

Tím Cole Sustainability Officer VP Green Schools National Network

http://www.vbschools.com/sustainableschools

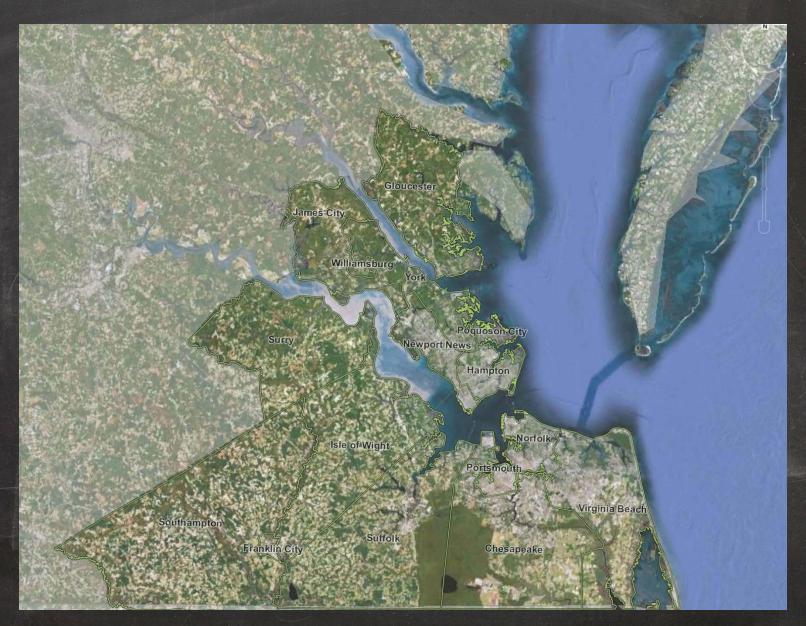
# Virginia Beach City Public Schools



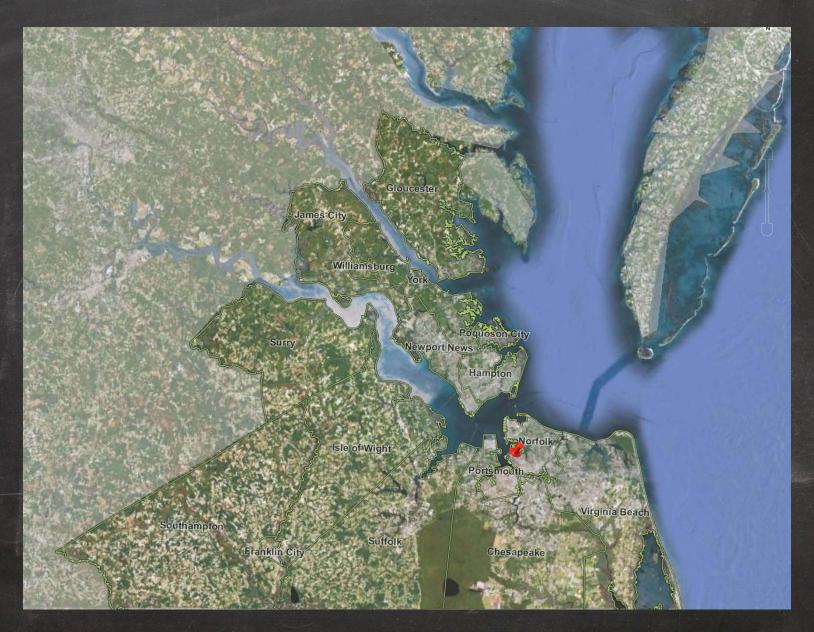


85 schools 15,000 employees 69,000 students 1,900 acres

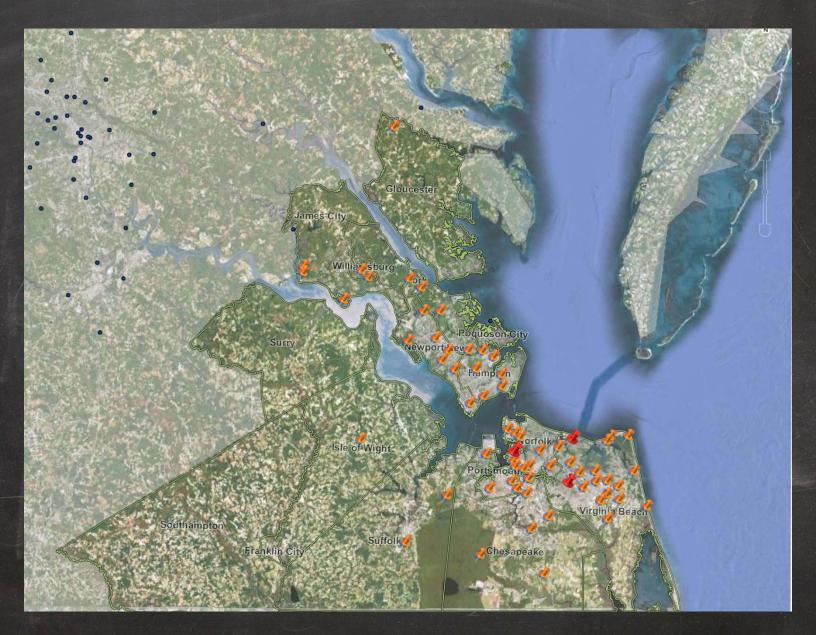
10.6 million square feet of building space



36<sup>th</sup> Largest Metropolítan area in the country



Number of USGBC LEED Buildings in Hampton Roads in 2004 (1)



Number of USGBC LEED Buildings in Hampton Roads in 2014 (198)

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Report: Va. Beach one of most conservative cities

2011 or latest, 1-most conservative, -1-mo

1

Oklahoma City, OK Virginia Beach, VA Colorado Springs, CO

#### Conservatism in America



Source: "Representation in Municipal Government" by Chris Tausanovitch and Christopher Warshaw March 2014. American Building Science Project (forthcoming).

San Francisco, CA

## Virginia Beach City Public Schools Sustainability Goals:

- 1. Develop a sustainable building infrastructure.
- 2. Integrate sustainable practices throughout the school division.
- 3. Educate the public about the importance of sustainability.

1.6 million square feet of LEED building space

Emíssion Reduction Plan

Policy 3-67

62 schools w/ Outdoor teaching gardens
63 schools with environmental clubs
37 regional and national awards



Pupíl Transportation & Maintenance Facility (LEED Platinum)

10.6 million S.F. of Building inventory, 1.6 Million S.F. is designated as LEED.



Great Neck MS LEED GOLD



College Park ES LEED Platinum



Pupil Transportation LEED Platinum



Virginia Beach MS LEED Silver



Renaissance Academy LEED Gold



Windsor Oaks ES LEED Silver



Hermitage ES LEED Certified



Kellam HS LEED Gold Pending



ODC/KLMS LEED Gold Pending

Buildings





College Park ES LEED Platinum



Pupil Transportation LEED Platinum



Virginia Beach MS LEED Silver



Kellam HS LEED Gold Pending

Section 19 contract	School Name	Year Opened	Const. Cost	Regional Average	LEED Status	LEED Cost	% of Project
	Hermitage Elementary	2005	\$102/SF	\$130/SF	Certified		
	Windsor Oaks Elementary	2010	\$168/SF	\$189/SF	Silver		
	Renaissance Academy	2010	\$187/SF	\$203/SF*	Gold	\$1.45 Míll	2.2%
	Virginia Beach Middle	2010	\$209/SF	\$232/SF	Silver	\$1.17 Míll	2.5%
	Great Neck Middle	2011	\$166/SF	\$236/SF	Gold	<b>\$</b> 525,000	2.4%
	Pupíl Transportatíon	2011	\$185/SF	NA	Platinum	<b>\$</b> 375,000	1.7%
	College Park Elementary	2011	\$195/SF	\$234/SF	Platinum	\$1.48 Míll	1.45%
	Kellam Hígh School	2014	\$214/SF	\$232/SF	Gold (Projected)		

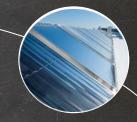
Regional Average Data provided by "School Planning & Management's" Annual School Construction Report.







Photovoltaics

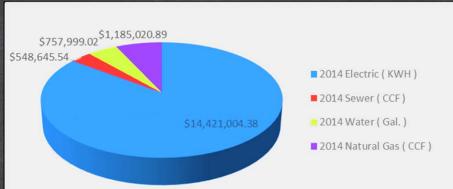


Solar Hot Water



Educational Signage

Energy Star and performance contracting are key components in our sustainable infrastructure program.



Total utility Cost for FY14 \$16,912,670

HVAC Replacement

Geothermal



Energy Star 27 Schools 2.8 Million SF

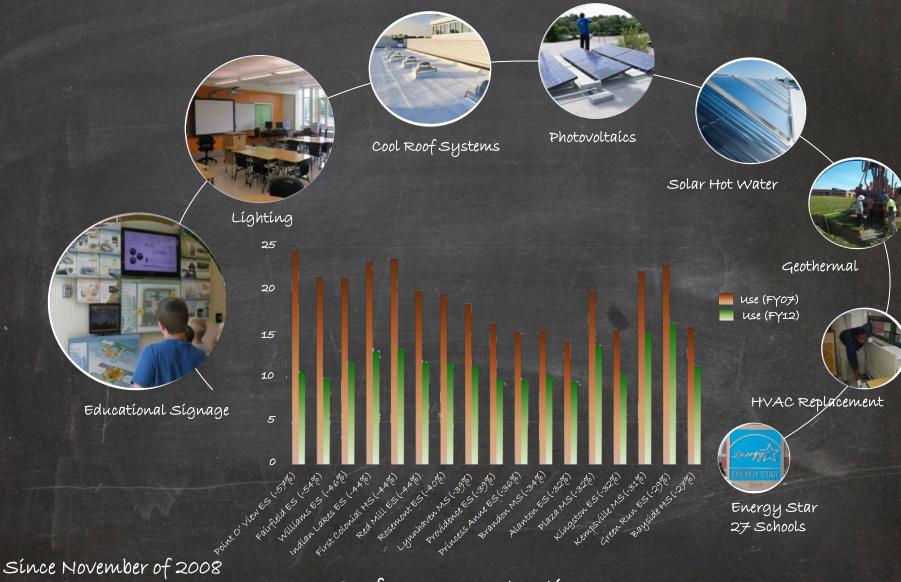
### Change in Average ENERGY STAR Score

+25 > Change in Average ENERGY STAR Score

59 Durrent Average ENERGY STAR Score

34 Baseline Average ENERGY STAR Score

Average VBCPS Energy Star Score FY08=34 Average VBCPS Energy Star Score FY14=59



- \$14M in Contract work
- \$1.8M in cost avoidance/yr

Performance contracting





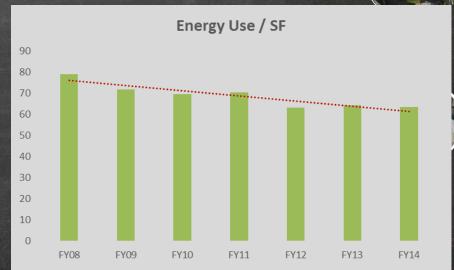




Solar Hot Water







Energy Star 28 Schools

Sínce FY06, VBCPS SF has increased nearly 9% -During this time, energy use per square foot has declined 21%





Sustainable Schools Committee

Committee is comprised of representatives from departments throughout the division; school Plant, custodíal, purchasing, technology, transportation, etc.....











Plastic cap recycling

· Green Cleaning program (Green Seal and EPA's DFE, certifications)

- · Team Cleaning program
- Removal of personal appliances across the division.
- Elimination of Styrofoam trays
- Reusable utensils
- Purchasing of Local Produce
- No idle policy
- Reduce transportation stops
- Installation of GPS devices in vehicles
- Adjusted temperature range

71-75 during occupied, 78 in gyms (with some exceptions) 63 § 80 on unoccupied setback

- Four day work week during summer
- Holiday and Break set-backs
- Remove manual HVAC overrides
- Performance contracting
- LEED construction
- GHG Emissions study
- Sustainability Report
- Etc....



STEM and the built environment

Initiatives introduced through the committee are responsible for over two million dollars in cost avoidance each year.



Teaching Gardens



Environmental Clubs



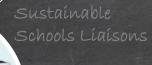
Outreach



Cell phone recyclina



Plastic cap recycling





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Rest Art Services	Coffee Makers	Microwave s	Mini- Fridges	Toaster Ovens	Space Heaters	Oth er	Total s	Response s	Total Est. Annual Cost
ES	180	610	760	29	58	53	1690	49	
MS	85	252	355	32	17	35	776	11	
HS	109	348	364	29	37	29	916	14	THE SECOND SECOND
Auxiliary	<u>5</u>	<u>11</u>	<u>20</u>	<u>3</u>	<u>12</u>	<u>5</u>	<u>56</u>	<u>3</u>	
Totals	379	1221	1499	93	124	122	3438	77	
Estimated Annual		30	No. of the State o		18.5	2,000		300V 1435	
Cost	\$5,257	\$9,534	\$273,105	\$884	\$2,945				\$291,725

Currently have 150 Sustainable School Liaisons.

This is a voluntary position with no additional pay.



<u>Sustainable</u> Schools Liaisons



Teaching Gardens



Environmental Clubs

Act as a conduit between the sustainable

schools committee and the school.



Outreach



Cell phone recycling



Plastic cap recycling

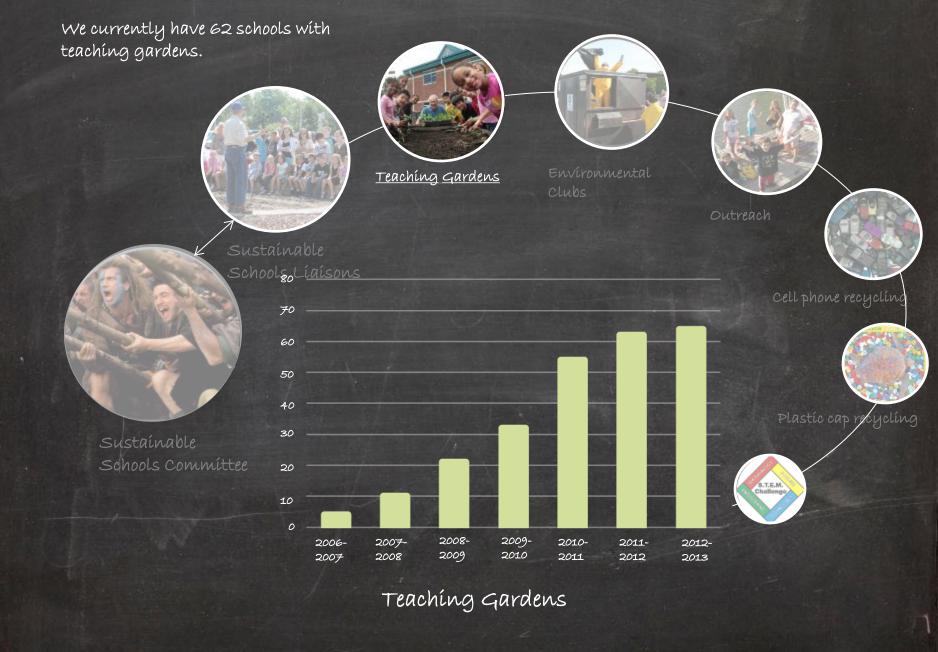


Buildings



STEM and the built environment

Teachers that attend annual Liaison training earn license renewal points and professional learning points.



1,931 students We currently have 70 schools with last year. environmental clubs. Environmental clubs cell phone recycling 80 70 60 50 Plastic cap recycling 40 30 20 10 2008-2009-2006-2007-2010-2011-2012-2009 2010 2008 2011 2007 2012 2013 Environmental Clubs





- Resiliency -Terrain and situation dictate (expect change and be ready for it)
- Embrace risk (better to ask for forgiveness than permission)
- Lead by example
- "Better than most" is not acceptable



em-pa-thy 'empəTHē/ noun

1.the ability to understand and share the feelings of another.

