

**2012-2013 GREEN RFP PROGRAM
STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE FUNDING PROPOSAL**

Part I- General Information:

Name of Student Organization	SGA Sustainability Committee
Contact/Responsible Person	Spencer Sauter
Contact Office Held/Title	Committee Member
Contact Email Address	sksauter@vt.edu
Contact Telephone Number	973-349-6971

Part II- Project Cost Information

Estimated Cost of this Proposal	\$11,970	See III.C. below
Estimated Savings -	\$ 6,650	See III.D. below
Net Cost of this Proposal =	\$ 5,320	

Part III- Supporting Information

A. Please describe your sustainability initiative and attach supporting documentation.
Of the 28 Residence Halls on campus, 21 have some or no low-flow shower head fixtures. My sustainability initiative is to replace 266 shower head fixtures (currently 3.5 and 3.0 gallons per minute in Slusher Hall and the other 20 Residence Halls) with lower-flow shower heads (2.5 gallons per minute). Once installed the lower-flow shower head fixtures would provide an estimated annual water savings of 23,000,000 gallons.

B. How does this initiative help to achieve the goals of the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan? VTCAC&SP page 47 states "Continue water conservation program throughout campus to reduce water and sewage costs and save energy and emissions required for pumping and treatment." VTCAC&SP page 72 states "Continue energy efficiency and infrastructure improvements in all buildings."

C. What is the cost of your proposal? Please describe in adequate detail the basis for your cost estimate.
The total cost of this proposal \$11,970. It includes \$5,320 for the 266 2.5 GPM lower-flow shower head fixtures and \$6,650 labor cost. Figures were provided by Tim Gift, Associate Director of Facilities Management, Housing and Residence Life (See next pages).

D. Will your proposal produce cost savings for the University? If so, how much? Please describe in adequate detail the basis for your savings estimate. Yes. Over \$45,000 in the first year. (See next pages).

E. Is this funding request an Ongoing or One-Time change (please check one)?

One-time

Ongoing

F. Is funding available for this request from another source? If yes, describe the funding (source, amount, etc.)
Yes. Facilities Management, Housing and Residence Life, will provide the entire \$6,650 labor cost for installation. Thus the net cost of this proposal is just the cost of the 266 shower head fixtures which is \$5,320.

Part IV- Requestors/Reviewers

Prepared By (Name of Contact for Student Organization)	(Date)
Spencer Sauter, SGA Sustainability Subcommittee	Nov 27, 2012

Reviewed By (Name of Office of Energy and Sustainability Representative)	(Date)
	Dec 12, 2012

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2012-13 Green RFP Low Flow Shower Head Fixtures for Residence Halls

Building	Total Showers	Low Flow Heads	Total Needed
Ambler Johnston	All New		
Barringer	36	9	27
Brodie	50		50
Campbell East	All New		0
Campbell Main	All New		0
Cochrane	84		84
Donaldson Brown	109		109
Eggelston Main	24	20	4
Eggelston West	24	20	4
Harper	86		86
Hillcrest	28		28
Johnson	36	9	27
Lee	All New		0
Miles	All New		0
Monteith	16		16
New Hall West	All New		
New Residence East	80	58	22
O'Shaughnessy	39	13	26
Payne	67	38	29
Pritchard	All New		
Peddrew-Yeates	71	64	7
Rasche	52		52
Slusher Tower	36	16	20
Slusher Wing	48	34	14
Special Purpose Housing	130	39	91
Thomas	20		20
Vawter	36	9	27
Newman	47	12	35
Total	440	174	266
			<u>\$20.00</u>
			\$5,320.00
			266
Labor 1 hour @ \$25.00 per hr			<u>\$25.00</u>
			\$6,650.00
Total cost			<u>\$11,970.00</u>

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Cost Savings

Number of students living in Residential Halls	9300
Number of showers per day per student	1
Number of days student and summer conferencing on campus	240
Total estimated student showers	2,232,000
Estimated summer conference showers	50,000
Estimated summer school showers 84 x 300 = 25200	25,200
Total estimated showers per year	2,307,200
Gallons savings per shower @ 3.5-2.5= 1 gal per minute	1
Average shower time at 10 minutes	10
Estimated water savings to convert all SH to Low Flow (in gallons)	23,070,200
Cost per gallon	\$0.00325
Total savings per year	\$74,978.15
Percent of savings with associated with installing 266 new LFSH	60.45%
Total savings per year if project implimented	\$45,327.70