

Date: January 28, 2008

Committee Meeting Date: January 17, 2008

Board Meeting Date: February 7, 2008

**BOARD MEMORANDUM**

**ACTION ITEM**

**TO:** Santa Clara Valley Transportation Authority  
Board of Directors

**THROUGH:** Michael T. Burns  
General Manager

**FROM:** John H. Ristow  
Chief CMA Officer

**SUBJECT:** VTA Sustainability Program

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**Policy-Related Action: Yes**

**Government Code Section 84308 Applies: No**

**RECOMMENDATION:**

Approve the VTA Sustainability Program guidelines included as Attachment A.

**BACKGROUND:**

There is widespread international attention given to energy efficiency and environmental sustainability as they relate to greenhouse gas (GHG) emissions and to the effect on global climate change. In response to this, many public agencies, businesses and individuals are proactively taking steps to reduce GHG emissions. VTA supports these efforts and is implementing programs for the conservation of natural resources, the reduction of GHG, the prevention of pollution and the use of renewable energy and materials.

Although the only previous related VTA Board program action was in June 2001 with the adoption of specific Energy Conservation Initiatives in response to the energy crisis, VTA has been involved in sustainability programs for a number of years. For example, beginning in 1998, VTA began replacing over ninety rooftop air conditioners with Energy Star rated equipment. In 2001, VTA installed the first of 19 solar powered bus stops in South County. New water treatment plants were installed at the North Division in 2002 and at the Cerone Division in 2006. Since October of 2002, VTA has installed approximately 200,000 square feet of cool energy efficient roofing over thirteen buildings. In 2005, VTA began operating three Zero-Emission buses using fuel-cell technology. And, in 2006, the VTA Outreach Program began operating the first of 60 Toyota Prius Hybrid vehicles now in service.

The Fiscal Year 2008 and 2009 transfer capital budgets approved by the Board of Directors included a total of \$3 million for “green sustainability facility improvements”. The purpose of this project was to assess and implement improvements at VTA facilities to address issues of environmental concern and energy efficiency.

VTA’s Environmental Programs and Resource Management and Facilities Maintenance departments are responsible for identifying and implementing the green sustainability facility improvements with the assistance of an interdepartmental team. In the first six months of the project, the team has initiated certifications of VTA as a Green Business with Santa Clara County and with the U.S. Green Building Council, replaced 10 high-emission vehicles with 10 hybrid vehicles for Protective Services and Construction staff, collected data on VTA’s baseline energy, water/sewer, and solid waste use, and is researching various sustainable actions including installation of solar power facilities. The team is also working with the Santa Clara Valley Water District and PG&E to conduct facility audits that identify no-cost and low-cost as well as larger capital investment projects that can be considered for implementation. Attachment B provides a more detailed listing of activities and projects underway.

### **DISCUSSION:**

VTA currently does not have formal guidelines for sustainability program goals and implementation. By establishing guidelines for the program, including goals and implementation strategies, VTA can more consistently consider sustainability in the procurement of products and in the planning, design, construction, and operation of VTA’s facilities. The Sustainability Program guidelines will allow VTA to consider the long term benefits, as well as shorter term budgetary issues, during the procurement evaluations. Approving the Sustainability Program would be the first step in improving VTA’s practices and procedures to consider the environmental benefits and the operational efficiencies of sustainability in the planning, designing, supporting and operating transportation facilities throughout the county as well.

One of the major challenges in considering sustainability is evaluating the potentially higher upfront cost versus the longer term benefits of the more sustainable but higher cost product. In many cases, sustainable products or sustainable project features may initially cost more than conventional products or technologies. Sustainable features such as renewable energy systems energy-efficient lighting or drought-resistant landscaping may have a higher initial capital costs but may prove to be cost-effective when a consideration of sustainability and long term efficiency goals are taken into consideration.

Environmental sustainability is just one of many factors that would be considered in the planning and procurement process. Over the longer term, the Sustainability Program should result in a financial benefit to VTA in terms of facility operating efficiencies and energy savings. However, the approval of the Sustainability Program could also result in an increase in the initial project and procurement costs for VTA. One of the implementation strategies of program is to evaluate the best practices and products which can offset the higher upfront costs with cost savings from the efficient use of energy, the reduction in waste, and the conservation of natural resources. One of the next steps of the Sustainability Program will be to develop product procurement cost/benefit decision-making criteria incorporating analysis of the lifecycle return on investments and guidelines on the allowable increase in cost for incorporating sustainable features into a project or purchase.

In the future, as additional technologies and other specific implementation approaches are developed, VTA staff will report back to the Board of Directors on progress at accomplishing the goals and strategies contained in the Sustainability Program.

**ALTERNATIVES:**

The alternative is to make no changes to VTA's current policies and procedures or modify program guidelines pursuant to Board direction.

**FISCAL IMPACT:**

The approved VTA Operating and Capital FY 2008 and 2009 budget includes \$3,000,000 for initiation of the Sustainability Program including VTA staff support for coordination of the program and lower cost, near-term capital improvements. Continuation of the program beyond FY 2009 will require future budget appropriations.

**STANDING COMMITTEE DISCUSSION/RECOMMENDATION:**

The Administration and Finance Committee acting as a Committee of the Whole, with Directors Williams and Reed attending, considered this item on January 17, 2008 and made the following comments:

- Strongly supported the Sustainability Program's goal and strategies.
- Expressed an interest in biodiesel fuel potential for buses. (Staff is following up.)
- Questioned whether the VTA green logo, "Keeping the Valley Green", should be trademarked.

Prepared by: Tom Fitzwater, Manager of Environmental Planning and Resource Management

## **VTA'S SUSTAINABILITY PROGRAM**

VTA is committed to creating a greener Santa Clara Valley. VTA's Sustainability Program will strengthen VTA's commitment to the environment through the conservation of natural resources, the reduction of greenhouse gases, the prevention of pollution, and the use of renewable energy and materials.

### **GOAL:**

To proactively reduce the consumption of natural resources, the creation of greenhouse gases, and the generation of pollution in the provision of public transportation services.

VTA's goal and the strategies that follow are designed to improve the sustainability of VTA's operations by achieving the Bay Area Green Business Program's objectives; complying with all applicable environmental regulations and striving to exceed compliance; conserving energy, water and other natural resources; developing and implementing practices that prevent pollution and waste; and acting as an environmentally responsible business within the community.

### **STRATEGIES:**

- 1) Develop and implement public educational programs that promote the environmental benefits of public transit.
- 2) Support sustainable, transit-oriented development along major transit corridors to maximize the use of VTA's buses and light rail system as environmentally friendly alternative to the single-occupant automobile.
- 3) Evaluate the sustainability of VTA's existing facilities. Implement cost-effective sustainable maintenance and operational measures that recognizes life-cycle returns on investments from the efficient use of energy, the reduction of waste, and the conservation of natural resources.
- 4) Incorporate sustainability and green building principles and practices in the planning, design, construction and operation of new VTA facilities.
- 5) Develop procurement strategies that incorporate sustainability criteria compatible with federal and state regulations.
- 6) 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, electrical, and water usage on a regular basis.

**SUSTAINABILITY-** Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

## ATTACHMENT B

### SUSTAINABILITY PROGRAM ACCOMPLISHMENTS IN 2007

DATE	ACTIVITY	ATTENDEES & KEY STAFF	COMMENTS
<b>2007</b>			
June 7	Met with Santa Clara County Green Business Program Representative	Fitzwater, Jaworski	Discussed program and VTA involvement
June 19	Met with Executive Committee	Fitzwater	Committee supported Draft Program
June 21	Submitted Green Business Program application	Jaworski	Initiated certification process
July 10	SVRT green workshop	Fitzwater	Attended workshop discussing SVRT opportunities. Including solar at yard
July 19	1 <sup>st</sup> Green Program meeting	VTA Team	
July 27	Green fleet workshop, Silicon Valley Clean Cities Coalition	Halstead	Attended workshop
July 29-31	APTA Sustainability and Public Transit Workshop, Seattle	Fitzwater, Basma, Gaither	Overview of nationwide transit agency programs
Aug 3	SolarCity meeting	Hursh, Fitzwater, etc	Solar vendor meeting
Aug 15	Joined U.S. Green Building Council	Newgren	Initiated LEED certification process
Aug 16	2 <sup>nd</sup> Green Program meeting	VTA Team	
Aug 28	LEED workshop, Monterey	Newgren	Attended training for LEED certification
Aug	AC Transit Solar Facility field trip	Fitzwater, Mahaffey, etc	Visited Seminary Bus Yard site
Sept 1	SB 14 report released	Marchetti, Gordon	VTA hazardous material generated has decreased by 39% between 2002 and 2006
Sept 1	Cafeteria agrees to phase out styrofoam cups	Weisert, Peterson	Transition to paper cups scheduled for Jan., 2008
Sept 4	Irrigation Audit of River Oaks	Jaworski	Results of audit received in Nov. 2007
Sept 14	Solid Waste Audit of North Yard	Soto, Jaworski	Results of audit received in Oct. 2007
Sept 18	Water Audit of River Oaks	Lasich, Jaworski	Results of audit expected in Feb. 2008.

<b>DATE</b>	<b>ACTIVITY</b>	<b>ATTENDEES &amp; KEY STAFF</b>	<b>COMMENTS</b>
Sept 19	Water Audit of Guadalupe	Giles, Jaworski	Results of audit expected in Jan. 2008
Sept 20	3 <sup>rd</sup> Green Program meeting	VTA Team	
Sept 21	PG&E meeting	Hursh, Fitzwater, Jaworski, Mahaffey, Halstead	Discussed opportunities
Sept 24	Water Audit of Chaboya	Mazzanti, Newgren	Results of audit expected in Jan. 2008
Sept 25	Sent letter to PG&E requesting Energy Audit	Hursh, Jaworski	Initiated audit process
Sept 26	SVLG Clean and Green Conference	Fitzwater	Attended conference
Sept 26	Water Audit of North Yard	Soto, Newgren	Results of audit expected in Jan. 2008
Sept - Oct 2	APA Statewide Conference, sustainability sessions, San Jose	Fitzwater	Attended sustainability sessions
Oct 3	Sustainable SV Annual Meeting	Newgren	Attended meeting and received certificate
Oct 12	City of San Jose solar meeting	Fitzwater, Jaworski, Halstead, Weisert	Learned about their comprehensive solar program and teaming opportunity
Oct 18	4 <sup>th</sup> Green Program meeting	VTA Team	
Oct 19	PG&E partnership meeting	Hursh, Fitzwater, Jaworski, etc	Will be auditing all VTA facilities beginning in Nov/Dec 2007
Oct 22-23	Focus on the Future conference	Fitzwater, Ristow	Attended global warming sessions
Oct. 23	City of San Jose solid waste meeting	Mahaffey, Halstead, Jaworski,	Provided resources and advice for recycling
Oct	2 <sup>nd</sup> Executive Committee meeting	Fitzwater, Jaworski	Program update
Nov. 9	Motion detectors installed in River Oaks conference rooms	Halstead	Implemented improvement
Nov. 9	PG&E traction power meeting	Jaworski, Douwes, Sabherwal	Discuss audit of LRT vehicle
Nov. 15	5 <sup>th</sup> Green Program meeting	VTA Team	
Nov. 16	Declassified filtercake waste from wastewater treatment to non-hazardous	Marchetti, Gordon	Acknowledgement of improvement

<b>DATE</b>	<b>ACTIVITY</b>	<b>ATTENDEES &amp; KEY STAFF</b>	<b>COMMENTS</b>
Nov. 28	Allied Waste meeting	Fitzwater, Jaworski, Mahaffey, Halstead, Newgren	Learned about programs and will schedule waste audits for all SJ facilities
Nov. 29	Purchase Power Agreements Workshop	Fitzwater, Jaworski, Weisert	Attended SJ sponsored workshop
Dec. 7	Hybrids purchased	Halstead	All 10 hybrid Ford Escapes received, 10 older vehicles retired
Dec. 18	Energy Audit of Cerone	Jaworski	Received preliminary recommendations on 12/20/07. Full report due in 5 weeks.
Dec. 20	6 <sup>th</sup> Green Program meeting	VTA Team	
Dec. 26	Submitted requests to SCVWD for irrigation audits at 14 VTA facilities	Jaworski	Initiated audit process

## **SUSTAINABILITY PROGRAM MAJOR PLANNED ACTIVITIES IN 2008**

### **Programwide**

- Board approval of Sustainability Program (February 2008)
- Achieve Green Business Certification for VTA's five major divisions (June 2008)
- Achieve LEED Certification for North Yard (June 2008)

### **Energy**

- Implement no-cost and low-cost recommendations from PG&E audits (June 2008)
- Partner with the City of San Jose on a solar assessment of VTA's Childrens' Discovery Museum Light Rail Station (June 2008)
- Prioritize and implement recommendations from PG&E audits that require capital investment (December 2008)
- Install solar panels at Guadalupe Light Rail Division or at North Yard (December 2008)

### **Water**

- Implement recommendations of River Oaks irrigation audit, including improving irrigation efficiency and installing a weather-based irrigation controller (March 2008)
- Prioritize and implement recommendations of water audit at VTA's five divisions (June 2008)
- Prioritize and implement recommendations of irrigation audit at fourteen VTA facilities (June 2008)

**Solid Waste**

- Begin paper recycling at SVRT Hynix offices (February 2008)
- Identify opportunities and establish goals for reducing VTA's waste stream and increasing recycling (March 2008)
- Develop educational campaign for VTA employees (March 2008)
- Work with VTA Contracts on the solid waste contract that expires in September 2008 (June 2008)

**Hazardous Materials**

- Review the reclassification of waste from Chaboya's steam cleaning and other operations as non-hazardous (March 2008)
- Study elimination of wastewater accumulation and hazardous waste generation in bus wash and steam clean sumps and interceptors at Chaboya, Cerone and Guadalupe. This would reduce or eliminate the need for quarterly pump outs and offsite disposal of the waste waters (June 2008)