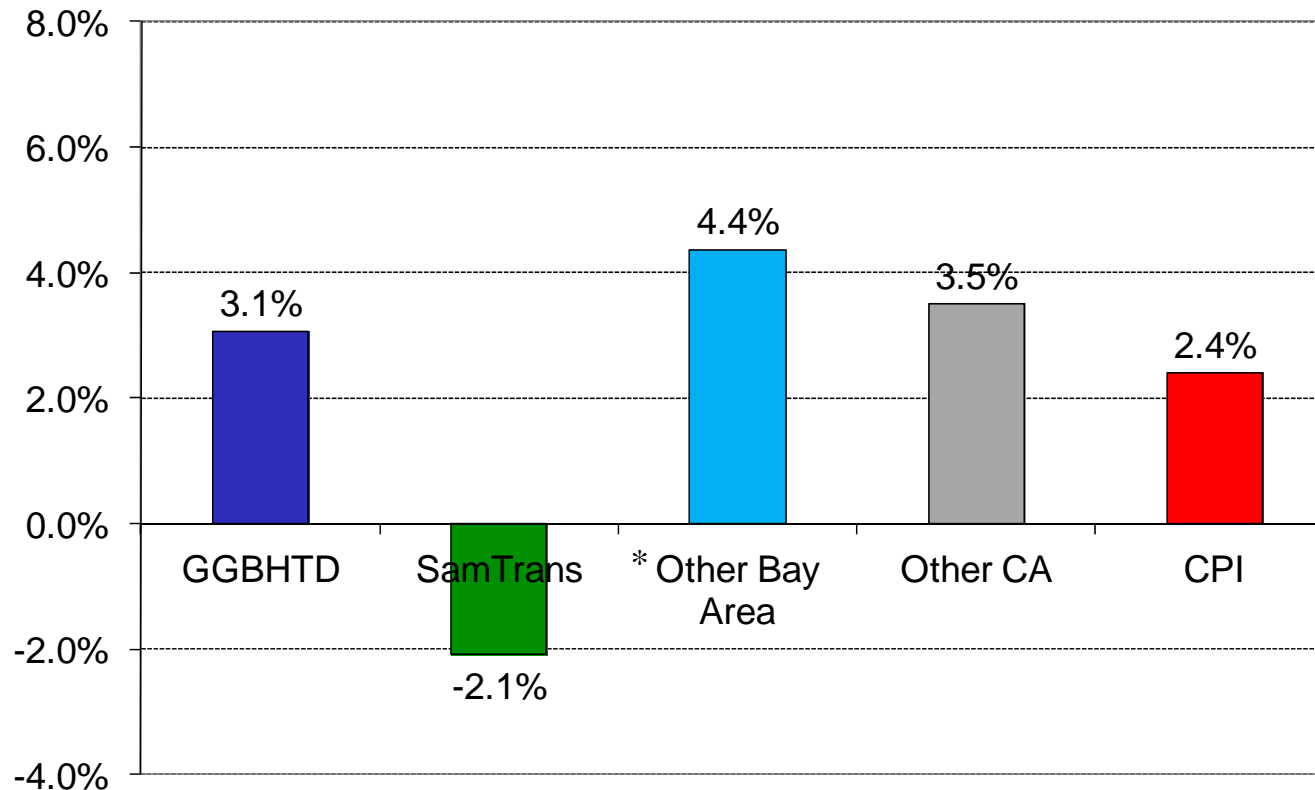
Trends Specific to Individual Operators

- Dixon and Rio Vista: Fringe benefits costs decreased substantially.
- NCTPA: Service restructuring and renegotiated contract terms resulted in 23 percent annual increase in Purchased Transportation costs.
- SolTrans: Fringe benefits costs increased substantially due to start-up costs being phased in; while Casualty/Liability costs decreased as redundant coverage (with contractor) was eliminated.
- Vacaville: In-house labor costs were down 25% annually, but fringe benefits costs increased by 20% annually.

Comparison of Cost per Vehicle Service Hour – Fixed-Route Bus (FY2014)

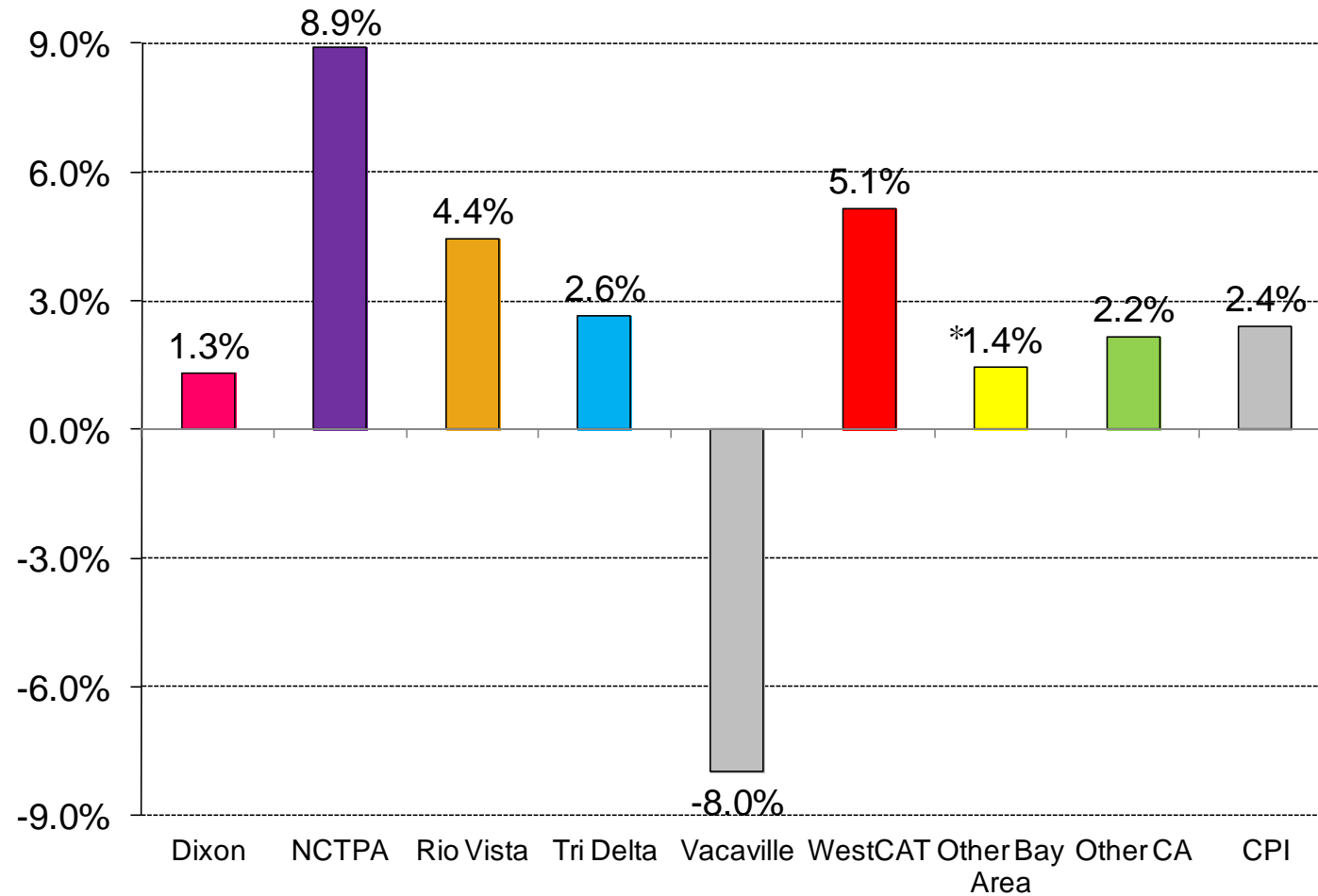


Comparison of Average Annual Change in Cost per Vehicle Service Hour for Larger Bus Operators (FY2009-FY2013)



* "Other Bay Area": AC Transit, CCCTA, SFMTA, and VTA.

Comparison of Average Annual Change in Cost per Vehicle Service Hour for Smaller Bus Operators (FY2009-FY2013)



* "Other Bay Area": FAST, LAVTA, Petaluma, Santa Rosa, SCT, and UCT.

Passengers per Vehicle Service Hour Trends

Fixed-Route Service

Agency	Productivity*	Ridership	Notes
GGBHTD	↔	↓	Small decreases in service and ridership
SamTrans	↓	↓	Small increase in service; ridership decreased
Dixon	↓	↓	Small decrease in service; ridership decreased
NCTPA	↑	↑	Service steady; small ridership increase
Rio Vista	↓	↔	Small increase in service, ridership steady
SolTrans	↑	↓	Decrease in service, small ridership decrease (FY2012-FY2014 only)
Tri Delta	↑	↑	Small decrease in service; small increase in ridership
Vacaville	↑	↑	Increases in service and ridership
WestCAT	↔	↓	Small decreases in service and ridership

**Productivity relates to the number of passengers per service hour and mile.*

Transit Sustainability Project (TSP) and Transit Performance

MTC annually adopts Productivity Improvement Program (PIP) projects in accordance with TDA law. PIP projects derived from:

- Strategic Plans developed by the largest seven operators to achieve performance targets set forth in MTC Resolution 4060
- Service and institutional recommendations set forth in MTC Resolution 4060
- TDA performance audit findings and other agency initiatives



MTC Resolution 4060: Performance Metrics and Targets

- Target: Reduce operating cost per service hour, cost per passenger, or cost per passenger mile by 5% by FY2016-17 and no growth beyond CPI thereafter
- Targets set compared to the highest cost per metric experienced by each agency between 2008 and 2011
- Starting in FY2018-19, MTC will link existing and new operating and capital funds administered by MTC to progress towards achieving the performance targets



MTC Resolution 4060: Performance Metrics and Targets *Cost Per Hour*

Transit Operator	Baseline Highest Year		Most Recent Assessment Year	Percent Change from Highest	FY 2016-17 Target (a)
	Year	Performance	FY2013-14	FY 2013-14	
AC Transit	FY2010-11	\$169.41	\$170.53	0.7%	\$160.94
BART	FY2009-10	\$277.46	\$283.12	2.0%	\$263.58
Caltrain*	FY2010-11	\$345.42	\$459.98	33.2%	\$328.15
GGBHTD	FY2010-11	\$282.33	\$304.83	8.0%	\$268.21
SFMTA	FY2009-10	\$204.61	\$205.12	0.3%	\$194.38
SamTrans	FY2009-10	\$198.40	\$159.37	-19.7%	\$188.48
VTA	FY2010-11	\$185.87	\$188.42	1.4%	\$176.57

* NTD reporting direction to Caltrain varied over reporting period related to shuttle system hours and costs, resulting in a significant increase for FY2014 cost per hour. Caltrain rail service increase for FY2014 compared to baseline year was 5.4%.

Note: shading indicates five percent or greater real reduction in performance
(a) Equals five percent reduction from baseline highest year in FY2013-14 dollars.



MTC Resolution 4060: Performance Metrics and Targets *Cost Per Passenger*

Transit Operator	Baseline Highest Year		Most Recent Assessment Year	Percent Change from Highest	FY 2016-17 Target (a)
	Year	Performance	FY2013-14	FY 2013-14	
AC Transit	FY2008-09	\$5.88	\$5.80	-1.3%	\$5.59
BART	FY2008-09	\$4.86	\$4.32	-11.0%	\$4.62
Caltrain	FY2009-10	\$8.33	\$6.07	-27.1%	\$7.91
GGBHTD	FY2010-11	\$11.76	\$11.61	-1.2%	\$11.17
SFMTA	FY2009-10	\$3.27	\$3.12	-4.5%	\$3.11
SamTrans	FY2010-11	\$8.59	\$8.05	-6.4%	\$8.16
VTA	FY2009-10	\$7.49	\$7.48	-0.2%	\$7.11

Note: shading indicates five percent or greater real reduction in performance

(a) Equals five percent reduction from baseline highest year in FY2013-14 dollars.



MTC Resolution 4060: Performance Metrics and Targets *Cost Per Passenger Mile*

Transit Operator	Baseline Highest Year		Most Recent Assessment Year	Percent Change from Highest	FY 2016-17 Target (a)
	Year	Performance	FY2013-14	FY 2013-14	
AC Transit	FY2009-10	\$2.01	\$1.52	-24.6%	\$1.91
BART	FY2008-09	\$0.39	\$0.33	-15.0%	\$0.37
Caltrain	FY2007-08	\$0.36	\$0.29	-19.3%	\$0.34
GGBHTD	FY2008-09	\$1.20	\$1.06	-12.1%	\$1.14
SFMTA	FY2009-10	\$1.56	\$1.46	-6.2%	\$1.48
SamTrans	FY2010-11	\$1.79	\$1.69	-5.7%	\$1.70
VTA	FY2009-10	\$1.58	\$1.36	-14.1%	\$1.51

*Note: shading indicates five percent or greater real reduction in performance
(a) Equals five percent reduction from baseline highest year in FY2013-14 dollars.*

Performance Measure Progress to Date

- All seven operators on target to achieve 5% reduction in cost per passenger miles
- Cost control, a primary focus of TSP, remains a concern – cost per hour continues to trend up
- All seven operators exhibit improved cost per passenger – but only three meet, or exceed 5% reduction target.

Small Operators: TSP Recommendations and Specific Initiatives

- **Corridor/sub-regional Planning**

- Coordinated Short-Range Transit Planning in Sonoma and Solano Counties
- SMART Integration Study
- Contra Costa Express Bus Study

- **Clipper Implementation**

- 5 operators in FY2014-15: Marin Transit, Fairfield-Suisun Transit (FAST), SolTrans, The VINE, Vacaville City Coach
- 8 operators in FY2015-16: Alameda, Contra Costa, and Sonoma small operators



Small Operators:

TSP Recommendations and Specific Initiatives

- **Transit Asset Management Planning**
 - All agencies submitted information for the Regional Transit Capital Inventory (RTCI)
- **Mobility Management**
 - Solano TA coordinates for entire county
 - Paratransit scheduling changes (Santa Rosa, CCTA, ECCTA, Union City)
- **Operational Improvements**
 - Comprehensive Operational Analysis (LAVTA and Santa Rosa)

