

San Diego Association of Governments

FY10-FY12 Triennial Performance Audit of the North County Transit District (NCTD)

FINAL AUDIT REPORT



In Association With



June 28, 2013

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EXECUTIVE SUMMARY

Transit operators that receive Transportation Development Act (TDA) funds are required to undergo triennial performance audits in the State of California. Triennial performance audits are a requirement for the continued receipt of State TDA funds for public transit under California Public Utilities Code (PUC) Section 99246. In San Diego County, the performance audit is administered by the San Diego Association of Governments (SANDAG). For the FY2010-12 cycle, the audit was prepared by CH2M HILL. This report represents the State-mandated performance audit of North County Transit District (NCTD) for Fiscal Years 2010, 2011, and 2012, the period from July 1, 2009 through June 30, 2012.

The TDA triennial performance audit of NCTD includes evaluations of:

- Compliance with pertinent sections of the Public Utilities Code
- Progress to implement prior performance audit recommendations
- Agency goals and objectives and performance monitoring systems
- Systemwide and functional area performance trends.

The objective of the performance audit is to assess compliance with PUC requirements, identify significant achievements as well as opportunities for improvement, and develop recommendations for short- and long-term efficiency and effectiveness improvements.

NCTD is in compliance with Public Utilities Code (PUC) requirements and the implementation of prior audit recommendations:

- Compliance with PUC Requirements: NCTD is in compliance with PUC requirements.
- Progress to Implement Prior Audit Recommendations: NCTD has meaningfully addressed its three prior audit recommendations. Farebox recovery on SPRINTER increased 27% over the audit period, to 19.2% (up from 15.1%). The COASTER automatic passenger counter Request for Proposals was finished and the resulting procurement will address the recommendation. The third prior audit recommendation on SPRINTER business planning activities has been addressed by NCTD, through bus feeder service changes and working with Universities and large employers to incentivize ridership.

NCTD as an organization is settling after major restructuring and cultural change. The first two years of the audit period corresponded to the “Great Recession” economic downturn, which began to subside during the last year of the audit period. During the first two years, NCTD moved aggressively to overcome these and past fiscal challenges brought on by increased gas prices, the implementation of SPRINTER, and an over-extended bus service.

The privatization of the BREEZE Bus Service began in July of 2010, which gradually ramped up to include the bus and facilities maintenance one year later, represented the biggest change affecting the organization. In so doing, the organization underwent a restructuring and cultural change, to be more flat and streamlined, with a new business model focused on oversight of operations and special projects where as in the past NCTD was a bus operator. NCTD in-house agency staffing levels, with over 500 staff in the prior audit period, were reduced to below 100. This transition resulted in a significant turnover of staff, particularly staff in senior positions. Currently, the majority of senior staff have been in their current jobs for two years or less.

Post restructuring, NCTD is holding the line on bus ridership and has seen increased ridership on rail lines. The Mobility Plan/Comprehensive Operational Analysis from 2011 set the stage for service changes with BREEZE, by consolidating low performing routes and improving connectivity with the rail modes. Overall ridership diminished by over one million riders from 2009 in the first two years of the audit period, a result of the recession and service cuts. For 18 months starting in January 2011, NCTD

conducted a fare decrease for BREEZE, COASTER and LIFT while also increasing service in FY12. The combination, together with an economy and consumer confidence slowly rebounding, yielded a significant jump in total ridership which at the end of FY12 was back at 12 million riders – just shy of the FY09 levels. While BREEZE ridership is still almost 10% below FY09 levels, ridership on the COASTER was up 8.2% and SPRINTER up 10.1%. The agency increased service on SPRINTER (extra early morning trains and extended hours) and on COASTER (new Sunday and holiday service). NCTD also implemented a new brokerage model for demand response, a departure from the prior dedicated fleet model, to achieve greater flexibility and reduce costs. Demand response ridership was up by 8.2% over the audit period.

NCTD has effectively controlled costs during the audit period and can now project balanced budgets. Total operating costs diminished significantly between FY09 to FY11, but increased quickly in FY12 such that the overall net change was negative 0.5% (while the Consumer Price Index, a measure of inflation, increased by 5.6% during the audit period). This, coupled with reductions in output (service hours, service miles) translated into a modest increase in system-wide operating cost per service hour and service mile. However, these system-wide averages conceal two different stories. While Bus/BREEZE unit costs increased about 10% during the audit period, unit costs for the other modes decreased very significantly (SPRINTER: 16%; Demand Response: 15%; COASTER 1%). These highlight NCTD's accomplishment of holding down operating costs during the audit period by thinking outside the box for economies across the board. For example, NCTD negotiated with COASTER's operator to forfeit the normal 3% annual increase for FY10 and reduce consist sizes from five to four. The system-wide farebox recovery ratio stayed flat during the audit period; however, SPRINTER and LIFT showed major increases.

NCTD has advanced multiple initiatives in support of corporate goals. One of the major challenges facing the commuter rail industry has been the implementation of the Positive Train Control (PTC) mandate from the Federal Railroad Administration (FRA). PTC is advanced technology specifically designed to automatically stop or slow a train before certain accidents occur. PTC is designed to prevent train-to-train collisions, derailments caused by excessive speed, unauthorized incursions by trains onto sections of track where repairs are being made and movement of a train through a track switch left in the wrong position. Over the past several years, NCTD successfully addressed it by lobbying for and securing funding (\$87 million), mostly from State and Federal sources. NCTD successfully issued the PTC contract and built the staffing in house to manage the program. NCTD commissioned a new Centralized Traffic Control (CTC) system at the Escondido control center and assumed dispatch responsibilities from Metrolink. NCTD has continued to take advantage of fuel contracts to lock in diesel fuel at below market prices. For Security, NCTD created a Code Enforcement program, leveraging the role of control center technicians. NCTD re-instituted the Sheriff program at the end of the Audit Period, which was disbanded in 2009 as a cost saving measure. NCTD also successfully implemented a variety of projects related to Finance; Technology, IT and Facilities.

SPRINTER suffered a major service shutdown. SPRINTER service was interrupted in March 2013, eight months beyond the end of the audit period. However, the circumstances leading to the shutdown occurred during the audit period and are summarized here. The root cause of the problem was premature wear on the light rail vehicle center truck brake rotors. The wear of the rotors exceeded the limits established by the original equipment manufacturer. Existing preventive maintenance checklists specified intervals for measuring the wear of the rotors. A subsequent review of the inspection forms completed by NCTD's contractor did not identify any issues associated with the premature wear of the rotor. The premature wear of the rotor was identified during a CPUC inspection. NCTD took the responsible action of shutting down the system until the resolution of this issue is achieved to the satisfaction of the respective regulatory agencies. NCTD and its contractors, Veolia and Bombardier have worked with the FRA, FTA, and CPUC to test the use of new split disc rotors to replace the current solid disc rotors that have reached the end of their useful life. The tests have been deemed successful and NCTD and its contractors have procured new split disc rotors for the center trucks for the entire fleet. FRA and CPUC conducted inspections of both vehicles and track infrastructure to support the restoration of SPRINTER operations. As part of these inspections, NCTD and its contractors are submitting the required documents associated with the corrective action plan. The corrective action plan consists of

replacing the defective rotors, implementing improvements to the maintenance procedures, and strengthening NCTD's oversight program. The FRA and CPUC have accepted the plans put forth by NCTD and its contractors related to improved maintenance procedures and strengthening the oversight program. On May 15, 2013 the CPUC issued a letter to NCTD agreeing with the District's request to resume SPRINTER revenue service as of May 18, 2013.

Four recommendations are offered for NCTD's consideration:

- Recommendation 1: Fare policy is complicated and confusing, due to the multiple modes within NCTD and number of other operators connecting with the system (MTS, Metrolink, Amtrak). Recognizing this to be a long term challenge, NCTD should devote resources to work with SANDAG as responsible party for the regional fare policy and its partner operating agencies (Amtrak and Metrolink and MTS) to improve fare simplification and fare integration.
- Recommendation 2: NCTD has recently implemented several contractual practices with valuable performance standards and incentives/disincentives for BREEZE and LIFT. NCTD ought to examine the best provisions within these contracts and apply them to the other modes where applicable in the next audit period.
- Recommendation 3: In light of NCTD's most recent changes to the SPRINTER oversight program reviewed by the CPUC, NCTD should, over the next audit cycle, evaluate the oversight and training processes for identifying, reporting, and mitigating safety issues in a timely manner. NCTD should consider additional staffing resources and the efficacy of the oversight by Operations and by Safety.
- Recommendation 4: Customer satisfaction has been an issue recently for the LIFT service, operating with a new brokerage operating model, for a variety of reasons. NCTD reacted to the problem by instituting contract revisions and a Performance Plan. NCTD ought to carefully track adherence to the Performance Plan for its contractor, through regular reporting out on progress and also with continued customer surveys.

SECTION I: INTRODUCTION

The TDA triennial performance audit of the North County Transit District (NCTD) follows state guidelines. Triennial performance audits are a requirement for the continued receipt of State Transportation Development Act (TDA) funds for public transit under California Public Utilities Code (PUC) Section 99246. The San Diego Association of Governments (SANDAG) is responsible for administering the conduct of performance audits in the San Diego Region. SANDAG has retained CH2M HILL to conduct the performance audit of the North County Transit District (NCTD). This report represents the State-mandated performance audit of NCTD for Fiscal Years 2010, 2011, and 2012, the period from July 1, 2009 through June 30, 2012.

The TDA triennial performance audit of NCTD includes evaluations of:

- Compliance with pertinent sections of the Public Utilities Code
- Progress to implement prior performance audit recommendations
- System-wide performance trends for efficiency and effectiveness
- Functional area performance results
- Opportunities to improve the efficiency and effectiveness of operations

The objective of the performance audit is to identify significant achievements as well as opportunities for improvements, and to provide recommendations for short- and long-term efficiency and effectiveness improvements.

Interviews were conducted with staff responsible for the management and oversight of NCTD services:

Office of the CEO

- Executive Director
- Compliance Officer
- Director PMO/Capital Projects

Operations Division

- Chief Operations Officer
- Deputy COO Operations
- Deputy COO Planning
- Manager of Rail Operations
- Customer Service Supervisor
- Deputy COO/Interim Title VI Officer
- ADA Administrator

PTC Project Construction Division

- Chief Rail Systems Officer

Development Services Division

- Chief Development Services Officer

Information Technology Division

- Chief Technology Officer

Finance Division

- Chief Financial Officer
- Manager of Finance
- Grants Manager
- Manager of Human Resources

- Manager of Contracts and Procurement
- Senior Contracts Administrator

Transit Enforcement & Emergency Preparedness Division

- Chief of Transit Enforcement

Safety Division

- Chief of Safety

Government Affairs & Communications Division

- Chief of Staff

In addition, site visits were conducted at NCTD operations and maintenance facilities (East Division/SPRINTER; West Division/BREEZE, Stuart Mesa Maintenance Facility/COASTER).

The following documents and data were reviewed:

- Various Organization and Staffing Charts
- Form C Quarterly Performance Statistics, FY2009-FY2012
- Financial Audits and State Controller Reports, FY2009-FY2012, and supporting documentation
- National Transit Database Reports, FY2009-FY2012
- SANDAG Coordinated Plan Technical Appendix (2010-14, 2012-16)
- NCTD Budgets, FY2009-FY2012
- Maintenance Plan (2012, 2013)
- California Highway Patrol Terminal Compliance Certifications (2010-12)
- Performance Audit Response, SPRINTER Farebox Recovery Trend (2013)
- Labor Contracts in Effect during the Audit Period
- Service Provider Operating Contracts and Monthly Reports (FY2010-12)
- Year-End Performance Reports
- Mobility Plan Guide (Proposed Service Changes for BREEZE 2011)
- Maps and Brochures Regarding Services Offered
- NCTD Website
- Prior TDA Triennial Performance Audit
- Responses to Prior Performance Audit Recommendations
- Sample Board Meeting Agendas

NCTD provides fixed route bus (BREEZE), commuter rail along the I-5 corridor (COASTER), light rail service from Oceanside to Escondido (SPRINTER), and ADA paratransit services (LIFT) in the northern portion of San Diego County, and operates the SPRINTER light rail line. NCTD serves a population of approximately 850,000 in an area of responsibility that covers about 1,020 square miles. The service area extends from San Diego to the south, the Riverside County line to the northeast, and the Orange County line to the northwest. The service area includes Camp Pendleton as well as unincorporated portions of northern San Diego County.

NCTD hired a new Executive Director in early 2009 at a time of severe financial crisis for the agency. The “perfect storm” was caused by a combination of reduced State grant funding (TDA and STA); a deep recessionary environment; and an over-extended bus system. In Fiscal Year 2009, NCTD projected an annual operating deficit of more than \$24 million by 2014. The privatization of the BREEZE bus system to First Transit became effective July 1, 2010 (BREEZE carries roughly 80 percent of NCTD’s riders). One year later, on July 1, 2011, NCTD completed the second and final phase of the privatization, with the remaining labor classifications transitioning from NCTD to the contractor.

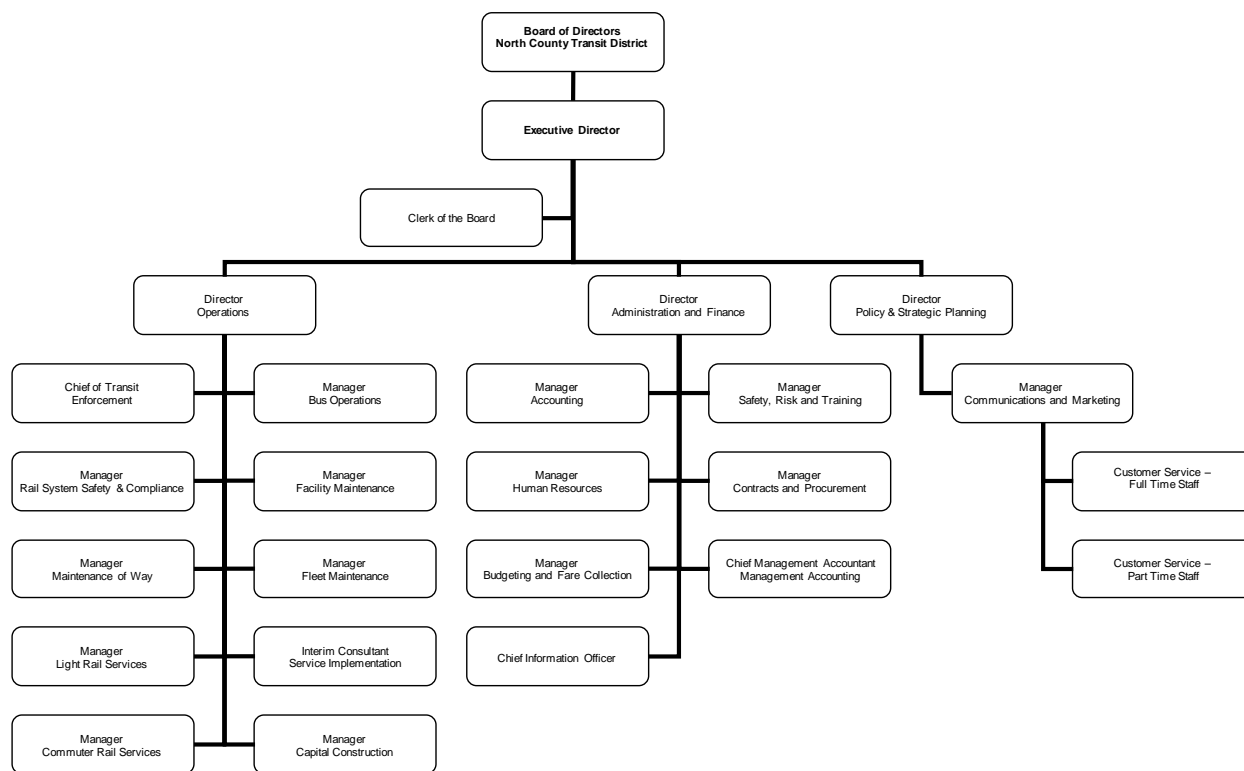
As the new Executive Director began to address the fiscal challenges and structural deficit in the operation, the privatization of BREEZE became the main element, but by far not the only agent of change. Staffing levels were reduced, functions streamlined, and job descriptions consolidated so as to

achieve cost savings. The security contract with the Sheriff’s Department was cut in 2009. NCTD initially reduced bus and rail service, in response to the recommendations from internal service planning work, then gradually added service back as the economy improved and where the demand was the highest. During this Audit Period, the organization underwent a major restructuring and cultural change, to be more flat and streamlined, with a new business model focused on oversight of operations and special projects.

The next several charts show the “before” and “after” organization structures. Exhibit I-1 shows NCTD’s high-level organizational structure just before the beginning of the audit period (June 2009). At that time, NCTD had three main Divisions which were:

- Operations
- Administration and Finance
- Policy and Strategic Planning.

Exhibit I-1: NCTD Organization Chart (June 2009, Beginning of Audit Period)



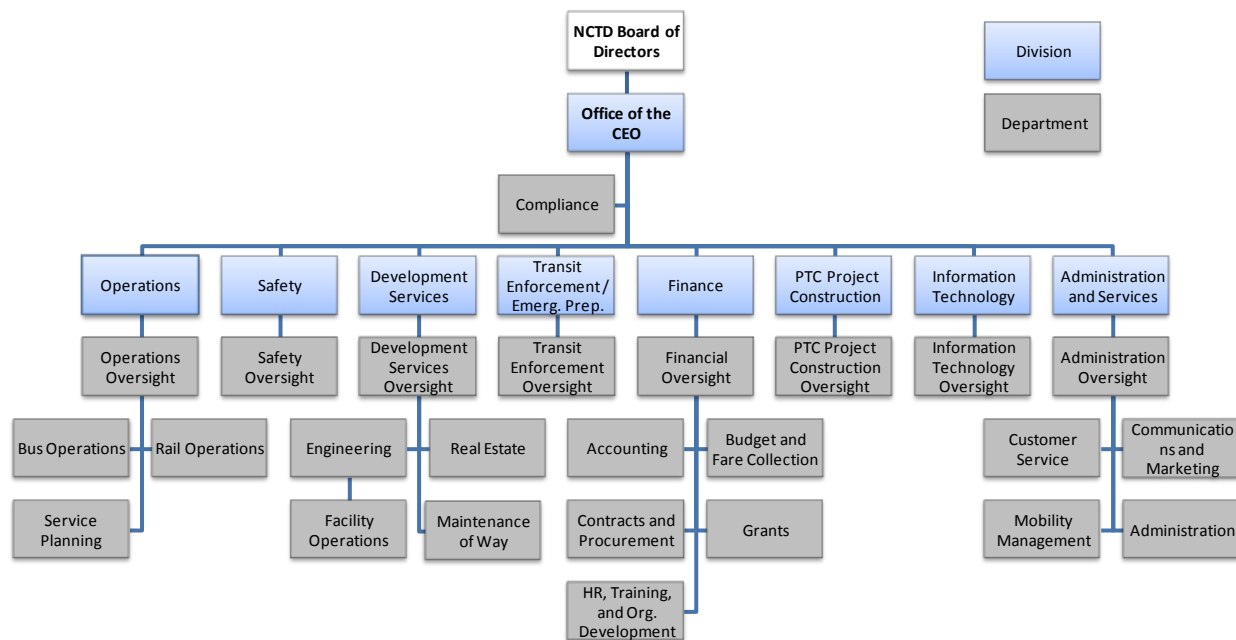
Source: NCTD, May 2009

As the privatization of the bus service occurred, and other changes implemented, NCTD experienced a significant turnover in staff, particularly senior staff. At no time during the audit period were the vacant positions vacant for very long. NCTD’s organization structure went through several changes until it ended as shown in Exhibit I-2 with eight Divisions, all directly reporting to the CEO:

- Operations
- Safety
- Development Services
- Transit Enforcement and Emergency Preparedness

- Finance
- PTC Project Construction
- Information Technology
- Administration and Services.

Exhibit I-2: NCTD Organization Chart (June 2012, End of Audit Period)



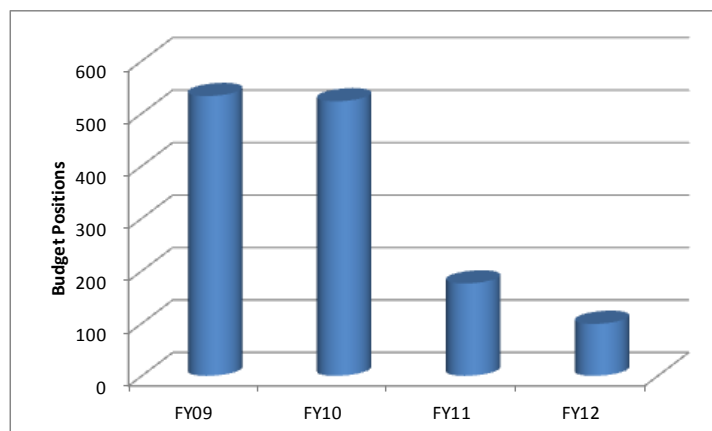
Source: NCTD, June 20, 2012

The organization changes have resulted in significant turnover in staff, particularly for staff in senior positions. The average current tenure for the eight Division Managers is 1.7 years in the position. Three other significant points to note regarding the organizational changes:

- In addition, NCTD enlarged the office of the CEO, to include General Counsel; Compliance; Civil Rights; and Project Management Office.
- Given the size and importance of the \$90 million Positive Train Control (PTC) program, NCTD created a PTC Project Construction Division.
- NCTD created the position and staffed three Management Analysts to strengthen administrative functionality and improve cross-divisional communications and efficiency.

Total staffing levels (Agency and Contracted Staff, together) started at 833 in FY09 and ended at 822 in FY12. This is a modest reduction of 1.3%. The BREEZE total staff count went down, but total staffing levels went up for all of the other modes. The NCTD agency staffing levels, excluding contracted staff, have been reduced from 533 in FY09 to 99 in FY12, as a result of the BREEZE contract and illustrated in Exhibit 1-3.

Exhibit I-3: NCTD Staffing Levels, FY2009-12



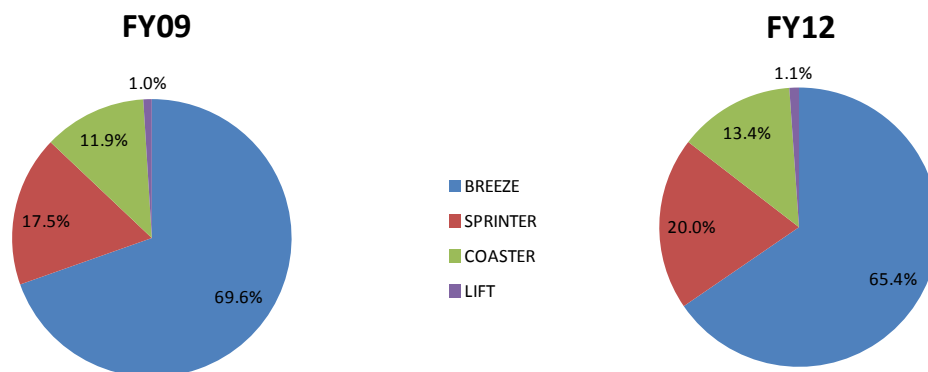
Source: NCTD FY2012 Budget

The restructuring and privatization of the bus service has meant significant service changes for BREEZE, with ridership experiencing a 10% drop at the end of the audit period compared to the three years prior. However, connectivity to the rail modes improved during this period which also saw a maturing of SPRINTER ridership. By the end of the audit period, there were double digit ridership gains for SPRINTER and an 8.2% increase for COASTER. At the beginning of the audit period, the SPRINTER system was just 15 months old, gas prices were hitting their peak and the Great Recession was well under way. NCTD implemented a variety of strategies, including a fare decrease for BREEZE, COASTER and LIFT, to gain consumer confidence and increase ridership. For FY09, NCTD has 12.5 million annual riders. For FY2012, ridership was back to 12 million annual riders after a dip to 11.4 million riders in FY11.

NCTD has effectively controlled costs during the audit period and can now project balanced budgets. Total operating costs diminished significantly between FY09 to FY11, but increased quickly in FY12. The overall net change was negative 0.5% (while the Consumer Price Index, a measure of inflation, increased by 5.6% during the audit period). This, coupled with reductions in output (service hours, service miles) translated into a modest increase in system-wide operating cost per service hour and service mile. However, these system-wide averages conceal two different stories. While Bus/BREEZE unit costs increased about 10% during the audit period, unit costs for the other modes decreased very significantly (Sprinter: 16%; Demand Response: 15%; Coaster 1%). These highlight NCTD's accomplishment of holding down operating costs during the audit period by thinking outside the box for economies across the board. For example, NCTD negotiated with COASTER's operator to forfeit the normal 3% annual increase for FY10 and reduce consist sizes from five to four. The system-wide farebox recovery ratio stayed flat during the audit period; however SPRINTER and LIFT showed major increases.

Mode share for the different modes experienced a change during the audit period. Exhibit I-4 illustrates that the BREEZE bus mode share of total riders has decreased, while the both rail modes, COASTER and SPRINTER, increased in similar proportions. As point of reference, in 2006 BREEZE carried 85% of NCTD's passengers.

Exhibit I-4: NCTD Mode Share, Unlinked Trips



BREEZE, the NCTD's fixed route bus system, carries over 7.9 million passengers annually and about 25,800 weekday boardings. This is less than the 8.7 million riders BREEZE carried in 2009. BREEZE is composed of two service types:

- Corridor: inter-community routes operating along major arterial roads
- Local: routes with frequent stops that operate within local areas.

BREEZE service generally operates from approximately 5:30 am to 11:30 pm, with the service span varying by route. Service frequency typically varies between 30 to 60 minutes, with some 15 minute-headway service. NCTD operated BREEZE services directly only during the first year of the audit period, using two operations and maintenance facilities. The West Division facility is located in Oceanside; the East Division facility is located in Escondido. The first phase of the privatization of the BREEZE Bus Service occurred on July 1, 2010, for operations. The second phase of the privatization occurred one year later, in July 2011, for vehicle and facilities maintenance staff.

In the past, NCTD has structured the BREEZE service to balance coverage and productivity. However, financial pressures experienced over the last two audit periods have impacted NCTD's approach. The District has moved away from the coverage-influenced approach and currently focuses on passenger yield. NCTD continues to implement service changes to achieve higher productivity. More detailed information about the performance of the BREEZE system is presented in Chapter IV, Performance Trends.

COASTER, NCTD's commuter rail line, experienced a 15% drop in ridership due to the recession, but rebounded the two subsequent years and ended up 8.2% higher in FY12 than where it started in FY09. Transit America "TASI", a subsidiary of Herzog, has had this 10-year contract since FY07. TASI operates the trains, maintains the equipment, track, signals and facilities. NCTD is responsible for contract management and oversight. The COASTER runs between the Oceanside Transit Center and San Diego's Santa Fe Depot, with six intermediate station stops.

In FY10, TASI accepted to forfeit a 3% pay increase in a gesture of goodwill to help the agency weather the financial crisis. During the same year, COASTER reduced the standard five car trains to four car trains, as a cost savings measure.

However, in the latter part of the audit period, COASTER began adding service across the board. At the beginning of the audit period, COASTER operated 22 trains on weekdays and eight trains Saturdays. At the end of the audit period COASTER operated 22 trains weekdays (with an increase to 26 trains on Friday nights, seasonally), 12 Saturday trains and eight Sunday/Holiday trains. Today COASTER runs 365 days per year.

Since COASTER began service in 1995, it has experienced significant ridership growth serving in FY12 approximately 1.6 million passengers, with most Park & Ride facilities near or at full capacity. This ridership is equivalent to about 5,600 weekday boardings. NCTD now also handles dispatching functions for COASTER. Ongoing maintenance activities for the COASTER service are performed by Transit America/TASI at the COASTER Stuart Mesa Maintenance Facility, located at Camp Pendleton. Exhibit I-5 provides the COASTER system map.

Exhibit I-5: COASTER System Map



SPRINTER, NCTD's new light rail line, opened March 9, 2008. During the audit period, SPRINTER continued experiencing strong popularity with the public. At the beginning of the audit period, SPRINTER was 15 months old, still very much a new light rail line. Opening of the SPRINTER line was one of NCTD's major accomplishments during the past audit period and the focus during the past three years has been on reaching a steady state for operations and growing ridership.

Ridership, while on the increase during this audit period, has not conformed to pre-recession ridership modeling projections made by SANDAG and NCTD to the Federal Government. In other words, total ridership has not performed to expectations that were set when the project was being developed. Clearly, those plans were made before the Great Recession and bus operation privatization at NCTD. Since that time, SANDAG has adjusted their series 11 ridership model to reflect the lower numbers (now series 12).

SPRINTER operates 18 hours/day and runs east-west between the Escondido and Oceanside Transit Centers, known as ETC and OTC respectively. SPRINTER runs under a temporal-separation shared track use program where SPRINTER utilizes the track for approximately 18 hours/day and freight trains get about six hours per night, up to five nights per week.

SPRINTER has 12 vehicles and is operated by Veolia Transportation with Bombardier as rail vehicle maintenance subcontractor. Veolia manages train operations and handled fare enforcement through June 2010, while Bombardier manages vehicle maintenance. NCTD began managing fare enforcement in July

2010. Both contractors, Veolia and Bombardier, have offices in a shared building along with NCTD. The Herzog contractor who runs COASTER, TransitAmerica, maintains the rail infrastructure of the SPRINTER line. Stations and parking lots are handled by NCTD Development Services staff and their subcontractors.

SPRINTER ridership was mainly flat from FY09 to FY10, then progressively increased through FY12 to reach 2.4 million riders. For the first time in FY12, SPRINTER carried 20% of NCTD riders. This ridership level represents about 7,800 weekday boardings.

NCTD and its operator, TransitAmerica, carefully track Automatic Passenger Counter (APC) data to evaluate load points and standees. Typically SPRINTER runs two car trains during the peak periods, and one car trains off-peak. However, if ridership expands, they can put eight vehicles on four cars into service. They cannot decrease headways since they have a mix of single and double track. Double-tracking the system is being considered for the future, but it would cost approximately \$100M end-to-end. A five-mile extension to the south (Westfield North County Fair Mall) from Escondido has been studied.

The SPRINTER system map is presented in Exhibit I-6.

Exhibit I-6: SPRINTER System Map



The entirety of the SPRINTER service was interrupted in March 2013, eight months beyond the end of the audit period. The circumstances leading to the shutdown occurred during the audit period and are summarized here. The root cause of the problem was premature wear on the light rail vehicle center truck brake rotors. The wear of the rotors exceeded the limits established by the original equipment manufacturer. Existing preventive maintenance checklists specified intervals for measuring the wear of the rotors. A subsequent review of the inspection forms completed by NCTD’s contractor did not identify any issues associated with the premature wear of the rotor. The premature wear of the rotor was identified during a CPUC inspection. NCTD took the responsible action of shutting down the system until the resolution of this issue is achieved to the satisfaction of the respective regulatory agencies. NCTD and its contractors, Veolia and Bombardier have worked with the FRA, FTA, and CPUC to test the use of new split disc rotors to replace the current solid disc rotors that have reached the end of their useful life. The tests have been deemed successful and NCTD and its contractors have procured new split disc rotors for the center trucks for the entire fleet. FRA and CPUC are currently in the process of conducting inspections of both vehicles and track infrastructure to support the restoration of SPRINTER operations. As part of these inspections, NCTD and its contractors are submitting the required documents associated with the corrective action plan. The corrective action plan consists of replacing the defective rotors,

implementing improvements to the maintenance procedures, and strengthening NCTD's oversight program. The FRA and CPUC have accepted the plans put forth by NCTD and its contractors related to improved maintenance procedures and strengthening the oversight program. On May 15, 2013 the CPUC issued a letter to NCTD agreeing with the District's request to resume SPRINTER revenue service as of May 18, 2013.

NCTD's other services include LIFT paratransit services using a variety of contractor-supplied, ADA-certified vehicles as well as FLEX on-demand service in Carlsbad, Encinitas/Solana Beach and Ramona. NCTD transitioned LIFT from a dedicated fleet to a brokerage model in FY11, and ridership has continued to grow.

LIFT is a curb-to-curb shared ride service available to ADA-certified patrons. LIFT serves origins and destinations that are within ¾-mile of an NCTD fixed route, during the same hours as the corresponding fixed route (generally from 5:30 am to 11:30 pm). From FY09 to FY11, NCTD operated LIFT with a dedicated fleet through a contract with Lifeline Community Services, with NCTD providing oversight and administration.

Having examined service delivery and unit cost management concerns for several years, NCTD engaged in a paradigm shift for LIFT. On July 1, 2011, NCTD transitioned the contract to American Logistics Company (ALC). The new model operated by ALC is one where ALC operates as a broker, using taxis, limousine-like vehicles, and other transportation providers to serve the disabled community. NCTD leases three vans to ALC to use in the LIFT program (peak requirement is two vehicles). The vans are maintained by First Transit in the Oceanside facility, alongside with BREEZE vehicles. This shift to a brokerage model is estimated to save \$8.7 million over six years.

FLEX is a demand response system available to anyone, within certain service areas. ALC runs FLEX as a brokerage model as well. ALC leases five cutaway vans from NCTD for this service (peak requirement is three vehicles). One of the biggest challenges for the LIFT operation is handling the peak times for demand (8-10:30am, 2-4pm). There are no denied trips, but on time performance can be affected.

The transition from one business model to the other business model resulted in certain challenges. During the second half of FY2012, on time performance was affected, the number of missed trips increased, complaints increased slightly, and NCTD discovered other operational issues. This all resulted in contract revisions and a performance plan for ALC in October and November 2012 (outside the period of the performance audit).

SANDAG reduced transit fares in the NCTD service area during the audit period, and SANDAG also introduced new fare products. As shown on the next page, COASTER has a distance-based zone fare system, with one-way fares ranging from \$4.00 to \$5.50. One of the big changes made in 2011 was the reduction of the COASTER zones from four to three. Monthly passes are available. Discounts are offered to seniors, disabled patrons and youth.

NCTD has a flat fare structure for the BREEZE and SPRINTER services:

- The base fare was decreased from \$2.00 to \$1.75 in July 2011. Discounts for seniors, disabled patrons, and youth are provided.
- As of the end of the audit period, NCTD was selling a \$5 Regional Day Pass, a \$12 Premium Day Pass and a \$2.25 Senior Local Day Pass.

Exhibit I-7 provides NCTD's current fare structure.

Exhibit I-7: Fare Structure for NCTD Services (as of June 2012)

BREEZE / SPRINTER

CASH

Adult		\$1.75		
Senior / Disabled / Medicare		\$0.75		
ADA Certified		Free		
DAY PASSES				
Adult		\$5.00	Valid on SPRINTER, BREEZE, Trolley & MTS Regular Buses,	
Senior / Disabled / Medicare		\$2.25	Valid on SPRINTER, BREEZE, Trolley, MTS Regular & Premium Express Buses, and COASTER	
Region-Plus Day Pass		\$12.00		
Regional 14-Day Pass		\$43.00	Valid on SPRINTER, BREEZE, Trolley, MTS Regular Buses,	
MONTHLY & 30 DAY PASSES				
SPRINTER / BREEZE		\$59.00	Valid on SPRINTER, BREEZE,	
Regional Regular		\$72.00	Valid on SPRINTER, BREEZE, Trolley, MTS Regular Buses,	
Regional Youth		\$36.00	Valid on SPRINTER, BREEZE, Trolley, MTS Regular Buses,	
Regional Senior / Disabled / Medicare		\$18.00	Valid on SPRINTER, BREEZE, Trolley, MTS Regular Buses,	
CSUSM		\$29.00	Valid on SPRINTER, BREEZE (sold only on campus)	
Palomar College		\$47.00	Valid on SPRINTER, BREEZE (sold only on campus)	
MiraCosta College		\$44.00	Valid on SPRINTER, BREEZE (sold only on campus)	
Premium Regional Passes				
Regional Premium Adult Monthly		\$100.00	Valid on SPRINTER, BREEZE, Trolley, MTS regular and express buses	
Regional Premium Senior/Disabled/Medicare Monthly		\$25.00	Valid on SPRINTER, BREEZE, Trolley, MTS regular and express buses	
Regional Premium Youth Monthly		\$50.00	Valid on SPRINTER, BREEZE, Trolley, MTS regular and express buses	
Regional Premium 14-day Pass		\$60.00	Valid on SPRINTER, BREEZE, Trolley, MTS regular and express buses	
LIFT (ADA service for patrons with disabilities)				
One Way		\$3.50		
Ten Ride Book		\$35.00		
Attendant		Free		
COASTER				
		One Way	Round Trip	
			Monthly & 30 Day Pass	
Adult	One Zone	\$4.00	\$8.00	\$120.00
	Two Zones	\$5.00	\$10.00	\$150.00
	Three Zones	\$5.50	\$11.00	\$165.00

Senior / Disabled / Medicare	One Zone	\$2.00	\$4.00	\$41.25
	Two Zones	\$2.50	\$5.00	\$41.25
	Three Zones	\$2.75	\$5.50	\$41.25
Youth	All Zones			\$82.50

Source: FY2012 Budget

NCTD remains committed to its cost control efforts and is continuing its restructuring of the BREEZE service through the implementation of the Comprehensive Operations Analysis (COA).

The COA, called the Mobility Plan, is being conducted following roughly 18 months of experience with the new SPRINTER line and in the context of the current financial realities. The COA will result in re-routings of bus services, alternative methods of service delivery, use of smaller, more cost-efficient vehicles in some areas, as well as other service adjustments to strengthen service productivity. Stakeholder outreach was a major component of the COA; several meetings were held with community groups, elected officials, businesses, and other stakeholders.

NCTD is actively working to improve rail and paratransit service efficiencies through renegotiation of contracts, consolidation of facilities, and other cost reduction strategies. NCTD is also examining revenue generation strategies through advertising and transit oriented development.

The rest of this performance audit is organized into four sections:

- II. Compliance Review: Assesses NCTD's compliance with specific PUC requirements and discusses the status of prior audit recommendations.
- III. Management Control and Reporting: Examines the management structure and performance monitoring systems in place to help reach NCTD's goals and objectives.
- IV. Performance Trends: Examines systemwide and functional performance trends as well as trends in the major functional areas: operations, maintenance, and planning and administration.
- V. Conclusions and Recommendations: Outlines recommendations and potential implementation strategies for NCTD to capitalize on improvement opportunities.

SECTION II: COMPLIANCE REVIEW

The compliance review assesses compliance with state and local mandates. TDA performance audits include assessments of the operating agency's:

- Data collection and reporting procedures for the five TDA performance indicators required under Sections 99246 (d) and 99247 of the Public Utilities Code
- Compliance with PUC requirements for transit operators
- Progress to implement prior audit recommendations.

NCTD is in full compliance with applicable PUC requirements:

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC Section 99243	Uniform System of Accounts and Records: The transit operator submitted annual reports to the RTPA based upon the Uniform System of Accounts and Records established by the State Controller. Report is due 90 days after end of fiscal year (Sept. 28) for paper filing, or 110 days (Oct. 18) if filed electronically.	Full Compliance	State Controller Report submittal dates: FY10: October 18, 2010 FY11: September 26, 2011 FY12: September 28, 2012
PUC Section 99245	Annual Fiscal Audit: The operator has submitted annual fiscal and compliance audits to its RTPA and to the State Controller within 180 days following the end of the fiscal year (Dec. 27), or has received the appropriate 90 day extension by the RTPA allowed by law.	Full Compliance	Annual fiscal audit submittal dates: FY10: letter of transmittal dated January 28, 2011 FY11: letter of transmittal dated February 1, 2012 FY12: letter of transmittal dated December 14, 2012
PUC Section 99251	CHP Certifications: The CHP has, within the 13 months prior to each TDA claim submitted by an operator, certified the operator's compliance with Vehicle Code Section 1808.1 following a CHP inspection of the operator's terminal.	Full Compliance	CHP certification dates during the audit period for TDA claims made the following fiscal year: FY10: August, 12, 2010 FY11: October 7, 2011 FY12: December 4, 2012
PUC Section 99261	Transportation Planning Agency Regulations: The operator's claim for TDA funds is submitted in compliance with rules and regulations adopted by the RTPA for such claims.	Full Compliance	NCTD submitted its TDA claims and proper documentation to SANDAG for Article 4 and 4.5 revenue each year for FY10, FY11, and FY12. A TDA Claims Checklist is used to indicate compliance with each required element, such as financial/performance reporting forms, resolution of the governing body authorizing the claim, description of service provided, and other attached exhibits.

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC Section 99266	<p>Budget Changes: The operator's operating budget has not increased by more than 15% over the preceding year, nor is there a substantial increase or decrease in the scope of operations or capital budget provisions for major new fixed facilities unless the operator has reasonably supported and substantiated the change(s).</p> <p>Source: State Controller Reports (including specialized and non-specialized service), minus depreciation</p>	Full Compliance	FY10: - 3.4% FY11: - 2.3% FY12: 2.3%
PUC Section 99247	<p>Data Definitions: The operator's definition of performance measures are consistent with Public Utilities Code Section 99247, including (a) operating cost, (b) operating cost per passenger, (c) operating cost per vehicle service hour, (d) passengers per vehicle service hour, (e) passengers per vehicle service mile, (f) total passengers, (g) transit vehicle, (h) vehicle service hours, (i) vehicle service miles, and (j) vehicle service hours per employee.</p>	Full Compliance	NCTD operating statistics are collected and performance measures are calculated in accordance with PUC requirements.
PUC Sections 99268.2 99268.3 99268.4 99268.5 99269	<p>Requirement – Revenue Ratios: Operator has maintained a ratio of fare revenues to operating costs at least equal to: 20% for urban areas, 10% for non-urban areas, 10% for services for elderly and handicapped persons. For NCTD, the systemwide ratio shall be not less than the ratio achieved in FY1979 (18.8%). For ADA Paratransit Service, the ratio must be 10.0%</p> <p>Source: Comprehensive Annual Financial Report</p>	Full Compliance	Farebox Recovery Ratios Systemwide: FY10: 23.0% FY11: 23.6% FY12: 23.8% Farebox Recovery Ratios for ADA Paratransit Service: FY10: 12.8% FY11: 13.5% FY12: 15.7%
PUC Section 99271	<p>Employee Retirement System: The current cost of the operator's retirement system is fully funded with respect to the officers and employees of its public transportation system, or the operator is implementing a plan approved by the RTPA, which will fully fund the retirement system for 40 years.</p>	Full Compliance	NCTD offers a defined benefit pension through an independent contract with the California Public Employees' Retirement System (CalPERS). The Comprehensive Annual Financial Report provides the current cost of the retirement system.
CAC Section 6754(a)(3)	<p>Required Findings: If the operator receives state transit assistance funds, the operator makes full use of funds available to it under the Urban Mass Transportation Act of 1964 before TDA claims are granted.</p> <p>Source: Comprehensive Annual Financial Report</p>	Full Compliance	The two primary sources of Federal aid are FTA 5307 and FTA 5309. During the audit period, NCTD received both federal operating and capital grants:

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
			FY 2010: Operating (\$17,162,048) Capital (\$11,264,117) FY 2011: Operating (\$17,367,307) Capital (\$15,188,844) FY 2012: Operating (\$12,475,024) Capital (\$8,128,838)

NCTD has taken appropriate steps to implement the three prior audit recommendations:

Prior Audit Recommendation #1: Develop strategies to improve farebox recovery on SPRINTER.

Compliance Finding: Completed

NCTD Actions: NCTD has taken several steps to implement this recommendation, resulting in a 27% increase in the SPRINTER farebox recovery. The ratio went from 15.1% in FY09 to 19.4% in FY12. NCTD's actions during the audit period included:

- First, NCTD eliminated SPRINTER's all day pass in FY10, except for senior/disabled/ Medicare customers
- NCTD restructured fares on BREEZE, COASTER and LIFT in July 2011. However, SPRINTER's basic fare stayed the same at \$2.00. The fare restructuring was accompanied by the BREEZE service restructuring conducted through NCTD's Comprehensive Operations Analysis. This, combined with new dedicated efforts in marketing on SPRINTER, helped boost ridership, particularly in FY12.
- NCTD worked with Veolia Transportation to reduce inventory and thus lower costs.

Prior Audit Recommendation #2: Continue updating the COASTER passenger counting methodology.

Compliance Finding: In Progress (Expected to be complete in Fall 2013; thus is dropped from this audit's list of recommendations.)

NCTD Actions: NCTD has taken or is currently taking the following steps to implement this recommendation:

- NCTD has taken steps to address this recommendation by developing a Request for Proposals (RFP) for a new automatic passenger counting system on COASTER. The RFP was issued in April 2012 but was later cancelled. The decision to re-procure the COASTER Automatic Passenger Counters was based on the following
 - The need to improve the scope of work to ensure the ultimate responsibility for implementing the APC system was allocated to the contractor; and
 - Ensuring there were provisions for ongoing maintenance.

As a result, NCTD modified the terms and reissued the RFP in the Spring 2013.

- In the meantime, NCTD continues to rely on manual counts which are performed on Sorrento Valley and Old Town (100% checks) and randomly elsewhere.

Prior Audit Recommendation #3: Continue efforts to implement prior audit recommendations, in particular business planning activities to guide service delivery strategies in the post SPRINTER service environment.

Compliance Finding: In Progress.

NCTD Actions: NCTD has taken or is currently taking the following steps to implement this recommendation:

- With the recommendations from its Comprehensive Operational Analysis, NCTD restructured its BREEZE network to focus on passenger yield over total coverage. Feeder service to the SPRINTER line was improved through new or restructured service (e.g., routes 325, 320X, 315, 332, 353, 347). Changes became effective in Fall 2011 and others in early 2012.
- NCTD tracks performance for each of its services relative to specified performance objectives, and reports summary performance data to its Board on a quarterly basis. The performance indicators included in these summary reports include passenger trips, revenue service hours, farebox recovery, and subsidy per passenger.
- The original SANDAG ridership projections in series 11 model forecasted significant development activities near the 15 SPRINTER stations, with ridership forecasts upwards of 11,000 boardings per weekday. The series 11 model also did not forecast the impacts of the great recession which occurred soon after SPRINTER began operations. SANDAG has subsequently revised projections in series 12 model which accounts for the suppressed ridership resulting from the recession and lack of surrounding station development. Series 12 model forecasted SPRINTER ridership below 7,000 weekday boardings, which have been met and surpassed with nearly 7,800 SPRINTER boardings per weekday.” (FY12)
- NCTD recognizes the major ridership potential within the corridor, with five universities and major employment centers, notably health care. Student passes are available for the universities, and the ongoing challenge for the two target groups (university students and health care workers) is to both market/inform and incentivize potential customers in the corridor.

SECTION III: MANAGEMENT CONTROL AND REPORTING

The California State Legislature authorized the creation of NCTD in July 1975 to plan, construct and operate public transit systems in North San Diego County. The agency consolidated the existing Oceanside and Escondido bus companies. Its nine member Board of Directors comprises eight city council representatives from the member cities in North San Diego County as well as one representative from the San Diego County Board of Supervisors, and the Board oversees the organization's operations for the public. Beginning in 2002, Senate Bill 1703 transferred responsibility for planning, programming, and project development and delivery to SANDAG. NCTD's executive director, appointed by the board, is responsible for day-to-day management of the agency.

As a result of SB1703, SANDAG assumed responsibility for transit planning, programming and construction for the San Diego region. SANDAG is also responsible for preparing the Regional Short Range Transit Plan (RSRTP), which is intended to provide a regional framework for consolidated transit system development over a five-year period. NCTD no longer prepares its own Short Range Transit Plan (SRTP). Rather, NCTD participates in the RSRTP as well as in other regional transit planning processes as a Task Force member. The consolidated regional planning process ensures a greater focus on regional mobility throughout San Diego County.

NCTD's internal planning happens primarily through the budget process and the ongoing operations in the Service Planning department. Annually, the agency develops its budget to match its overarching goals within its financial constraints. The agency also updates its Capital Improvement Program every year as part of the budget process. More long range planning is a part of the Regional Transportation Plan authored by SANDAG, as well as a function of the NCTD's Service Planning and Policy and Strategic Development divisions. Service Planning in particular is responsible for studying major changes to NCTD's service and major capital investment opportunities that will affect how the agency delivers service.

NCTD operates by segmenting its budget into two major divisions – operating (with its Enterprise Fund) and capital (with its Capital Improvement Program). The budget development process is concentrated mainly over the course of the winter and is a major planning opportunity for the organization. Once the budget is approved by the Board in June, it is incorporated into the accounting system, where it can be compared with actual performance throughout the fiscal year. Changes can be made to the budget through budget transfers or Board approved amendments. Budget transfers do not change the total appropriated amount but only move funds between budget items. Budget amendments adjust the total budget amount and require the Board's approval.

NCTD uses the JD Edwards financial management system which allows the agency to closely track expenditures and respond to trends quickly. The system is well integrated so that NCTD managers are able to generate reports relatively easily with robust operating data. Staff report the system stores data very well and there are no issues with data integration. The agency's high quality reporting system has helped NCTD to better weather its fiscal challenges through better forecasting, identifying more opportunities for efficiencies, and responding to ongoing business needs. Because NCTD delivers many of its services through contractors, the agency has integrated its contractors into its reporting systems. The agency receives daily, weekly, monthly, quarterly, and annual reports which document level of performance and monitoring dictated by NCTD's contracts.

NCTD's management also provides monthly and quarterly reports to the Executive Management team and the Board of Directors:

- Financial reporting: A monthly budget variance report, prepared with input from the departments, is reviewed by the Executive Team, including the CEO and the CFO. On a quarterly basis, the report is augmented to include a budget forecast and presented to the Board.
- Functional performance reporting: Departments have developed monthly performance reports that include data specific to their functions and responsibilities. Comprehensive reports are

prepared by fleet maintenance, facilities maintenance, bus operations and commuter rail. The Bus Services Report, for example, provides detailed statistics and trend analyses on service quality (detours, route changes, customer comments, missed trips), cost drivers (attendance and overtime trends), service reliability (schedule adherence), system safety (accidents), and budget performance.

- Quarterly performance reporting: The NCTD Board receives performance data through the quarterly Performance Report. For each mode, this report provides a detailed overview of service delivery (revenue hours and miles), service effectiveness (boardings, boardings per hour, ridership per capita), service efficiency (cost per hour and boarding, fares and subsidies per boarding, farebox recovery, subsidy and cost per passenger mile), service quality (customer comments, on-term performance, roadcalls and roadcall intervals), and safety performance (accident rates). Quarterly Performance Reports do not report performance against departmental performance goals.

In the past several years, NCTD has focused more on improving its externally oriented systems, such as the website and document sharing systems. NCTD also rolled out Rail Docs during the audit period, a web based reporting tool where the Federal Railroad Administration can see compliance status immediately. The agency also has plans to allow vendors to register their information to receive solicitations automatically.

NCTD's Contracts and Procurement team plays an important role in the organization. The department maintains compliance as a major priority and must ensure that contracts meet the requirements of the funding sources as well as NCTD's own requirements. Now that NCTD has outsourced all its transit operations functions, Contracts and Procurement must focus more on compliance and oversight issues. The team also works with the risk management team and NCTD's legal counsel to evaluate risks and oversee the contracting process.

SECTION IV: PERFORMANCE TRENDS

This section of the report provides results of the analysis of TDA and functional performance indicators. The review of TDA performance indicators identifies system-wide trends to assess the overall efficiency and effectiveness of NCTD. Functional area performance trends are also examined by mode (i.e., fixed route bus, commuter rail, paratransit and light rail) to provide additional clarification of performance results.

The TDA performance indicators are as follows:

- Operating Cost per Service Hour: measure of cost efficiency
- Operating Cost per Passenger: measure of cost effectiveness
- Passengers per Service Hour: measure of service productivity
- Passengers per Service Mile: another measure of service productivity
- Vehicle Service Hours per Employee Full-Time Equivalent (FTE): measure of labor productivity.

Most primary information for this analysis was extracted from the SANDAG Quarterly Schedules of Base Statistics (i.e., Form C), which break out performance data by mode. Where appropriate, information from the National Transit Database (NTD) reports was also used to supplement the analysis of functional area trends, as well as the CAFRs, annual Bus Operations Performance Reports, and the annual Fleet Maintenance Plans. The performance trends cover the period from FY10 through FY12, with FY09 used as a base year to provide a point of reference for the analysis.

IV-1. Systemwide Performance

During the audit period, passenger yields diminished and increased again to finish about 4% below the base year with the structural changes affecting BREEZE. System vehicle service hours and miles similarly diminished. NCTD managed cost efficiency and cost effectiveness increases below inflation. Service productivity improved slightly, but labor productivity (i.e., service hours per FTE) diminished slightly.

Exhibit IV-1 shows systemwide TDA performance indicators. The data reflects impacts of the economic recession; restructuring of BREEZE; as well as NCTD's focus on restoring service and more productive service provision in FY12.

Exhibit IV-1: System-Wide TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operating Costs	\$76,386,086	\$74,087,212	\$71,930,026	\$75,978,754	-0.5%
Unlinked Passengers	12,568,151	11,333,866	11,439,135	12,082,052	-3.9%
Vehicle Service Hours	544,678	507,361	495,661	519,721	-4.6%
Vehicle Service Miles	8,872,982	8,191,335	8,222,892	8,346,229	-5.9%
Employee FTEs	654	590	600	632	-3.4%
Operating Cost per Service Hour	\$140.24	\$146.02	\$145.12	\$146.19	4.2%
Operating Cost per Passenger	\$6.08	\$6.54	\$6.29	\$6.29	3.5%
Passengers per Service Hour	23.07	22.34	23.08	23.25	0.7%
Passengers per Service Mile	1.42	1.38	1.39	1.45	2.2%
Service Hours per Employee FTE	833	860	826	822	-1.3%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database. Employee full-time equivalents (FTEs) from SANDAG Form C reports.

The following findings are based on Exhibit IV-1:

- The most important trend of the audit period was the 0.5% reduction in operating costs from FY10 to FY12, a rate far below the 5.6% rise in the CPI. As point of comparison, operating costs had

- risen 20.5% during the FY07-09 audit period. The decrease is the result primarily of BREEZE contract; however also reflects other cost containment strategies pursued by NCTD.
- The data shows a 3.9% decrease in ridership during the audit period. However, this masks a close to 10% decrease from FY09 to FY10, as the recession was felt the strongest. NCTD began restructuring the bus service and contract operations began in July 2010.
- During the audit period, vehicle service hours fell by 4.6% and vehicle service miles fell by 5.9%. While this reflects mostly bus service reductions, NCTD also reduced the COASTER vehicle miles through train size reductions (e.g., 4-car trains in FY10, instead of 5-car trains).
- During the three years, the operating cost per service hour increased 4.2%, while the operating cost per passenger increased 3.5%. These modest increases are below the 5.6% Consumer Price Index increase for the same period.
- In terms of NCTD’s service productivity, passengers per service hour were almost flat (to 23.25, or a 0.7% increase), and passengers per service mile increased slightly (to 1.45, a 2.2% increase). These numbers reflect the new baselining of the service, as ridership was beginning to pick back up at the end of the audit period.
- Service hours per FTE dropped by 1.3%. The numbers reflect a drop both in service output, but also of total staff (NCTD plus contracted).

The next table showcases Revenue Performance. Systemwide, similarly to operating costs, revenue declined slightly during the audit period, before climbing up again and finishing flat for the three year period. The systemwide farebox recovery ratio was unchanged at 23.9%, and this reflected strong gains for SPRINTER and demand response, combined with reductions for BREEZE and COASTER. This is shown in Exhibit IV-2.

Exhibit IV-2: Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operating Costs	\$76,386,086	\$74,087,212	\$71,930,026	\$75,978,754	-0.5%
Farebox Revenues	\$18,258,383	\$17,092,485	\$17,034,369	\$18,169,760	-0.5%
Net Cost	\$58,127,703	\$56,994,727	\$54,895,657	\$57,808,994	-0.5%
Unlinked Passenger Trips	12,568,151	11,333,866	11,439,135	12,082,052	-3.9%
Farebox Recovery Ratio	23.9%	23.1%	23.7%	23.9%	0.0%
Average Fare per Passenger Trip	\$1.45	\$1.51	\$1.49	\$1.50	3.5%
Net Cost per Passenger Trip	\$4.63	\$5.03	\$4.80	\$4.78	3.5%
Farebox Recovery, Fixed Route Bus	20.8%	19.9%	20.0%	19.5%	-6.1%
Farebox Recovery, Commuter Rail	42.4%	40.0%	39.5%	39.5%	-6.9%
Farebox Recovery, Light Rail	15.1%	16.2%	18.3%	19.2%	27.2%
Farebox Recovery, Demand Response	12.8%	12.8%	13.5%	16.0%	25.0%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database

Main findings from Exhibit IV-2 are as follows:

- The farebox recovery ratio for NCTD services in total was completely flat at 0% during the audit period, finishing at 23.9% for FY12. NCTD’s farebox recovery exceeds the 20% TDA requirement for fixed route operators.
- As a result of the various fare changes, the average fare per passenger trip was 3.5% higher than in FY09, at \$1.50 versus \$1.45, though it barely changed year to year between FY10 and FY12. NCTD implemented a fare decrease for BREEZE, COASTER and LIFT, in an effort to increase ridership.
- The net cost per passenger trip increased by the same amount, by 3.5% over the audit period.

- The other major take-away from the Exhibit concerns farebox recovery. NCTD was successful in greatly boosting the farebox recovery ratio for SPRINTER from 15.1% to 19.2%. This was one of the recommendations from the prior performance audit. Equally impressive was the improvement of the farebox recovery ratio for demand response, from 12.8% to 16.0%. However, farebox recovery diminished for both BREEZE and COASTER, by 6.1% and 6.9% respectively. These numbers reflect the base operating cost, compared to somewhat reduced ridership.

IV-2. Fixed Route Bus Service Performance

FY11 was a watershed year for BREEZE with the beginning of the new contract to First Transit on July 1, 2010, the first day of the FY2011 Fiscal Year. Statistics should be interpreted with this milestone year as a new “baseline”. With the changes, NCTD effectively put a lid on rapidly escalating operations costs and declining measure of performance experienced in prior audit cycles.

In addition to the change in governance, NCTD also implemented recommendations from the comprehensive operations analysis (COA) update to better streamline bus service, focusing more on inter-community routes and rail feeder routes along major arterial roads. NCTD was also subject, during the audit period, to the lasting effects of the Great Recession. In fact, many at NCTD today feel the agency is still in a recovery period in 2013.

During the audit period, NCTD focused on bolstering its SPRINTER service as a backbone of high quality service serving the growing Oceanside-Escondido corridor and commute shed, and in particular feeder routes for this service. SPRINTER was first introduced in 2008.

The BREEZE service focused on improved efficiency and productivity during the audit period, but lost ridership due to service cuts and the economic downturn. Staffing levels were reduced. This is shown in Exhibit IV-3.

Exhibit IV-3: TDA Performance Indicators for NCTD Fixed Route Bus Service

Verified TDA Statistics & Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operating Costs	\$41,045,432	\$41,987,274	\$39,400,500	\$41,009,341	-0.1%
Unlinked Passengers	8,747,458	7,825,176	7,722,646	7,905,588	-9.6%
Vehicle Service Hours	425,029	396,072	381,842	391,500	-7.9%
Vehicle Service Miles	5,745,711	5,339,331	5,244,849	5,237,788	-8.8%
Employee FTEs	491	429	438	432	-12.0%
Operating Cost per Service Hour	\$96.57	\$106.01	\$103.19	\$104.75	8.5%
Operating Cost per Passenger	\$4.69	\$5.37	\$5.10	\$5.19	10.6%
Passengers per Service Hour	20.58	19.76	20.22	20.19	-1.9%
Passengers per Service Mile	1.52	1.47	1.47	1.51	-0.9%
Service Hours per Employee FTE	866	923	872	906	4.7%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database. Employee full-time equivalents (FTEs) from SANDAG Form C reports.

Main findings from Exhibit IV-3 are as follows:

- The audit period can be characterized by a new baselining of the BREEZE ridership. NCTD’s restructuring of service in response to dropping revenue along with reduced demand from the economic downturn combined to reduce BREEZE’s passenger trips by 9.6% during the audit period.

- NCTD's reduced BREEZE operating costs 0.1% over the audit period, and 4% from FY10 to FY11. BREEZE operating costs climbed back to just over \$41 million in FY12, after a significant drop to \$39.4 million in FY11.
- Operating cost per passenger grew by 10.6% during the audit period, from \$4.69 in FY10 to \$5.19 in FY12. Operating cost per service hour grew by 8.5%, from \$96.57 to \$104.75. While both of these are higher than the 5.6% CPI increase, they also reflect the service restructuring that resulted in a 7.9% and 8.8% decrease in vehicle service hours and miles, respectively. Even if costs are held down, with lower output, cost efficiency and effectiveness are affected.
- Passengers per service hour declined slightly during the audit period: 1.9%. The other measure of passenger yield declined as well: passengers per service mile declined 0.9%. As several other metrics, these measures are impacted not only by the service restructuring, but also by the lingering effects of the recession.
- The measure of employee productivity, service hours per employee FTE, increased quite a bit, by 4.7%.

NCTD significantly reduced its BREEZE operating cost during the audit period, by over 12 percent. Most of the metrics for Operations reflect a decrease in service output from the base year. Exhibit IV-4 provides a variety of additional transportation performance indicators for fixed route bus service:

Exhibit IV-4: NCTD BREEZE Operational Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operations FTEs	260	214	270	289	11.2%
Total Operating Costs	\$24,027,723	\$24,045,744	\$19,901,162	\$21,020,913	-12.5%
Vehicle Service Hours (VSH)	425,029	396,072	381,842	391,500	-7.9%
Vehicle Service Miles (VSM)	5,745,711	5,339,331	5,244,849	5,237,788	-8.8%
Total Vehicle Hours	457,508	419,667	406,071	423,432	-7.4%
Total Vehicle Miles	6,317,053	5,803,083	5,755,243	5,886,371	-6.8%
Unlinked Passenger Trips	8,747,458	7,825,176	7,722,646	7,905,588	-9.6%
Passenger Miles	43,794,078	38,882,142	38,831,521	37,257,148	-14.9%
VSH per Operations FTE	1,635	1,851	1,414	1,355	-17.1%
VSM per Operations FTE	22,099	24,950	19,425	18,124	-18.0%
Service Miles per Service Hour	13.5	13.5	13.7	13.4	-1.0%
Service Hours / Total Hours	92.9%	94.4%	94.0%	92.5%	-0.5%
Service Miles / Total Miles	91.0%	92.0%	91.1%	89.0%	-2.2%
Oper Cost per Passenger Trip	\$2.75	\$3.07	\$2.58	\$2.66	-3.2%
Oper Cost per Passenger Mile	\$0.55	\$0.62	\$0.51	\$0.56	2.8%
Avg Psgr Miles per Psgr Trip	5.0	5.0	5.0	4.7	-5.9%
Percentage Change Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

Staff counts shown for BREEZE Operations include both agency and contracted staff. Total reported staff grew 11.2% during the audit period, based on NTD and Form C Reports.

NCTD's fixed route vehicle operations cost dropped significantly during the audit period (12.5%), and more than matched the 7.9% cut in service hours. One contributing factor was the introduction, in the fall of 2010, of 24 smaller buses (28 feet long) to replace standard size buses. The vehicles are cheaper to run and maintain.

Changes in service also caused a slight increase in deadheading. The ratio of service hours to total hours dropped slightly during the audit period from 92.9% to 92.5%, a 0.5% decrease, while service miles as a percentage of total miles dropped 2.2% to 89%.

Service reliability remained relatively unchanged during the audit period, with fewer missed trips but slightly lower on-time performance. The percentage of trips completed rose slightly during the audit period, from 99.93% to 99.98%, as missed trips declined. NCTD always has at least two buses on stand-by during service hours Monday through Saturday. On-time performance dropped slightly, from 96.8% to 95.5%. Both of these indicators reflect the high reliability of NCTD's bus service. Major construction on both I-5 and I-15 impacted on-time performance in FY08 and FY09.

As part of the new agreement, First Transit submits a monthly report to NCTD that includes a description of the compliance with the on-time performance and vehicle trip completion requirements; a calculation of the ridership for the month; a summary of the key maintenance activities during the month for vehicles and Facilities; a summary of training activities during the month; a description of any warranty enforcement issues or problems; a list of current employees; and a listing of any safety or security issues, major incidents, or related concerns or problems that arose during the month. The agreement spells out specific metrics of performance. For instance, on time performance is calculated as follows:

- (A) For AM Peak (6:00A – 8:59A), mid-day (9:00A – 2:59P), and night/other -- the On Time Performance (OTP) requirement is ninety-six percent (96%) of all Vehicle Trips.
- (B) For PM Peak (3:00P – 5:59P) -- the OTP requirement is ninety-four (94%) of all Vehicle Trips.
- (C) For all services, the OTP goal is ninety-five (95%) of Vehicle Trips.

According to year end reports, On-Time Performance exceeded the 95% goal, with the FY12 total being 96.7% and exceeding the goal in FY11 as well. Neither of the Year End reports for 2011 and 2011 reference any safety or security issues.

BREEZE maintenance performance remained strong during the audit period, with lower overall maintenance costs and staff levels, and labor productivity. In addition, NCTD and its contractor reached a new threshold with reliability climbing over 30% during the audit period. In FY11, NCTD added 24 new unleaded buses as well as a number of CNG buses. Maintenance trends are shown below in Exhibit IV-5.

Exhibit IV-5: NCTD BREEZE Maintenance Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Maintenance FTEs	100	89	85	86	-14.0%
Maintenance Costs	\$8,839,118	\$9,126,759	\$9,649,038	\$8,018,677	-9.3%
Total Vehicle Hours	457,508	419,667	406,071	423,432	-7.4%
Total Vehicle Miles	6,317,053	5,803,083	5,755,243	5,886,371	-6.8%
Peak Vehicles	121	123	120	125	3.3%
Total Vehicles	156	144	144	150	-3.8%
Revenue Vehicle Failures	387	383	403	276	-28.7%
Veh Hours per Maintenance FTE	4,575	4,715	4,777	4,924	7.6%
Veh Miles per Maintenance FTE	63,171	65,203	67,709	68,446	8.4%
Maintenance Cost per Active Vehicle	\$56,661	\$63,380	\$67,007	\$53,458	-5.7%
Maintenance Cost per Vehicle Hour	\$19.32	\$21.75	\$23.76	\$18.94	-2.0%
Maintenance Cost per Vehicle Mile	\$1.40	\$1.57	\$1.68	\$1.36	-2.6%
Veh Hours per Active Vehicle	2,933	2,914	2,820	2,823	-3.7%
Veh Miles per Active Vehicle	40,494	40,299	39,967	39,242	-3.1%
Total Miles Between Failures	16,323	15,152	14,281	21,327	30.7%
Spare Ratio	28.9%	17.1%	20.0%	20.0%	-30.9%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

Over the audit period, maintenance costs decreased 9.3% when the inflation increased by 5.6%. Staffing levels are also down 14% compared to FY09. These reverse the trend exhibited during the prior audit period. These two drivers of costs and staffing levels lend a positive spin to most the metrics in Exhibit IV-5.

Total bus mileage decreased by 6.8% during the audit period, with the fleet staying about the same at 125 peak/150 total vehicles. BREEZE has managed the spare ratio so that in the past two fiscal years it has stayed at exactly 20%, the FTA guideline. This is an efficient way to conduct business, and represents an improvement compared to the almost 29% FY09 spares ratio.

Maintenance productivity steadily showed improvement throughout the audit period. The vehicle hours per maintenance FTE rose 7.6% while the vehicles miles per FTE increased by 8.4%. This reflects that the maintenance output was reduced, but not as much as the staffing levels hence the increased maintenance productivity. Maintenance costs per vehicle, vehicle hour and vehicle miles all decreased.

One of the most important measures of maintenance reliability indicates NCTD's maintenance department's quality remains high. The Agreement with First Transit stipulates that the minimal average requirement is 16,000 miles between failures, or mean distance between failures (MDBF). The metric is an average for the year, meaning that fluctuation is expected, but this is a minimal threshold to meet. As can be seen in Exhibit IV-5, MDBF reached 21, 327 in FY12, a huge bump in the right direction and 5,300 miles over the minimum requirement. One further contributing factor, in addition to the newer vehicles mentioned above, was NCTD's shift to a 5 day pit inspection, from a 10 day cycle in place. This change was made in FY11, with the new contract.

NCTD's BREEZE administration reduced staffing levels and increased productivity during the audit period. Exhibit IV-6 illustrates some of the key administrative data and metrics.

Exhibit IV-6: NCTD BREEZE Administration Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Administration FTEs	132	126	84	57	-56.8%
Vehicle Service Hours (VSH)	425,029	396,072	381,842	391,500	-7.9%
Vehicle Service Miles (VSM)	5,745,711	5,339,331	5,244,849	5,237,788	-8.8%
Unlinked Passenger Trips	8,747,458	7,825,176	7,722,646	7,905,588	-9.6%
VSH per Administration FTE	3,220	3,143	4,546	6,868	113.3%
VSM per Administration FTE	43,528	42,376	62,439	91,891	111.1%
Percentage Change Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

The number of administrative FTEs for the fixed route bus system was drastically reduced during the audit period as a result of the contract to First Transit. The number 57 staff for FY12 represents both NCTD and contract staff; it is really a handful for NCTD and the bulk at First Transit.

A couple of measures of administrative effectiveness also showed improvement during the audit period. Vehicle service hours and vehicle service miles per administration FTA more than doubled during the audit period, roughly the same ratio as the staff level change.

IV-3. COASTER Commuter Rail Service Performance

COASTER ridership was impacted by the economic downturn, but has since rebounded. By employing several cost containment measures, NCTD has controlled the growth in operating costs and managed to make the COASTER service more productive. COASTER is also a contracted operation, the contractor being Transit America S. I. (TASI) with Herzog as the parent corporation. Exhibit IV-7 shows the TDA performance indicator trends for the audit period.

Exhibit IV-7: NCTD COASTER TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operating Costs	\$16,439,884	\$15,387,944	\$15,850,637	\$17,602,811	7.1%
Unlinked Passengers	1,501,619	1,271,620	1,378,849	1,624,968	8.2%
Car Service Hours	33,348	30,646	32,981	34,927	4.7%
Car Service Miles	1,349,238	1,230,687	1,322,123	1,400,512	3.8%
Employee FTEs	73	70	76	94	28.8%
Operating Cost per Service Hour	\$492.98	\$502.12	\$480.60	\$503.99	2.2%
Operating Cost per Passenger	\$10.95	\$12.10	\$11.50	\$10.83	-1.1%
Passengers per Service Hour	45.03	41.49	41.81	46.52	3.3%
Passengers per Service Mile	1.11	1.03	1.04	1.16	4.3%
Service Hours per Employee FTE	457	438	434	372	-18.7%
Percentage Change Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database. Employee full-time equivalents (FTEs) from SANDAG Form C reports.

Main findings from Exhibit IV-7 are as follows:

- The COASTER's operating costs outpaced inflation slightly, growing 7.1% during the audit period compared to 5.6% for the CPI. When ridership declined in FY10 with the economic downturn NCTD was able to cut costs, shortening consist sizes from 5 to 4 cars, implementing fuel-saving

- measures, and renegotiating Transit America's contract escalation to zero for FY10 (normally, the contract stipulates a 3% annual increase). Operating costs grew mainly between FY11 and FY12; this reflects the regular contractor increase as well as increased service.
- COASTER experienced a strong inflation-induced drop in ridership between FY09 and FY10. However, as the economy recovered and NCTD implemented its fare decrease, COASTER ridership grew again. From FY 10 to FY12, the ridership growth was greater than 27%.
 - Service hours remained grew about 4.7%, and Service miles grew 3.8% during the period. Among the service increase changes include the switch to Sunday and holiday service (in the past, COASTER did not run trains on Sundays). However, in the latter part of the audit period, COASTER began adding service across the board. At the beginning of the audit period, COASTER operated 22 trains on weekdays and 8 trains Saturdays. At the end of the audit period COASTER operated 22 trains weekdays (with an increase to 26 trains on Friday nights, seasonally), 12 Saturday trains and 8 Sunday/Holiday trains. Today COASTER runs 365 days per year.
 - According to the statistics, employee FTE's went up from 73 to 94 during the period (including both NCTD and TASI personnel). With the increase in staff, the COASTER's service hours per FTE declined significantly during the audit period, dropping 18.7%. However, the terms of NCTD's contract with Transit America meant this did not create any additional costs for NCTD. The rationale is that additional staff improved customer service, maintenance quality, and other key performance areas.
 - Due to the strong passenger growth in FY12, operating cost per passenger actually decreased 1.1% during the audit period, during a 5.6% rate of inflation. Operating cost per service hour rose just 2% to \$504. The high COASTER operating cost per passenger of \$10.83 in FY12 relative to the BREEZE cost of \$5.19 is the result of maintaining an expensive right-of-way, operating six stations with full security, and meeting the numerous mandates and requirements to operate a mixed passenger and freight railroad with multiple users. Although not part of the calculation, COASTER also has had to address the Positive Train Control mandate.
 - Service productivity showed improvements during the audit period. Passengers per car service hour and passengers per car service mile increased by 3.3% and 4.3%, respectively.

Despite the economic challenges at the beginning of the audit period, the COASTER regained ridership and gradually increased its output. The operations cost grew as a result and operational effectiveness declined. This is shown in Exhibit IV-8.

Exhibit IV-8: NCTD COASTER Operations Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operations FTEs	14	15	16	22	57.1%
Total Operating Costs	\$6,510,386	\$5,806,446	\$6,504,393	\$7,785,394	19.6%
Car Service Hours (CSH)	33,348	30,646	32,981	34,927	4.7%
Car Service Miles (CSM)	1,349,238	1,230,687	1,322,123	1,400,512	3.8%
Total Car Hours	38,760	35,721	38,620	40,554	4.6%
Total Car Miles	1,421,080	1,299,500	1,398,921	1,479,039	4.1%
Unlinked Passenger Trips	1,501,619	1,271,620	1,378,849	1,624,968	8.2%
Passenger Miles	42,056,346	35,916,269	38,192,474	44,615,985	6.1%
CSH per Operations FTE	2,382	2,043	2,061	1,588	-33.4%
CSM per Operations FTE	96,374	82,046	82,633	63,660	-33.9%
Service Miles per Service Hour	40.5	40.2	40.1	40.1	-0.9%
Service Hours / Total Hours	86.0%	85.8%	85.4%	86.1%	0.1%
Service Miles / Total Miles	94.9%	94.7%	94.5%	94.7%	-0.3%
Oper Cost per Passenger Trip	\$4.34	\$4.57	\$4.72	\$4.79	10.5%
Oper Cost per Passenger Mile	\$0.15	\$0.16	\$0.17	\$0.17	12.7%
Avg Psgr Miles per Psgr Trip	28.0	28.2	27.7	27.5	-2.0%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

The COASTER operations staffing level increased to 22 from a low base of 14 which represents a large percentage increase of 57%. This increase resulted from NCTD assuming dispatching responsibilities from Metrolink for the San Diego and Escondido subdivisions, requiring additional staff.

Total operating costs for COASTER increased 19.6% during the period, a reflection of the contract increases and the new service added (see above). In addition, COASTER continued to support special events throughout the year, such as Padres games, local marathons, Mardi Gras, Comicon, St Patrick's. Given that COASTER now operates on Sundays and holidays, it makes sense that the number of special events would increase as well.

The average passenger trip remained very similar over the course of the audit, about 27 miles. Since the service remained consistent and the system is a single line, any changes would be unexpected. Likewise service characteristics including average speed remained very consistent during the audit period, about 40 miles per hour.

COASTER has maintained a good on time performance record (average 95%), with the exception of one month with a major rain event/washout when trains experienced highly unusual delays.

One of the major changes affecting COASTER operations during the audit period was NCTD taking over dispatching responsibilities from Metrolink. In March 2012, the dispatching functions for the Escondido and San Diego subdivisions were transferred from Metrolink to NCTD's Escondido train control center. The major changes required to assume dispatching from Metrolink included obtaining the services of a qualified train dispatch contractor, installing a train Centralized Traffic Control (CTC) dispatch system, and receiving FRA dispatcher certification.

There have been no rail to rail collisions during the audit period.

COASTER's maintenance function underwent the opposite trend as operations, with a 16% decrease costs, and a gradual increase in staffing levels. Labor productivity measures worsened as a result of the higher staffing levels, but cost efficiency and effectiveness metrics were up. Railcar reliability is a special case, and after closer scrutiny continues to be very much in line with prior audits (even improved). COASTER maintenance performance indicators are shown in Exhibit IV-9.

Exhibit IV-9: NCTD COASTER Maintenance Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Maintenance FTEs	45	45	49	58	28.9%
Maintenance Costs	\$6,274,291	\$5,557,071	\$5,383,242	\$5,290,004	-15.7%
Total Car Hours	38,760	35,721	38,620	40,554	4.6%
Total Car Miles	1,421,080	1,299,500	1,398,921	1,479,039	4.1%
Peak Cars	26	26	26	24	-7.7%
Total Cars	35	35	35	35	0.0%
Revenue Vehicle Failures	4	15	13	15	275.0%
Car Hours per Maintenance FTE	861	794	788	699	-18.8%
Car Miles per Maintenance FTE	31,580	28,878	28,549	25,501	-19.2%
Maintenance Cost per Active Car	\$179,265	\$158,773	\$153,807	\$151,143	-15.7%
Maintenance Cost per Car Hour	\$161.88	\$155.57	\$139.39	\$130.44	-19.4%
Maintenance Cost per Car Mile	\$4.42	\$4.28	\$3.85	\$3.58	-19.0%
Car Hours per Active Car	1,107	1,021	1,103	1,159	4.6%
Car Miles per Active Car	40,602	37,129	39,969	42,258	4.1%
Car Miles Between Failures	355,270	86,633	107,609	98,603	-72.2%
Spare Ratio	34.6%	34.6%	34.6%	45.8%	32.4%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

Beginning with COASTER vehicle reliability, according to the Exhibit there were 15 revenue vehicle failures, up from four. These are essentially mechanical failures. The FY09 was an anomaly in a trend that is typically in the 14-15 failures per year, on average. The vehicle failures reported for FY10-12 are therefore exactly within the recent historical average.

The Car Miles between Failures reported for FY09 – 355,270 – also appears to be an anomaly, which is not surprising because one is a ratio of the other. In FY08 the number was 90,164, and in FY07 it was 40,906. Seen in this light, the rail car reliability performance for the TASI operation during FY10-12 seems to have been quite good, oscillating between 86,633 and 107,609 as the annual average. This is better than during the previous audit cycle.

Transit America (the current contractor) reports all maintenance FTEs including both Maintenance of Equipment and Maintenance of Way employees. As reported, this number has increased from 45 to 58 during the audit period. When asked during the interview, the General Manager for TASI said staffing levels had increased from 68 at the beginning of the period to roughly 90 in 2013, but a majority of the increase (flaggers, signal engineers, track inspectors, conductors, engineers) support San Diego County, SANDAG, and other clients.

Maintenance cost decreases characterized the entire audit period. Maintenance costs dropped every year and 15.7% overall. The reduction in maintenance costs has resulted in excellent cost efficiency and effectiveness metrics for maintenance, measured per active car, car hour or car mile. Each saw improvements from 15 to 19%.

Finally, the COASTER spare ratio has increased from 34.6% to 45.8% in FY12. NCTD decreased the peak time car capacity (26 cars to 24 cars), affecting the spares ratio.

NCTD has been able reduce COASTER administration costs during the audit period without impacting operations. The agency continues to meet all FRA requirements, and collaboration has improved with the contractor, allowing cost reductions and improved service quality. Exhibit IV-10 shows several key indicators.

Exhibit IV-10: NCTD COASTER Administration Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Administration FTEs	14	11	11	14	0.0%
Car Service Hours (CSH)	33,348	30,646	32,981	34,927	4.7%
Car Service Miles (CSM)	1,349,238	1,230,687	1,322,123	1,400,512	3.8%
Unlinked Passenger Trips	1,501,619	1,271,620	1,378,849	1,624,968	8.2%
CSH per Administration FTE	2,382	2,786	2,998	2,495	4.7%
CSM per Administration FTE	96,374	111,881	120,193	100,037	3.8%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

The increasing ridership and new FRA mandates continue to be a challenge for COASTER management staff. The staffing levels stayed level, and as a result there were corresponding increases in labor productivity measures.

IV-4. LIFT Paratransit Service Performance

Demand for LIFT services continued to grow during the audit period, and overall performance (particularly efficiency) improved across the board as a result of the new operating model. In July 2011, NCTD effected a change in how the paratransit service is run, from a dedicated fleet to a broker model. This is shown in Exhibit IV-11.

Exhibit IV-11: TDA Performance Indicators for NCTD Paratransit Service

Verified TDA Statistics & Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operating Costs	\$3,851,220	\$3,932,079	\$3,642,401	\$3,561,876	-7.5%
Unlinked Passengers	123,701	119,150	117,734	133,890	8.2%
Vehicle Service Hours	58,150	57,996	56,244	62,989	8.3%
Vehicle Service Miles	1,160,029	1,122,471	1,114,381	1,041,717	-10.2%
Employee FTEs	45	47	45	53	17.8%
Operating Cost per Service Hour	\$66.23	\$67.80	\$64.76	\$56.55	-14.6%
Operating Cost per Passenger	\$31.13	\$33.00	\$30.94	\$26.60	-14.6%
Passengers per Service Hour	2.13	2.05	2.09	2.13	-0.1%
Passengers per Service Mile	0.11	0.11	0.11	0.13	20.5%
Service Hours per Employee FTE	1,292	1,234	1,250	1,188	-8.0%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database. Employee full-time equivalents (FTEs) from SANDAG Form C reports.

The demand for LIFT grew over 8% during the audit period. Contributing factors include the ageing population in the county, high gas prices, and perhaps, effects from the recession. The shift to the brokerage model was in place for FY12, and this is when demand jumped 16,000 passengers in one year.

Despite the increase in passenger demand, NCTD reduce operating costs by 7.5% during the period. This was the principal objective sought in the business model change in 2011, at the time NCTD was facing several financial pressures. Cost efficiency measures improved significantly, with close to 15% improvements for cost per service hour and cost per passenger metrics.

Service productivity measures varied. There was no improvement to the number of passengers per service hour. However, there was a significant 20.5% improvement to the number of passengers per service mile. This single statistic suggests the vastly superior “coverage” approach of a brokerage system, with vehicles able to make service calls close to their point of location (e.g., the nearest driver picking up the call at a particular moment in time), as opposed to having to start from a base location and scheduling the best traveling salesman route. The strategy also reduces deadhead miles.

LIFT’s labor productivity diminished by 8% during the audit period, as a result of the increase in FTEs responsible for the service operation (includes NCTD and broker/contracted staff). Current productivity levels represent a new baseline for the new operating model.

In examining the operations performance indicators in more detail, NCTD improved productivity levels during the audit period. Examples include operating cost efficiency and the reduced miles per active vehicle. Exhibit IV-12 provides the detailed functional indicators for LIFT:

Exhibit IV-12: Operations Performance Indicators for NCTD ADA Paratransit Service (LIFT)

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Employee FTEs	45	47	45	53	17.8%
Operating Costs	\$3,851,220	\$3,932,079	\$3,642,401	\$3,561,876	-7.5%
Vehicle Service Hours (VSH)	58,150	57,996	56,244	62,989	8.3%
Vehicle Service Miles (VSM)	1,160,029	1,122,471	1,114,381	1,041,717	-10.2%
Total Vehicle Hours	58,150	57,996	56,244	62,989	8.3%
Total Vehicle Miles	1,281,115	1,372,856	1,339,913	1,055,001	-17.6%
Unlinked Passenger Trips	123,701	119,150	117,734	133,890	8.2%
Passenger Miles	1,522,615	1,559,507	1,540,464	1,125,217	-26.1%
Total Vehicles	46	35	35	49	6.5%
Operating Cost per Service Hour	\$66.23	\$67.80	\$64.76	\$56.55	-14.6%
Operating Cost per Psgr Trip	\$31.13	\$33.00	\$30.94	\$26.60	-14.6%
Passengers per Service Hour	2.13	2.05	2.09	2.13	-0.1%
Passengers per Service Mile	0.11	0.11	0.11	0.13	20.5%
Veh Hrs per Employee FTE	1,292	1,234	1,250	1,188	-8.0%
Vehicle Miles per Active Vehicle	27,850	39,224	38,283	21,531	-22.7%
Passenger Miles per Psgr Trip	12.31	13.09	13.08	8.40	-31.7%
Percentage Change					
Consumer Price Index (CPI-U)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

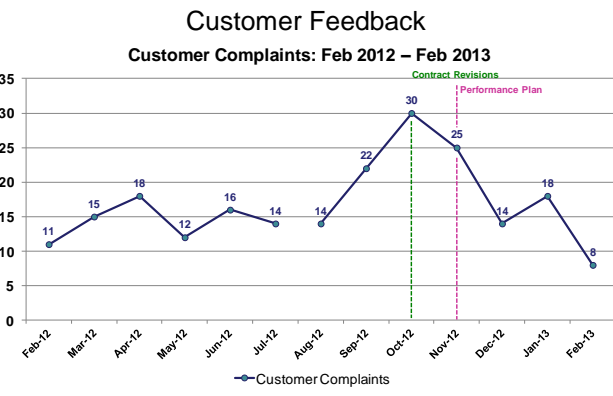
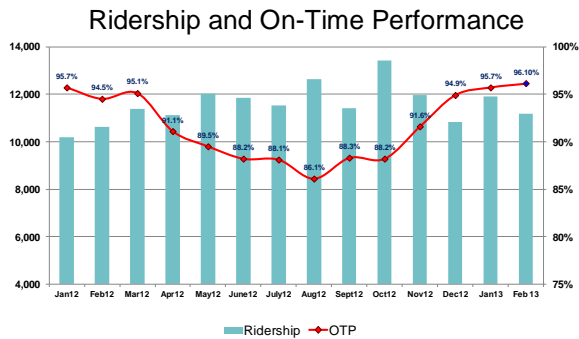
Despite the increase in staffing levels, the demand response operation run by ALC is more cost efficient and service productive than the prior model. As noted in Section IV-1, farebox recovery increased from 12.8% to 16.0% during the audit period. Operating costs were reduced by 7.5% during the period, during which inflation grew 5.6%.

NCTD operated 17.6% fewer vehicle miles while service 8.2% more trip, resulting in a decrease of 22.7% in vehicle miles per active vehicle. As noted earlier, the new model also affords the ability to serve considerable more passengers for the same (or even reduced) number of miles driven. Total passenger miles per passenger trip were reduced from about 12 to below 9 miles, on average.

Further evaluation of the service quality reveals a degradation of on time performance during the second half of FY12, with On Time Performance diminishing from the 95% average to 88%. In addition, the

review shows an increase in the number of missed trips from below 50 per month to over 150 in June 2012. Surprisingly, the customer complaints were marginally affected. These trends are illustrated in the trend snapshots below in Exhibit IV-13.

Exhibit IV-13: Trend Snapshots for LIFT Services



In response to these trends, NCTD reacted by implementing contract revisions and a performance plan in October/November 2012, a bit beyond the timeframe of the audit period. The performance standards call for:

- 95% on time performance, and liquidated damages if the on time performance is below 93% for the month. NCTD is not billed for missed trips
- NCTD will accept 1 valid complaint per 1000 passenger trips, and not to exceed 2 valid complaints per 1000 passenger trips per month. Contractor will pay liquidated damages to NCTD if a complaint is not addressed within 5 days. LIFT’s 133,890 trips in FY12 corresponds to about 11,150 trips per month, so NCTD will accept 11 valid complaints. Again, while outside the period of analysis, it is worth noting the number of complaints dropped from a high of 30 in October 2012 to 8 in February 2013.

IV-5. SPRINTER Light Rail Service Performance

The SPRINTER service enhanced performance during its second to fourth full years in operation. SPRINTER exhibited increased cost efficiency and effectiveness, as well as service productivity. The TDA performance indicators are shown in Exhibit IV-14.

Exhibit IV-14: TDA Performance Indicators for NCTD SPRINTER Service

Verified TDA Statistics & Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operating Costs	\$15,049,550	\$12,779,915	\$13,036,488	\$13,804,726	-8.3%
Unlinked Passengers	2,195,373	2,117,920	2,219,906	2,417,606	10.1%
Vehicle Service Hours	28,151	22,647	24,594	30,305	7.7%
Vehicle Service Miles	618,004	498,846	541,539	666,212	7.8%
Employee FTEs	45	44	41	53	17.8%
Operating Cost per Service Hour	\$534.60	\$564.31	\$530.07	\$455.53	-14.8%
Operating Cost per Passenger	\$6.86	\$6.03	\$5.87	\$5.71	-16.7%
Passengers per Service Hour	77.99	93.52	90.26	79.78	2.3%
Passengers per Service Mile	3.55	4.25	4.10	3.63	2.2%
Service Hours per Employee FTE	626	515	600	572	-8.6%
Percentage Change					
Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database. Employee full-time equivalents (FTEs) from SANDAG Form C reports.

The SPRINTER first fiscal year of normal operation was FY09. Operating costs diminished from roughly \$15 million in FY09 to \$13.8 million in FY12. Operating costs per vehicle service hour dropped by 14.8%, to \$455.53. This is also the first time that operating cost for vehicle service hour for SPRINTER is less than for COASTER.

The operating cost per passenger dropped even more, by 16.7%, to \$5.71, down from \$6.86. In fact, operating costs were increasing slightly towards the end of the audit period, but the passenger growth was sufficient to yield to this magnitude of improvement.

The SPRINTER opened at an opportune time when gas prices were peaking and quickly gained a strong passenger base. As gas prices gradually fell and the economy deteriorated in FY09-10, passenger levels sank to a more consistent base. NCTD increased its marketing efforts to target new riders in the Oceanside-Escondido corridor, and improved the feeder services to its newest mode.

Service productivity (i.e., passengers per service hour and per service mile) increased modestly during the period, with gains in the low 2% range.

The **SPRINTER** exhibited solid performance metrics during the period of performance. Veolia operates the service, and subcontracts the maintenance to Bombardier. Exhibit IV-15 provides operations performance indicators:

Exhibit IV-15: NCTD SPRINTER Operations Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Operations FTEs	30	30	26	35	16.7%
Total Operating Costs	\$6,010,225	\$4,872,034	\$4,766,927	\$5,707,980	-5.0%
Car Service Hours (CSH)	28,151	22,647	24,594	30,305	7.7%
Car Service Miles (CSM)	618,004	498,846	541,539	666,212	7.8%
Total Car Hours	28,507	22,985	24,836	30,430	6.7%
Total Car Miles	629,928	507,506	547,173	668,757	6.2%
Unlinked Passenger Trips	2,195,373	2,117,920	2,219,906	2,417,606	10.1%
Passenger Miles	19,574,979	18,400,478	19,602,174	21,210,390	8.4%
CSH per Operations FTE	938	755	946	866	-7.7%
CSM per Operations FTE	20,600	16,628	20,828	19,035	-7.6%
Service Miles per Service Hour	22.0	22.0	22.0	22.0	0.1%
Service Hours / Total Hours	98.8%	98.5%	99.0%	99.6%	0.8%
Service Miles / Total Miles	98.1%	98.3%	99.0%	99.6%	1.5%
Oper Cost per Passenger Trip	\$2.74	\$2.30	\$2.15	\$2.36	-13.8%
Oper Cost per Passenger Mile	\$0.31	\$0.26	\$0.24	\$0.27	-12.4%
Avg Psgr Miles per Psgr Trip	8.9	8.7	8.8	8.8	-1.6%
Percentage Change Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

SPRINTER is still a very new system. NCTD and its contractor, Veolia Transportation, have worked closely to both finetune existing operations and pursue ridership growth strategies. For instance, on a weekly basis they track the Automatic Passenger Counter Data and load points to decide when to break 2 cars into a one car train. In January 2011, NCTD increased service, extended hours Friday and Saturday, and added a couple of early morning trains out of Oceanside.

Characteristics of SPRINTER operations performance were as follows:

- Staffing levels varied in FY11 and FY12, resulting in proportional jumps in the labor productivity measures (down for the audit period).
- Service productivity measures grew very slightly, and moving into the right direction. Service miles divided by total hours and service miles divided by total miles both reached 99.6%, almost perfect. Veolia specifically sought out strategies to eliminate deadhead mileage.
- The average speed on the line was 22 miles per hour, unchanged over the period.
- The SPRINTER service maintained a clean accident record in FY09, reflecting the high safety level of its exclusive right-of-way.
- Operating costs per passenger trip and passenger mile decreased significantly, 13.8% and 12.4% respectively, as a result of the reduction in operating cost and increase in service output.

The SPRINTER has shown itself to be a reliable service so far for major operations, but revenue vehicle failures show a worrisome trend. As a relatively high frequency rail service, it requires a higher cost maintenance program. Exhibit IV-16 provides further details:

Exhibit IV-16: NCTD SPRINTER Maintenance Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Maintenance FTEs	12	12	12	10	-16.7%
Maintenance Costs	\$5,535,058	\$5,441,882	\$5,341,219	\$4,838,213	-12.6%
Total Car Hours	28,507	22,985	24,836	30,430	6.7%
Total Car Miles	629,928	507,506	547,173	668,757	6.2%
Peak Cars	6	6	6	8	33.3%
Total Cars	12	12	12	12	0.0%
Revenue Vehicle Failures	8	1	54	119	1387.5%
Car Hours per Maintenance FTE	2,376	1,915	2,070	3,043	28.1%
Car Miles per Maintenance FTE	52,494	42,292	45,598	66,876	27.4%
Maintenance Cost per Active Car	\$461,255	\$453,490	\$445,102	\$403,184	-12.6%
Maintenance Cost per Car Hour	\$194.16	\$236.76	\$215.06	\$158.99	-18.1%
Maintenance Cost per Car Mile	\$8.79	\$10.72	\$9.76	\$7.23	-17.7%
Car Hours per Active Car	2,376	1,915	2,070	2,536	6.7%
Car Miles per Active Car	52,494	42,292	45,598	55,730	6.2%
Car Miles Between Failures	78,741	507,506	10,133	5,620	-92.9%
Spare Ratio	100.0%	100.0%	100.0%	50.0%	-50.0%
Percentage Change Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

Immediately related to the increasing number of revenue vehicle failures, the car miles between failures metric has shown a precipitous drop from FY09. FY10 appears to be an anomaly in the data with only one mechanical failure all year long.

Maintenance labor productivity metrics increased by large amounts, 28% and 27% respectively. Maintenance cost efficiency performance measures improved significantly as well, in the 13% to 18% range (less cost per unit of service produced means a more cost efficient operation).

Finally, the service productivity measures improved as well. Car hours per active car increased 6.7%, while car miles per active car increased 6.2%. This likely reflects both the fleet balancing and the achievements in reducing deadhead mileage.

SPRINTER service administration showed satisfactory performance trends, shown in Exhibit IV-17.

Exhibit IV-17: NCTD SPRINTER Administration Performance Indicators

Base Data and Performance Indicators	Base Year FY09	Audit Review Period			% Change FY09-FY12
		FY10	FY11	FY12	
Administration FTEs	3	3	3	9	200.0%
Car Service Hours (CSH)	28,151	22,647	24,594	30,305	7.7%
Car Service Miles (CSM)	618,004	498,846	541,539	666,212	7.8%
Unlinked Passenger Trips	2,195,373	2,117,920	2,219,906	2,417,606	10.1%
CSH per Administration FTE	9,384	7,549	8,198	3,367	-64.1%
CSM per Administration FTE	206,001	166,282	180,513	74,024	-64.1%
Percentage Change Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	5.6%

Source: National Transit Database and SANDAG Form C Reports.

In FY12 NCTD adjusted the number of administrative staff from 3 to 9, a large percentage increase from a small base. The labor productivity measures suffered as a result, despite the service output increased almost 8% during the audit period.

SECTION V: CONCLUSIONS AND RECOMMENDATIONS

NCTD is in compliance with PUC requirements and has made satisfactory progress on implementing the prior audit recommendations. NCTD is currently implementing two of its prior audit recommendations pertaining to procedures for capturing transit-related incidents and conducting business planning activities in the post-SPRINTER environment. The third recommendation pertaining to reducing no shows on FAST is no longer applicable.

NCTD as an organization is settling after major restructuring and structural change, with the contracting out of the BREEZE bus service, shifting of LIFT from a dedicated fleet model to a brokerage delivery model, organizational restructuring, and other changes. Post restructuring, NCTD has held the line on bus ridership and seen increased ridership on rail lines. NCTD has effectively controlled costs during the audit period and can now project balanced budgets. During the audit period, NCTD advanced multiple initiatives, such as the implementation of the Positive Train Control program, the code enforcement program and re-instituting the Sheriff Contract that had been interrupted at the height of the financial crisis. Lastly, SPRINTER has suffered a recent service shutdown in March 2013. Even though this is eight months beyond the end of the audit period, circumstances leading up to the shutdown, and associated recommendations, are addressed in this audit report.

The following recommendations are provided for consideration by NCTD:

- 1) Develop strategies to improve fare simplification and integration, including with regional partners
- 2) Examine best provisions for performance standards, incentives and disincentives within recent contracts (BREEZE, LIFT) and apply where applicable to contracts for other modes
- 3) Provide additional oversight and training to SPRINTER vehicle maintenance staff
- 4) Carefully track Performance Plan adherence for LIFT contractor through regular reporting out on progress and continued customer surveys.

The following text discusses these recommendations and the expected results of implementing them.

Recommendation 1: Develop strategies to improve fare simplification and integration, including with regional partners SANDAG, MTS, Amtrak and Metrolink

Issues and Opportunities – NCTD has been working on fare simplification and integration for years, along a number of fronts – technology-wise, and policy-wise, working with the rest of the region. The focus of the recommendation is in the policy area and cooperation with the regional partners. SANDAG is responsible for regional fare policy. NCTD and MTS have an integrated fare structure. NCTD has reached a commuter rail/intercity rail fare integration agreement with AMTRAK which benefits both MTS and NCTD customers. NCTD is advancing a discussion within the region that would allow Amtrak customers to transfer to MTS and NCTD bus and light rail modes. NCTD and Metrolink have reached tentative agreement of the methodology to create an integrated rail fare table including transfer. The NCTD and Metrolink agreement are expected to be finalized by the end of CY 2013.

CompassCard and CooCoo are useful tools, but they currently have limited penetration/usage. During the audit period NCTD reduced several fares, and reduced the number of zones for COASTER from four to three. However, several issues are outstanding. Some transfers between NCTD modes and partner agencies have been problematic during the audit period (paper day passes with one operator and not the other; accounting and revenue sharing disagreements for special event discounted fares). Customers should not be responsible for understanding the nuances and differences between different operator fare policies. The audit team also heard anecdotal evidence of patrons confused by the fare structure, spending unnecessary time at stations and with the queuing back-up some end up missing their train.

Recommended Actions – NCTD should consider strategies to simplify the fares as much as possible, and develop a more simplified fare transfer policy, working with its partner agencies, including SANDAG,

MTS, Amtrak and Metrolink. Building on existing peer to peer working groups is most likely the most effective way to proceed. The CompassCard and CooCoo tools can be enabled to support the recommendations.

Expected Results – Overall level of customer satisfaction should improve. Fare revenue may increase marginally.

NCTD Response: NCTD has been involved with collaborative discussions with MTS, SANDAG, and a Southern California consortium regarding industry best practices for fare collection systems and fare policy. As a result, NCTD continues to explore methods to maximize the functionality of the Cubic-based fare collection system with features such as current promotions, stored value, and mobile applications and ticketing. This continued development is targeted at simplifying and enhancing the customer experience with the transit fare collection system. In addition, NCTD has committed to improving customer transferability between various modes of transit through (1) promotion of Regional and Region Plus Day Passes, (2) exploring various Rail2Rail options with Amtrak, and (3) partnering with neighboring Metrolink to implement inter-jurisdictional travel utilizing one fare on a one seat ride.

Recommendation 2: Examine best provisions for performance standards, incentives and disincentives within recent contracts (BREEZE, LIFT) and apply where applicable to contracts for other modes.

Issues and Opportunities – This recommendation focuses on implementing a best practice, not necessarily addressing a specific performance issue. In the past several years, NCTD has invested considerable effort and intellectual capital in framing robust performance contracts with BREEZE, and lately with LIFT as corrective measure for their Performance Plan. Penalties, or liquidated damages, are outlined in the respective contracts and are assessed to the contractors based on performance objectives including:

- On-Time Performance – service reliability;
- Customer Service – number of complaints; and
- Complaint Resolution – response time.

Incentives include fuel savings (BREEZE). Another incentive to improve performance is NCTD's adoption of a No-Show Policy for LIFT service which targets abuse of the service and improve operating efficiencies for the LIFT service providers.

The opportunity is to leverage the provisions in those contracts most advantageous to NCTD for robust contractor oversight (e.g. detailed performance measures, reporting requirements, incentives for performance and disincentives for poor performance) and port them to the other Contracts for SPRINTER and COASTER. This does not represent a huge effort, yet will provide lasting value.

Recommended Actions – It is recommended that NCTD tasks its Contracts and Procurement department to document the applicable provisions, discuss with Rail Operations/Operations Oversight and make recommendations to the CEO. Then, once approved, work with the contractors to execute the changes by amending the respective contracts as appropriate.

Expected Results – The expected result is (1) better reporting data on the part of the contracting agencies; (2) increased oversight and (3) better performance long term.

NCTD Response: NCTD is continuing to explore ways to streamline service delivery in our rail contracts. Current efforts center around creating a comprehensive rail service approach where contractors will be given more scope and responsibilities to meet all requirements to maintain and operate the rail system freeing up NCTD staff to focus on contractual oversight and programmatic improvements. This approach will allow the contractor to obtain better economies of scale, leverage synergies, and reduce overall costs. The CEO is directly involved in these initiatives.

Recommendation 3: Provide additional oversight and training to SPRINTER vehicle maintenance staff.

Issues and Opportunities – NCTD’s corrective action plan included: adding an additional quality assurance position, the development of a monthly risk register report that will be submitted by the contractor to the Executive Director, General Counsel, and Chief of Safety; and establishing a whistleblower hotline. Veolia and Bombardier have agreed to strengthen their maintenance program to include documenting all quantifiable measurements along with reporting whether the measurement passed/failed. Additionally, Veolia and Bombardier agreed to enhance employee training, improve the culture of safety, add a quality assurance manager position, improve overall maintenance process analysis and documentation, and modify its maintenance information system to support trend analysis.

The service shutdown of the SPRINTER provides an opportunity for several operational activities and oversight activities. NCTD is already taking advantage of the shutdown to carry out projects on the line. NCTD has already modified procedures to address the maintenance issues identified. Given the severity of any shutdown, especially one lasting multiple months, the other opportunity involves oversight and training.

Recommended Actions – In light of NCTD’s most recent changes to the SPRINTER oversight program reviewed by the CPUC, NCTD should, over the next audit cycle, evaluate the oversight and training processes for identifying, reporting, and mitigating safety issues in a timely manner. NCTD should consider additional staffing resources and the efficacy of the oversight by Operations and by Safety.

Expected Results – NCTD should realize an improved and clearer oversight program and provide greater assurance to the public and regulators that it has done everything possible to address the issue.

NCTD Response: NCTD has added an additional quality assurance position to focus on contractual compliance and has begun to cross train the two other quality assurance supervisors to provide assistance in overseeing the rail contracts as needed. NCTD has also reorganized the Operations Division and has split the duties of the Deputy Chief Operations Officer (DCOO) and has assigned rail operations and right of way maintenance oversight to a newly created DCOO - Rail. This will allow the DCOO to focus on bus operations and rail and bus vehicle maintenance. NCTD is also in the process of developing a Request For Proposals (RFP) for performance audits of the bus and rail maintenance practices, and training programs. Finally, NCTD created a Risk Roundtable program and a Whistle Blowers hotline to allow all NCTD employees and contractors to surface issues and concerns so that they can be properly addressed.

Recommendation 4: Carefully track Performance Plan adherence for LIFT contractor through regular reporting out on progress and continued customer surveys.

Issues and Opportunities – With LIFT, NCTD made a switch from a dedicated fleet model to a broker system. While the cost efficiencies and service productivity gains realized initially have been excellent, LIFT experienced some degradation of service, particularly during the second half of FY12 and a bit beyond. NCTD reacted by making revisions to the contract in October 2012 and by establishing a Performance Plan the following month. The opportunity is to show the demand response customer base that NCTD is doing everything possible to provide an excellent reliable, quality service through its contract. There is fairly strong correlation between missed trips and customer feedback. NCTD should continue to track the number of missed trips and related trends. Opportunities also exist to improve the reporting out on outward customer surveys.

Recommended Actions – NCTD ought to carefully track the Performance Plan adherence for its contractor, through regular reporting out on progress achieved for the key metrics of on-time performance, number of missed trips, related trends and customer complaints. Reporting out should be to executive staff on a monthly basis, and more if requested. Secondly, NCTD should assess the

appropriate frequency and approach to the customer surveys, and what meaningful feedback is extracted from these efforts.

Expected Results – NCTD will improve customer perception of the LIFT service. This, in turn, will improve NCTD's general image in the community.

NCTD Response: NCTD aggressively tracks LIFT contractor's key performance indicators on a weekly basis and monthly basis. Any negative trends or incidents are immediately brought to the attention of the contractor with the expectation that underlining issues will be promptly addressed. NCTD's ADA Administrator is in contact with its service provider on a daily basis and the service provider attends NCTD's bi-weekly operations meeting and reports out on performance indicators and addresses any related issues that surface. NCTD also employs a "secret shopper" firm to conduct service delivery audits on a quarterly basis. This effort, coupled with a strong customer feedback process and NCTD field observations, provides NCTD with an excellent understanding of the quality of ADA transit service that is being provided by its contractor.