2013 SUSTAINABILITY REPORT

Measuring VTA'S Environmental Progress

MAY 2014

Santa Clara Valley Transportation Authority

2013 Sustainability Report

vta.org/sustainability

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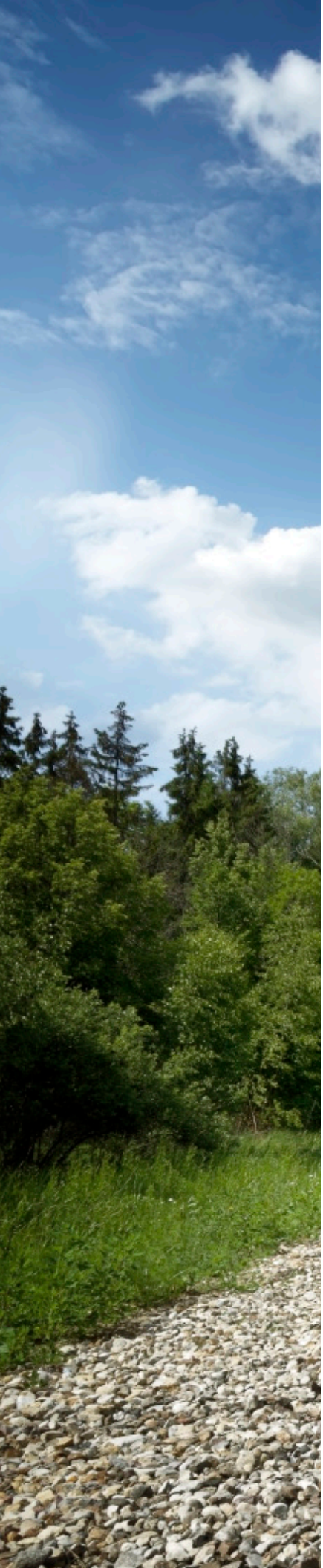


Executive Summary

Each year VTA monitors its progress toward meeting objectives and targets of its Sustainability Program. Annual reporting was adopted as part of VTA's Sustainability Program in February 2008. This is VTA's sixth annual sustainability report. Sustainability performance is measured against the 2007 baseline year and compared to the previous reporting year.

Since the 2007 baseline year, VTA has made significant progress towards reducing its environmental footprint. Fuel use has decreased due to the introduction of hybrids to replace older diesel buses and vehicles. Electricity use has decreased as a result of lighting retrofits, energy efficient fixtures and practices, and solar installations. The amount of hazardous waste and waste diverted to landfills has decreased due to better awareness and recycling programs.

In comparison to the previous reporting year (2012), VTA has continued to reduce fuel usage, natural gas usage, and waste. Electrical usage has stayed consistent, while water use has increased. The increase of water use is primarily attributed to higher irrigation usage. Following the January 2014 Drought Declaration by Governor Brown, VTA has committed to reduce water use by 10%.

In addition to documenting VTA's cost and resource savings, this report also describes the programs, achievements, and goals of the Sustainability Program. Major accomplishments in 2013 include awarding contracts for utility management software and office paper made out of 30% post-consumer waste, retrofitting facilities and station platforms with energy efficient lighting fixtures, and implementing Environmental Management System policies and procedures at the Cerone Bus Division. VTA's Sustainability Team is currently implementing the Utility Management Software and Services Project to improve monitoring and measurement of energy, water, gas, and garbage. This year, VTA will begin a pilot program of installing solar-powered trash compactors at select transit centers. Future projects include conducting a greenhouse gas inventory and studying opportunities for renewable energy projects.

To learn more about VTA's Sustainability Program, visit ***www.vta.org/sustainability***.

About VTA

The Santa Clara Valley Transportation Authority (VTA) is an independent special district responsible for bus, light rail and paratransit operations, congestion management, specific highway improvement projects, and transportation planning in Santa Clara County. VTA is both a transit provider and a multi-modal transportation planning organization involved with transit, highways and roadways, bikeways, and pedestrian facilities. In this capacity, VTA partners with the cities, towns and County of Santa Clara, as well as intra-county agencies, to develop a practical, multimodal transportation infrastructure that meets evolving travel needs.

VTA provides transit services to the 346-square-mile urbanized portion of Santa Clara County that is composed of 15 cities and towns and unincorporated areas with a total population of more than 1.8 million residents. VTA operates 75 bus routes and has an active fleet of 432 buses, as of January 2014. VTA operates 42.2 miles of light rail service and has an active fleet of 99 light rail vehicles.

The mission of VTA is to provide the public with a safe and efficient countywide transportation system. The system should increase access and mobility, reduce congestion, improve the environment and support economic development, thereby enhancing quality of life.

Report Purpose and Scope

Purpose

The purpose of this report is to measure, track, and effectively manage current and future sustainability program initiatives. Annual reporting was adopted as part of VTA's Sustainability Program in February 2008. The strategy is stated as follows: "Establish benchmarks to measure the progress and performance of VTA's Sustainability Program and report back to the VTA Board of Directors on an annual basis. Among other actions, this report will involve reassessing VTA's fuel, electricity, and water usage on a regular basis."

Scope

VTA has five main facility locations including three bus facilities, one light rail facility, and one administrative facility. The scope of this report is limited to these main operating facilities.

Cerone Bus Operating Division and Overhaul & Repair Facility (North San Jose)

VTA's Cerone facility includes the Cerone Bus Operating Division, the Overhaul and Repair (O&R) Division, and the Distribution Center. Cerone Minor Maintenance serves as a base for operations, fueling, servicing, detailing, running repair, and preventive maintenance. The O&R facility provides a centralized major maintenance program for the entire VTA bus fleet, including paint and body repair, upholstery, farebox repair, transmission and small component rebuild, engine overhaul, and the heavy repair and maintenance associated with major component removal. This facility also supports steam cleaning and a water treatment plant to treat wastewater from cleaning operations. The Distribution Center is responsible for the distribution of parts to support all bus operating divisions. This Division is also responsible for storage of inactive vehicles and is responsible for decommissioning and disposal of revenue and non-revenue vehicles.

Chaboya Bus Operating Division (South San Jose)

The Don Pedro Chaboya Bus Operating Division is VTA's largest-capacity bus operations and maintenance facility. The facility includes a maintenance shop, fueling facility, two bus washers, transit operations, bus operator training, a maintenance training building, a facilities maintenance building, steam cleaning equipment and a water treatment plant to treat wastewater from cleaning operations.

North Bus Operating Division (Mountain View)

The North Division is the smallest of VTA's operating facilities and includes a maintenance shop, fueling facility, bus wash, transit operations, steam cleaning equipment and a water treatment plant.

Guadalupe Light Rail Operating and Maintenance Division (Downtown San Jose)

Light rail vehicles are stored and maintained at the Guadalupe Light Rail Maintenance Division. This facility is equipped and staffed to perform all operations and maintenance functions, including major vehicle overhaul, historic trolley maintenance, and light rail operator and maintenance training. This facility is also home to the Way, Power and Signal Department, which is responsible for preventive maintenance and repair of wayside facilities including substations and overhead contact systems, light rail signals, tracks, stations, and park-and-ride lots. The Operations Control Center that serves as a monitoring, reporting, and emergency response hub for coordinating and directing all Bus and Light Rail Transit Operations is also located here.

River Oaks Division (North San Jose)

The River Oaks Division contains VTA's administrative offices. The offices house staff in Administrative Services, Congestion Management, Engineering, Construction, External Affairs, Fiscal Resources, and Operations.

Sustainability Program Overview

Introduction

The Sustainability Program was approved by the VTA Board of Directors in February 2008, with the following goal and operating strategies. The goal of the Sustainability Program is to strengthen VTA's commitment to the environment by reducing the consumption of natural resources, the creation of greenhouse gases, and the generation of pollution in the provision of public transportation services. The strategies to achieve this goal include educational programs and outreach, transit-oriented development, increasing sustainability at existing facilities, incorporating green building practices in new facilities, developing environmental preferable procurement strategies, and establishing a means of measuring the progress of the Sustainability Program.

VTA's sustainability mission is inherently linked to providing the public with a safe and efficient countywide transportation system. According to the American Public Transportation Association (APTA), public transportation reduces energy consumption by the equivalent of 4.2 billion gallons of gasoline, enough to fill up 320 million cars, per year. Those who choose to ride public transportation reduce their carbon footprint and conserve energy by eliminating travel that would have otherwise been made in a private vehicle. The result is fewer vehicle miles of travel and reduced emissions.

VTA became a signatory of the APTA Sustainability Commitment in September 2009. The commitment sets out common sustainability principles, an action plan and a course for progress. Signatories can obtain higher recognition by achieving additional actions, putting long-term processes into place, and attaining reduction targets for a series of indicators. VTA is signed up for the Bronze level, but could move up to Silver, Gold or Platinum as we achieve our goals. Under Bronze, VTA is committed to reduction targets of 2% over the baseline within two years. These reduction targets have been met for VTA's five main operating divisions.

There is no dedicated source of funds for the Sustainability Program. Funding is dependent on the two-year budget process. In FY 14/15, VTA budgeted $1.2 million for the program. Future funding would enable VTA to continue current and planned projects.

Sustainability Team

A Sustainability Team of 10-15 employees meets bimonthly to plan projects and monitor the progress of VTA's Sustainability Program. Members of the Sustainability Team represent VTA's diverse array of responsibilities and functions including Operations, Facilities Maintenance, Engineering, Construction, Fiscal Resources, and Congestion Management. In addition, approximately five employees allocate a portion of their time to support the program.

Accomplishments

Prior to the implementation of a formal sustainability program, VTA made ongoing improvements to improve operations and reduce costs. Examples include: Energy Management System upgrades (2004); replacing HVAC equipment with more efficient models (1997 to 2006); and installing cool roofing materials (2005).

In 2008, when the Sustainability Program was adopted, audits were completed to analyze operations and identify improvement opportunities, including formal audits by PG&E and the Santa Clara Valley Water District. The Sustainability Team focused on "low-hanging fruit" items first and was able to accomplish over $800,000 in annual savings. Past accomplishments since the adoption of VTA's Sustainability Program are described below.

Energy

In 2012, Lockheed Martin's Heavy Industry Energy Efficiency Program performed a site audit of select light rail stations and Guadalupe Division exterior lighting to evaluate potential energy saving opportunities. Lockheed's Program recommended that VTA replace the existing 102 High Pressure Sodium (HPS) lamps (100-150 watts each) with LED fixtures (40 watts each). The replacement was complete in early 2013. The lighting quality and visibility of the station has improved from a yellow to white color. Implementing ▶

this measure has resulted in an estimated annual cost savings of $7,962, lowering the capital cost to $45,842. This results in a payback of 5 to 6 years.

In 2011, solar parking structures consisting of 5,070 SunPower high-efficiency solar panels, totaling 2.1 megawatts, were installed at Cerone, Chaboya, and North Divisions. The clean electricity provided from these solar panel systems will offset VTA's three bus maintenance divisions' electricity demand and save $2.7 million in electricity costs over the next 20 years. The solar panels will help cut California's atmospheric pollution by reducing carbon dioxide levels by an estimated 2,000 metric tons each year, which is equivalent to removing more than 9,000 cars from California's roads or planting 10,000 acres of trees over the next 20 years. The panels also shade and protect VTA vehicles.

Solar panels installed at VTA's three bus maintenance divisions are expected to save $2.7 million in electricity costs over the next 20 years.

In 2009, VTA's Sustainability Program implemented several initiatives to conserve energy and reduce costs. To minimize electricity usage of light rail operations, VTA optimized the number of cars per light rail train during peak and non-peak hour and began turning off auxiliary power systems for light rail vehicles parked at the Guadalupe Light Rail Division. Based on a PG&E evaluation, it is estimated that these measures have achieved an annual electricity savings of approximately six million kilowatt hours, avoided three million pounds of greenhouse gases, and annual cost savings of approximately $723,000. A submeter was also purchased at the Guadalupe Light Rail Division which helped identify $107,000 in overcharges in PG&E's billing.

Modifications were completed at the River Oaks Division to enable participation in PG&E's Automated Demand Response Program to reduce electricity usage during periods of high demand. VTA received $35,000 in technical and participation incentives to help fund the modifications.

VTA's Information Technology Department programmed desktop computers to automatically go into hibernation mode after two hours of no activity and replaced 60 CRT monitors with energy efficient LCD monitors.

Finally, VTA partnered with a local technology company to install a 27-kilowatt High Gain Solar Plant at the Cerone Division. The project was a pilot to market a new type of solar collector that was designed to collect more energy per square foot and be less expensive to procure than traditional solar flat panels. Skyline Solar built the plant at no cost to VTA.

Optimized the number of cars per light rail train = annual savings of
$251,515 and **2,032,774** kWh

Turning off auxiliary power = annual savings of
$471,725 and **3,812,536** kWh

Combined these savings equate to the electricity needed to power the San Jose SAP Center for over 7 months

In 2008, VTA partnered with PG&E to complete Integrated Energy Audits of its main operating divisions. The audits recommended retrofitting existing fluorescent and metal halide lighting fixtures with energy efficient models. To date, VTA has replaced over 2,100 lighting fixtures with T-8s, T-5s, and LEDs. Occupancy sensors have also been installed in conference and break rooms per audit recommendations.

Transportation

In March 2013, VTA received a free electric vehicle charging station (EVCS) from ChargePoint, which was installed at River Oaks Division. Demand quickly outpaced capacity, and a second EVCS was purchased for River Oaks in June 2013. These two chargers have the ability to charge four vehicles simultaneously. VTA is currently working on bringing electric vehicle charging to other divisions and facilities.

In 2009, the Sustainability Program funded projects to update bike lockers and purchase fuel efficient non-revenue vehicles. The funding assisted with the conversion of 110 bike lockers across 12 transit centers, to utilize BikeLink smart cards. The BikeLink smart cards enable on-demand bike parking which facilitates a greater number of users. In addition, 15 fuel-efficient hybrids were purchased to retire older vehicles in the non-revenue fleet.

Waste

Continual improvements have been made to VTA's recycling programs and services to reduce the amount of waste hauled off to landfills. In 2013, recycling posters were updated to reflect VTA's mixed recycling program for paper, metal, glass, plastic, wood, and cardboard. Site visits were conducted to monitor recycling usage at VTA's operating divisions and BART field offices. In 2012, new recycling containers were added to bus operator and maintenance training areas at Chaboya Division. In 2009, a composting program was started at the River Oaks cafeteria. Compost bins are used by the kitchen staff and patrons to discard leftover food scraps and napkins.

VTA's Sustainability Program strives to find creative solutions for items that do not have a traditional recycling market. In 2011, VTA started donating spent CDs and DVDs to Resource Area for Teachers, a non-profit organization and certified Green Business, that uses the items for educational projects. In 2010, a local polymer recycling vendor was identified for recycling plastic vandal shields at bus maintenance divisions.

Electronic, universal, and hazardous waste is collected for recycling and proper disposal. In 2012, VTA reduced hazardous waste by 105 tons over calendar year 2011 and improved recycling. In 2008, battery recycling was expanded at the River Oaks Division.

Water Conservation

In 2010, Facilities Maintenance replaced most of the bottled water coolers at VTA's main operating divisions and administrative offices with new filtration units. Some bottled water coolers were retained for emergency supply. The filtration units reduce environmental impacts associated with transport, delivery, and bottling of water and result in a 75% cost savings to VTA.

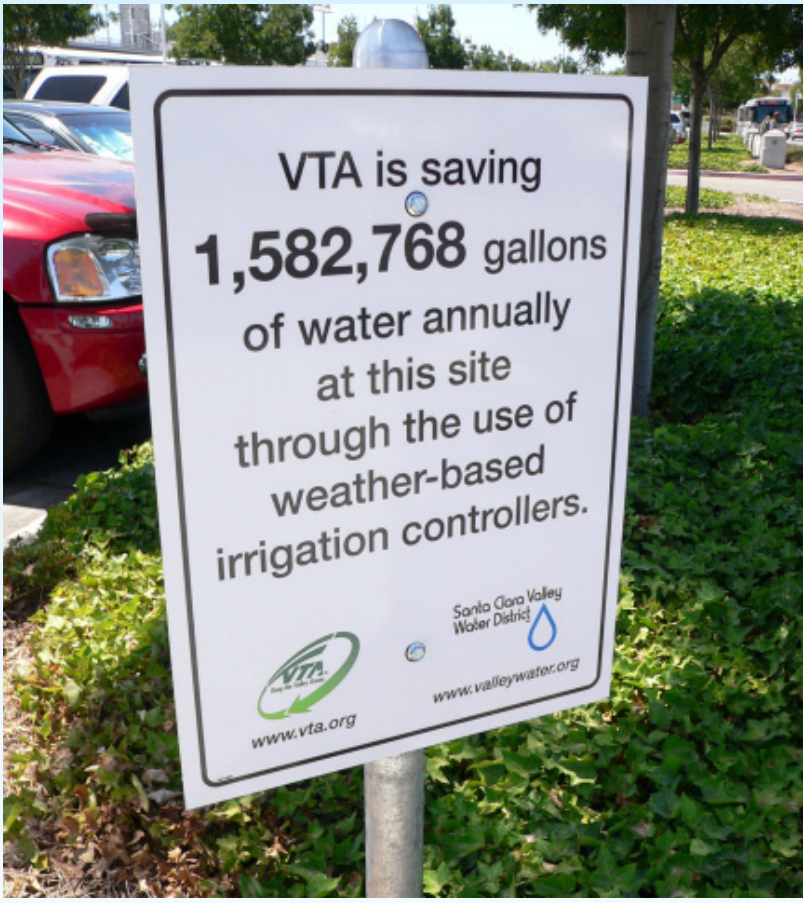
In 2009, many improvements were made to VTA's irrigation systems including flow sensors, irrigation controllers, and sprinkler nozzles. Automatic shut off-flow sensors were installed on backflow preventers at five park-and-ride lots: Great Mall, Penitencia, I-880 Milpitas, Evelyn and Hostetter. The sensors monitor abnormally high or low flows at each location and will automatically shut off flow to avoid unnecessary water usage. Since installation, VTA staff have received and reacted to alerts of abnormal flows such as up to 18.9 gallons per minute at the Hostetter park-and-ride.

Weather-based irrigation controllers were installed at 21 facilities in partnership with the Santa Clara Valley Water District. The controllers enable staff to receive email alerts, configure watering schedules remotely, and manage irrigation controls based on soil, slope, plant type, and weather conditions. This measure is anticipated to save over twelve million gallons of water and $37,000 per year.

Sprinkler nozzles were also replaced with MP Rotators, which distribute water more efficiently and more uniformly, at the Penitencia Creek Park-and-Ride, the Hostetter Park-and-Ride, the Great Mall Park-and-Ride, and the River Oaks Division.

VTA's Cerone Division was grazed by a herd of goats and sheep between 2009 and 2012. The animals were managed by Living Systems Land Management and offered a natural and cost-effective solution to weed and grass mowing. The grazing was discontinued due to potential impact to burrowing owls.

In 2008, Water Use Surveys were conducted in partnership with the Santa Clara Valley Water District. The surveys recommended toilets, urinals, showerheads, and aerators be replaced with low-flow equipment. To date, VTA has replaced over 90 bathroom fixtures.



Environmental Performance

Introduction

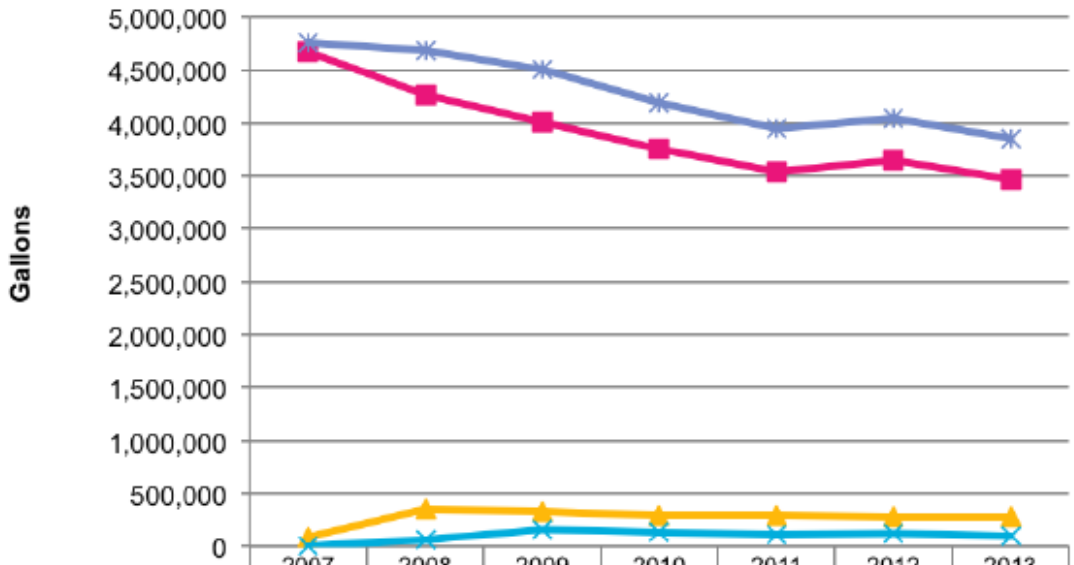
This section documents VTA's sustainability performance using key metrics such as fuel use, energy use, water consumption, and waste diversion. Performance is calculated from utility accounts since the baseline year. The 2007 baseline year represents VTA operations prior to implementation of the Sustainability Program.

Fuel Use

VTA purchases fuel through a joint procurement by the Regional Transit Coordinating Council. VTA has a contract with SC Fuels to supply Ultra-Low Sulfur Diesel Fuel (15 parts per million), Bio-Diesel, and Unleaded Gasoline. The majority of VTA's fleet uses diesel fuel. The average fuel economy is 5 miles per gallon (mpg) for hybrid buses and 4 mpg for standard diesel buses.

Graph 1 shows the annual fuel use for VTA's revenue and non-revenue fleet from the baseline year of 2007 to 2013. In 2013, total annual fuel usage was approximately 3.9 million gallons. This is a decrease of 19% over the base year of 2007, and a 5% decrease from the previous year. Fuel usage has declined due to service changes and replacement of older vehicles with fuel efficient hybrids. In 2013, VTA spent $14,256,582 on fuel. This graph excludes fuel

Graph 1: Fuel Use for VTA's Revenue and Non-Revenue Fleet from 2007 to 2013



	2007	2008	2009	2010	2011	2012	2013
Diesel Fuel	4,670,607	4,260,577	4,013,020	3,758,804	3,538,899	3,641,966	3,468,164
Unleaded Fuel	90,090	359,897	332,046	297,491	295,844	286,085	283,421
Biodiesel	0	67,051	163,361	134,339	112,458	121,758	105,936
Total	4,760,697	4,687,525	4,508,427	4,190,634	3,947,201	4,049,809	3,857,521

used for paratransit service, operated by Outreach and Escort, Inc. As of February 2014, the paratransit fleet is composed of 110 hybrid sedans, 90 minivans, 19 modified vans, and 31 small buses. In FY 12/13, the fleet averaged 20.6 mpg and consumed 333,874 gallons of fuel. Fuel economy has increased by 5.4% from the previous year and by 39% from 2007.

Energy

VTA's electricity and natural gas is supplied by Pacific Gas and Electric (PG&E), City of Palo Alto, Silicon Valley Power (City of Santa Clara), and Solar Star. At Cerone Division, VTA uses liquefied natural gas or propane for heating.

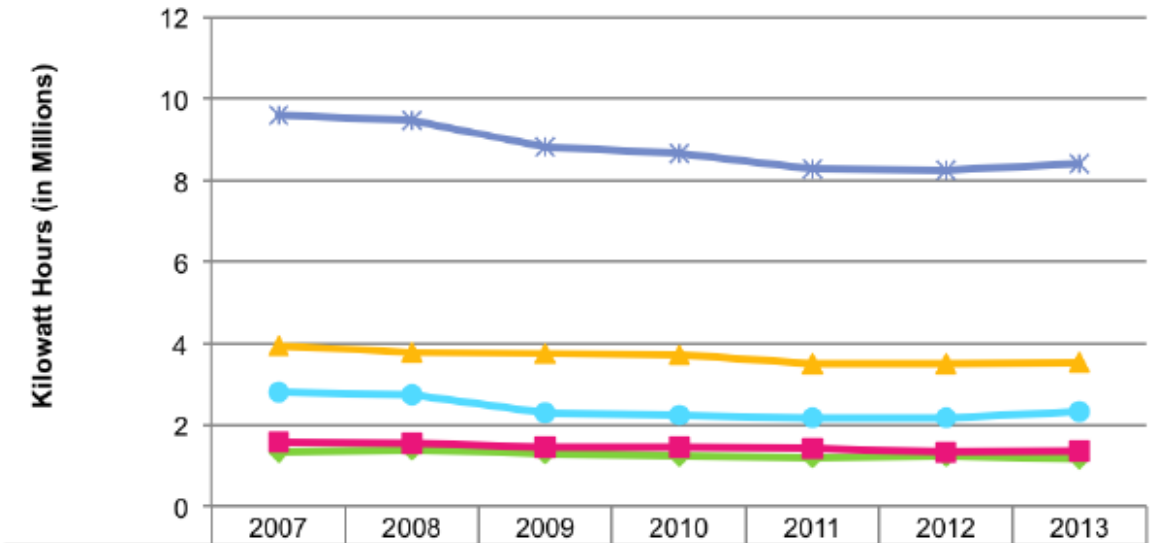
Electricity Usage and Costs

Graphs 2 and 3 show the annual electricity use at Cerone, Chaboya, North, and River Oaks Divisions, and Traction Power (includes Guadalupe Division and traction power substations) respectively. This data includes electricity supplied by VTA's solar installations at Cerone, Chaboya, and North Divisions, which became operational in December 2011. Traction power, which operates the light rail system, is the largest user of electricity at VTA.

VTA spends an average of $4.1 million annually on electricity for its main divisions and traction power. In 2013, total electricity use for the Divisions and traction power was 30,947,517 kilowatt hours (kWh).

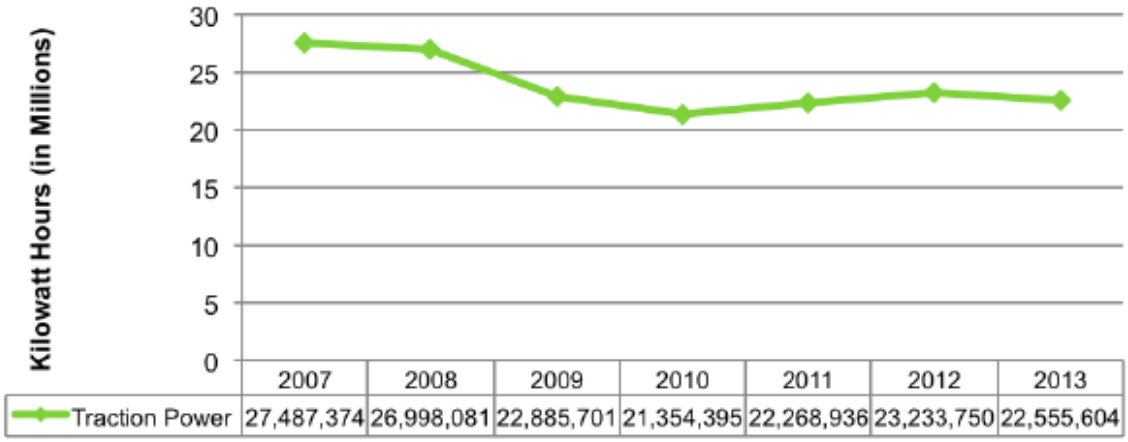
Since 2007, VTA's overall electrical use has decreased by 16.7% due to energy efficiency projects, resulting in a cost savings of over $2 million. In the last year, however, traction power electrical use has increased by as a result of an 8% increase in the total train miles. Electricity use at operating facilities was consistent with 2012.

Graph 2: Electrical Usage at VTA's Main Operating Facilities from 2007 to 2013



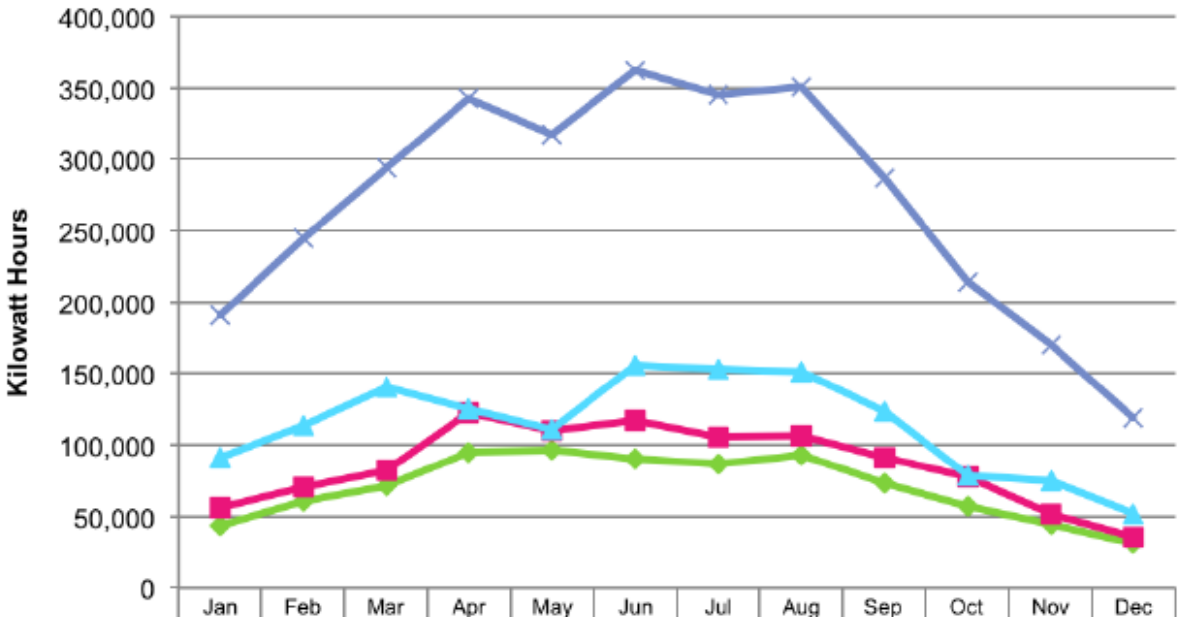
	2007	2008	2009	2010	2011	2012	2013
Chaboya	1,313,820	1,372,500	1,299,780	1,242,029	1,198,279	1,240,207	1,172,493
North	1,564,500	1,548,600	1,441,020	1,449,383	1,414,579	1,333,999	1,363,451
Cerone	2,793,600	2,754,000	2,314,711	2,249,874	2,183,451	2,162,193	2,327,043
River Oaks	3,928,944	3,789,036	3,758,537	3,707,163	3,489,350	3,497,754	3,528,925
Total	9,600,864	9,464,136	8,814,048	8,648,449	8,285,659	8,234,154	8,391,913

Graph 3: VTA's Traction Power from 2007 to 2013



	2007	2008	2009	2010	2011	2012	2013
Traction Power	27,487,374	26,998,081	22,885,701	21,354,395	22,268,936	23,233,750	22,555,604

Graph 4: Solar Electricity Production in 2013 by Month



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Chaboya	43,226	60,830	71,516	94,557	96,753	90,101	86,699	93,052	72,959	56,887	44,182	30,988
North	56,440	70,492	82,273	122,500	110,062	116,663	105,861	106,307	91,177	77,947	51,358	35,547
Cerone	90,901	113,607	140,278	125,582	110,919	155,794	152,943	151,079	122,993	78,892	74,795	51,977
Total	190,566	244,930	294,067	342,639	317,735	362,558	345,503	350,438	287,129	213,726	170,335	118,511

Solar Electricity Production

Solar electricity is procured through a power purchase agreement, and excess electricity generated is fed into PG&E's power grid in exchange for credit. This credit is used to offset the cost of electricity purchased during times when the sun is not shining.

Solar electricity generation at Chaboya and North Divisions accounted for 71% and 75% of all electricity used, respectively. Solar electricity accounted for 59% of electricity used at Cerone Division. This lower production is due to an inverter malfunction at Cerone during the months of April and May, but Solar Star's minimum performance guarantee was still met. Graph 4 shows monthly solar electricity generation in kWh at each of the three Divisions where it was installed. Graph 5 shows net electricity use at the Divisions by source. As shown, the installed solar panels produce more electricity in the summer months, when electricity rates from PG&E are at their highest. In addition to offsetting peak summer rates, the excess electricity generated is fed back to the grid at a high rate, resulting in higher credits earned for VTA. Existing solar performance in comparison to existing Power Purchase Agreement contract amounts and pro forma expectations will be evaluated in 2014.

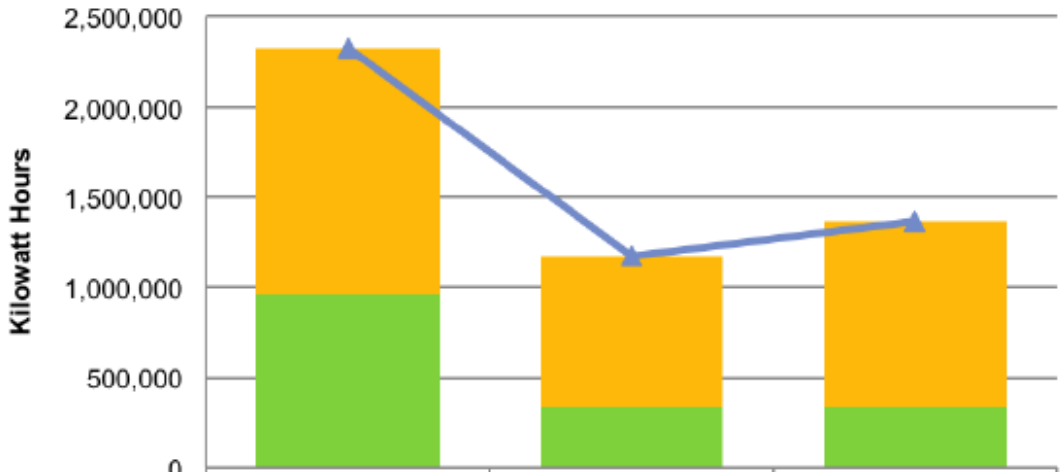
Natural Gas Usage and Costs

Natural Gas is used for operating space heaters and heating water at Chaboya, North and Guadalupe Divisions. River Oaks Division uses natural gas for heating water only. Propane is used for heating at Cerone Division.

Graph 6 shows the annual use of natural gas at Chaboya, North, River Oaks, and Guadalupe Divisions. In 2013, total natural gas usage was 141,625 therms. Usage has decreased by 18% from a record-high in 2008. VTA spent approximately $108,000 on natural gas in 2013 which is lower than the annual average of $133,000.

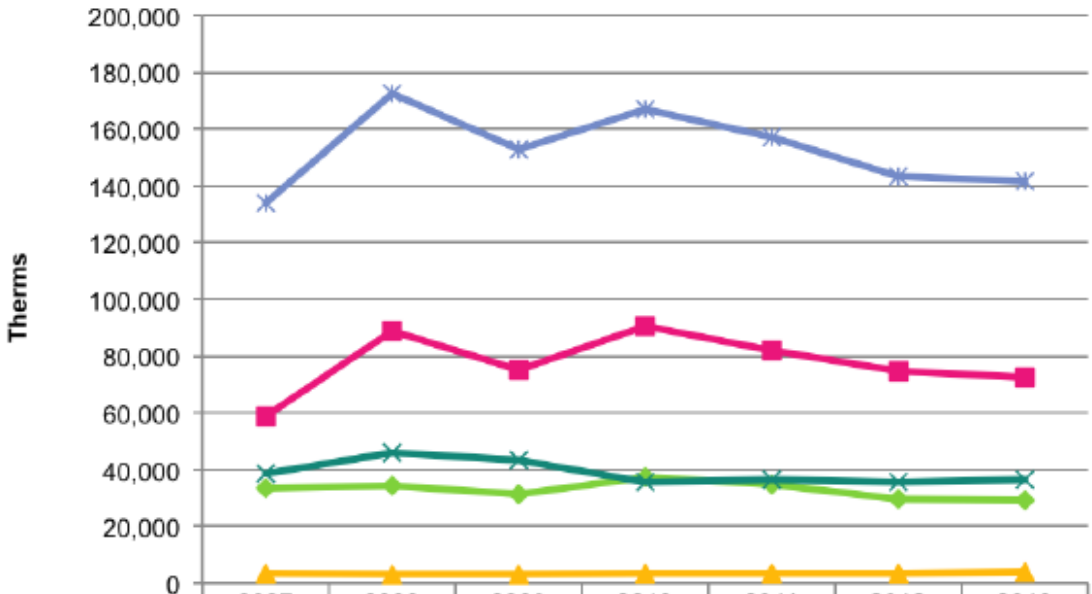
In summer of 2012, VTA reviewed its usage at North Division, which was high compared to Chaboya and Guadalupe Divisions. A leak was found and repaired above the paint booth in October, resulting in an annual savings of approximately $10,000.

Graph 5: Net Electricity Use in 2013 by Source



	Cerone	Chaboya	North
Solar	1,369,759	841,749	1,026,626
PG&E	957,284	330,744	336,825
Total	2,327,043	1,172,493	1,363,451

Graph 6: Natural Gas Usage at VTA's Main Operating Facilities from 2007 to 2013



	2007	2008	2009	2010	2011	2012	2013
Chaboya	33,531	34,516	31,297	37,253	34,772	29,682	29,003
North	58,637	88,780	75,130	90,599	81,936	74,860	72,479
River Oaks	3,232	3,218	3,194	3,296	3,590	3,506	3,825
Guadalupe	38,436	46,068	43,281	35,787	36,572	35,439	36,318
TOTAL	133,836	172,582	152,902	166,935	156,870	143,487	141,625

Water

Graph 7 shows annual water use from 2007 to 2013. VTA's water is supplied from Great Oaks Water Company, San Jose Water Company, and the cities of San Jose, Santa Clara, Sunnyvale, Milpitas, Morgan Hill, Mountain View, and Palo Alto. River Oaks Division used the most water in 2013, at approximately 12.1 million gallons. Water is used primarily for irrigation and indoor/domestic use. Exceptionally high water use this year can be attributed to intensive irrigation of new landscaping due to record-low precipitation levels. 2013 was the driest year on record for Santa Clara County.

Water use at Chaboya, North, and Cerone Divisions is attributed to bus washing, indoor/domestic use, irrigation, and general cleaning. Bus wash schedules have been modified to account for weather conditions. Water usage in 2013 has decreased at Chaboya and North Divisions, but increased at Cerone Division, in comparison with the previous year.

Water use at the Guadalupe Division is attributed to washing light rail vehicles, indoor/domestic use, irrigation, pressure washing and cleaning parts. Water usage in 2013 decreased by 6% in comparison to the previous year due to continued water conservation measures.

Waste and Recycling

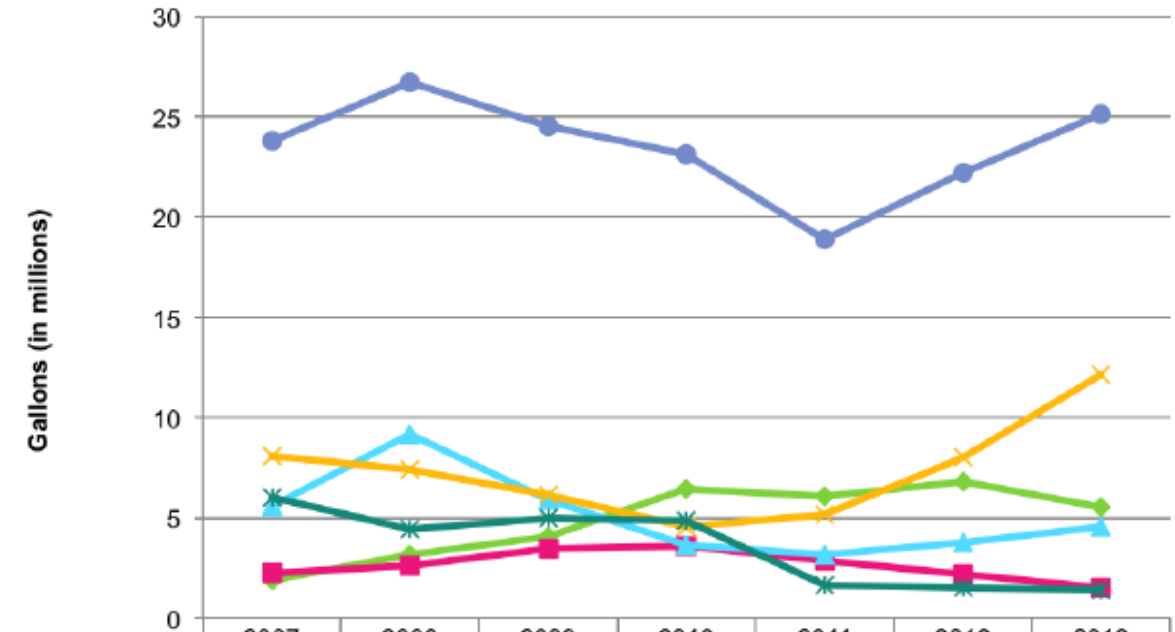
While VTA has waste and recycling programs at its major operating divisions, it does not currently have recycling programs onboard its vehicles or at its transit facilities. Recycling services include wood pallets and green waste. VTA's solid waste providers are Republic Services (City of San

Jose, formerly Allied Waste), City of Mountain View, and the City of Milpitas. VTA staff collects waste from its transit facilities and disposes of it at either the Newby Island or Zanker Landfill. Some waste is also handled by Clear Channel Communications, who maintains certain bus shelters under an advertising agreement with VTA.

Graph 8 shows the annual waste and recycling generation at VTA's main operating divisions from 2007 to 2013. Waste and recycling fluctuates seasonally and from year-to-year based on project cycles. In 2013, approximately 340 tons of materials (mixed paper, plastic, aluminum, glass, wood, and metal) were recycled and 1369 tons of waste were collected by VTA's solid waste providers. Overall, 40.3% of waste has been reduced since 2007 at VTA's main operating divisions. However, waste levels increased 3.5% in the past year. The dip in 2009 is most likely attributed to the addition of a compost program at the River Oaks cafeteria and adjustment of hauling services and container sizes to meet current needs.

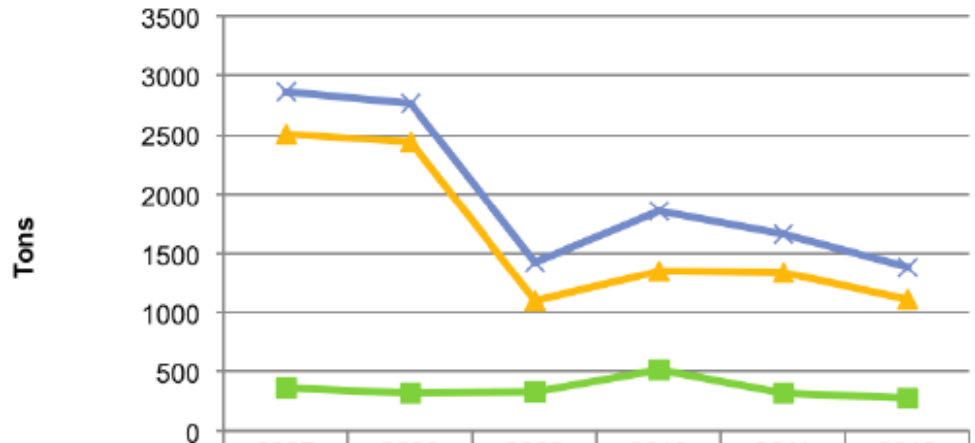
Graph 9 shows hazardous waste production at VTA's main operating divisions for years recorded between 2001 and 2013. Hazardous waste is produced primarily by bus washing and other maintenance activities. Since 2001, total production of hazardous waste has decreased by 70%, due to improvements in waste management, training, and awareness. The increase at Guadalupe Division in 2013 was due to non-routine maintenance of the steam cleaning system.

Graph 7: Water Use at VTA's Main Operating Facilities from 2007 to 2013



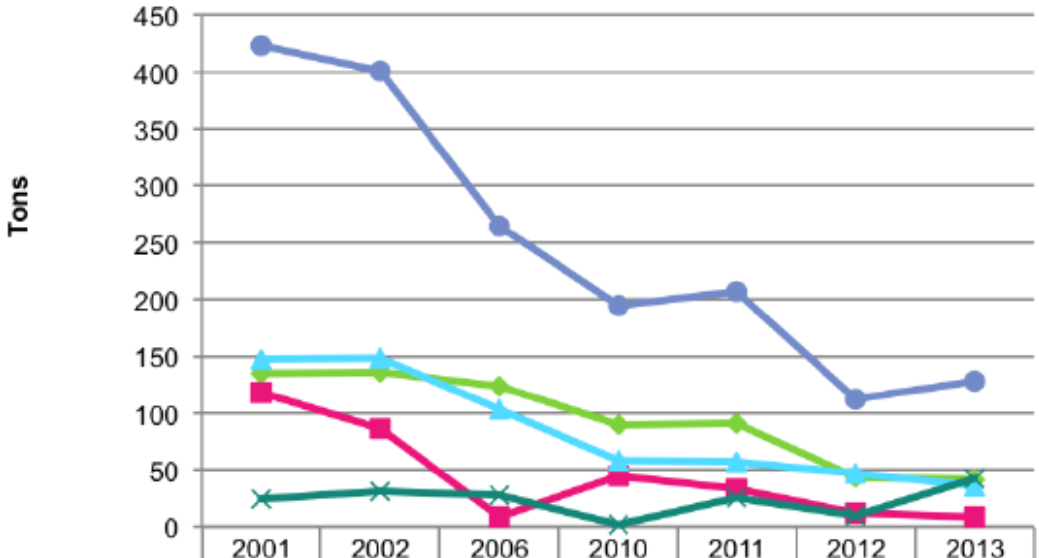
	2007	2008	2009	2010	2011	2012	2013
Chaboya	1,889,448	3,135,616	4,045,184	6,440,280	6,040,848	6,768,652	5,520,240
North	2,249,236	2,634,456	3,436,312	3,608,352	2,873,816	2,174,436	1,502,732
Cerone	5,568,112	9,132,332	5,898,728	3,663,704	3,140,852	3,775,156	4,559,060
River Oaks	8,073,912	7,389,492	6,153,048	4,537,368	5,182,144	7,990,884	12,128,820
Guadalupe	5,976,520	4,432,648	4,959,988	4,853,024	1,617,924	1,487,024	1,395,020
Total	23,757,228	26,724,544	24,493,260	23,102,728	18,855,584	22,196,152	25,105,872

Graph 8: Waste and Recycling at VTA's Main Operating Divisions from 2007 to 2013



	2007	2008	2009	2010	2011	2012
Recyclables	361	325	331	511	320	280
Trash	2501	2442	1095	1350	1337	1106
Total	2862	2767	1426	1861	1657	1386

Graph 9: Harzardous Waste at VTA's Main Operating Divisions for Select Years



	2001	2002	2006	2010	2011	2012	2013
Chaboya	134.3	135.6	124.1	90.1	91.4	43.8	41.8
North	117.7	86.2	8.4	44.6	32.9	12.4	8.1
Cerone	147.6	148.2	103.8	58.1	57.3	46.8	36.1
Guadalupe	24.3	31.0	28.3	1.7	25.2	9.3	42.5
TOTAL	423.9	401.0	264.6	194.5	206.8	112.3	128.5

Current Projects

This section describes projects currently underway or in development by VTA's Sustainability Team. The projects are supported by the Sustainability Program budget. VTA has currently allocated $1.2 million in its two-year FY14/15 budget for the Sustainability Program.

Utility Management Software

In December 2013, VTA signed a contract with EnergyCAP Inc. for Utility Management Software and Services. Using EnergyCAP software, VTA will monitor utility usage at all operating divisions, transit centers, stops, platforms, and other facilities. This data will be used to find opportunities for efficiency improvements, catch mistakes in invoices from utility providers, and identify leaks. The utility management program is scheduled to go live in July 2014.

Utility Meter GIS

A Utility Meter GIS is being developed to improve monitoring of utilities across the entire VTA system and is expected to be complete in early 2015. The Utility Meter GIS will have exact meter locations, photos of each meter, and detailed notes on how to find them.

Energy Efficiency

VTA is currently retrofitting facility lighting to energy efficient fixtures and installing LED lighting on station platforms. Lighting retrofits are being made at all maintenance bays at the Guadalupe Light Rail Division. Lights at this facility

Replacing high pressure sodium lamps with LED fixtures improves light quality and efficiency at VTA station platforms.

will be upgraded from T-5 to LEDs. At station platforms, VTA is replacing High Pressure Sodium (HPS) lights with LEDs at the following light rail stations: Children's Discovery Museum, Tasman, River Oaks, Orchard, Bonaventura, Component, Karina, Metro/Airport, and Gish. A total of 121 HPS fixtures (100-150 watts each) will be replaced with 121 LED fixtures (40 watts each). These retrofits are estimated to achieve an annual savings of $ 9,445, resulting in a payback of 5 to 6 years.

Environmental Management Systems Institute

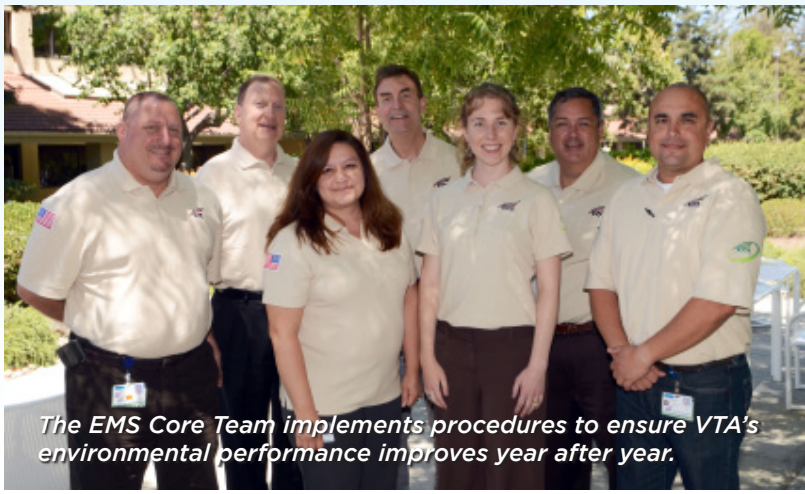
In 2013, VTA was accepted into the Federal Transit Administration's (FTA) fourth round of Environmental Management Systems (EMS) training and technical assistance for public transportation agencies. VTA identified an EMS Core Team to attend trainings at Virginia Tech over the 18-month program and selected the Cerone Bus Division as the EMS fence line.

FTA's training is designed to help agencies develop and implement an EMS, using the 14001 Standard of the International Organization for Standardization (ISO). The Virginia Tech Team will perform a Gap Audit in 2014 to measure VTA's progress towards implementing its EMS. At the conclusion of the program in 2015, FTA and Virginia Tech will publish a case study documenting VTA's commitment to continual improvement and pollution prevention according to the ISO Standard.

Waste Reduction and Recycling

The Sustainability Program is currently working with VTA's Technology Working Group to reduce paper use in administrative offices. In 2013, VTA approved a new contract for office paper made out of 30% post-consumer waste. Prior to this contract, no minimum recycled content was specified. Employees are encouraged to print and copy documents only when necessary and to use multi-functional devices to scan and share documents electronically.

Improvements are continually being made to existing recycling programs. For example, new containers are being added to field offices, break areas, and near printers to make recycling more convenient for employees. Starting with the Great Mall Transit Center in 2015, VTA will begin a solar-powered trash compactor pilot program. These waste receptacles monitor and report remaining capacity to reduce weekly pickup trips. Both features are powered by a solar photovoltaic panel located on top of the bin.


The EMS Core Team implements procedures to ensure VTA's environmental performance improves year after year.

Future Berryessa Station

Future Milpitas Station

Silicon Valley Berryessa Extension

VTA, BART and the Design-Build Contractor (Joint Venture of Skanska, Shimmick, Herzog) aim to achieve best practices in sustainability performance through design and construction of the Silicon Valley Berryessa Extension Project. The two BART stations, in Milpitas and San Jose, are designed based on CALGreen 2010 Standards. This includes green building measures in energy efficiency, water conservation, sustainable materials sourcing, occupant comfort and site impact. Some of the Project Sustainability Measures currently being pursued under the CALGreen umbrella include:

- Use of supplementary cement materials in concrete mixes. The project estimates offseting 15% of Portland cement with fly-ash.
- Use of low-flow indoor plumbing fixtures. The project estimates that annual potable water consumption will be reduced by 35% as a result of this measure.
- Maximize recycling and reuse of demolition waste.
- Use of available city recycled water for landscape irrigation requirements.
- Use of collected ground water for dust control during excavations.
- Use of LED fixtures instead of high density mercury or sodium vapor lamps.
- Use of escalator permanent variance to operate on crawl speeds when users are not present, resulting in reduced energy use and costs.

The Project has incorporated sustainability in the construction process through aggressive waste diversion goals and potable water reduction. Over 25,000 tons of construction waste has been generated since construction began in spring 2012. The total landfill diversion rate is 98.4%. Dust-suppression water trucks are encouraged to refill with collected groundwater whenever possible. At least 1.4 million gallons of potable water has been conserved due to this reuse, as of January 2014.

Outreach and Education

One of VTA's ongoing goals is to increase environmental awareness and promote environmental stewardship in the workplace and in the local community. Ongoing outreach and education to VTA employees includes:

- Introductory sustainability presentation at each New Employee Orientation,
- Monthly articles in employee newsletter *Timepoint*,
- Bike to Work Day competitions,
- Nominations of "Sustainability AllStars" – a recognition program for employees acting as stewards of the environment,

Future Projects and Goals

- Brown Bag Lunch and Learn events,
- E-Waste drop-off days for household waste,
- Seasonal "Farmer's Markets" put on by employees who share produce grown at home,
- Volunteer litter clean-up days, and
- Spare the Air Alert messages when a Bay Area Spare the Air Day is issued.

In addition, VTA's Sustainability Program works collaboratively with Sustainable Silicon Valley, Joint Venture Silicon Valley, and local agencies to combat climate change and promote environmental stewardship. For example, VTA is a task force member for the Silicon Valley 2.0 Project, a regional effort, managed by the Santa Clara County Office of Sustainability and funded by the Strategic Growth Council, to minimize the anticipated impacts of climate change and reduce the generation of local greenhouse gas emissions.

In addition to continuing the work described above, VTA's Sustainability Program identifies at least two additional projects for the next fiscal year.

1. Conduct a greenhouse gas inventory

A greenhouse gas inventory is an accounting of greenhouse gases emitted to or removed from the atmosphere over a period of time. Estimating greenhouse gases emissions would enable VTA to create an emissions baseline, monitor progress, and assess the relative contributions of emission sources per APTA recommendations.

2. Continue to explore funding for renewable energy projects and study opportunities for energy storage

In November 2012, a Request for Proposals was issued to procure a fuel cell for electricity generation at Guadalupe Division. Unfortunately, negotiations did not result in an acceptable financing package. VTA is also looking into energy storage opportunities.

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