

# SUSTAINABILITY REPORT

## BOARD OF TRUSTEES REPORT

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The following is an overview of some activities conducted by the Office of Sustainability. If you would like additional information please feel free to contact Brandon Bishop at [bishopbj@whitman.edu](mailto:bishopbj@whitman.edu), or at (509) 522-4439.

### Living at Whitman Update:

The new residence hall and Cleveland Commons will be the first campus buildings to be LEED certified by the United States Green Building Council under LEED v.3. LEED certification verifies construction material sourcing, mitigation of volatile organic chemicals in materials like adhesives, carpet, furniture and paint, reduction in energy and water use over standard designs. Our new halls will feature each of the following:

Features	Residence Hall	Cleveland Commons
<b>Onsight Storm Water Management</b>	Design specified for 25 year event. This will reduce the flow of site pollution into the watershed	Design specified for 25 year event. This will reduce the flow of site pollution into the watershed
<b>Use of Light colored pavers and roofing material to reduce urban heat island</b>	An index was selected appropriate to region to ensure maximum thermal gain and reduction in heat island effect.	An index was selected appropriate to region to ensure maximum thermal gain and reduction in heat island effect.
<b>Irrigation Systems and plant selection that reduce irrigation demand on the campus deep well.</b>	Design reduction is 54% over standard design	Design reduction is 52% over standard design
<b>Use of Low flow plumbing fixtures to reduce potable water use.</b>	Design reduction of 43% will reduce water use and overhead.	Design reduction of 46% will reduce water use and overhead.
<b>Use of energy efficient design and renewable energy strategies. Including enhanced building envelope, day lighting, aluminum clad windows, LED and lighting controls, aggressive heat recovery, and photovoltaic integration.</b>	Building energy reduction of 62% resulting in substantial operational savings. Overall operation cost reduction. Heating load is likely under projected by engineering firm.	Building energy reduction of 12% resulting in operational savings. Equipment selection and air handling demand creates an energy intensive space similar to the Hall of Science.
<b>Purchase of Green Power</b>	Incorporated in rating	Incorporated in rating

<b>(RECs) to offset 100% of building energy use</b>		
<b>Construction Practices aimed at 50% waste diversion</b>	Incorporated into construction plan still pending.	Incorporated into construction plan still pending.
<b>Use of Recycled and Regional Material</b>	Significant use of regional and recycled material still pending.	Significant use of regional and recycled material still pending.
<b>Use of Low VOC adhesives, sealants, paintings, coatings, flooring systems and composite wood and agrifiber products.</b>	We are monitoring all items that are incorporated into building design to ensure occupant health.	We are monitoring all items that are incorporated into building design to ensure occupant health
<b>Integration of LEED educational signage and building metering.</b>	Building will have integrated water, natural gas, electric, and solar panel metering to monitor systems and engage building occupants.	Building will have integrated water, natural gas, electric, and solar panel metering to monitor systems and engage building occupants.
<b>Bike Racks and an Electric Vehicle Charging Station</b>	This project is designed using multimodal transportation methods.	This project is designed using multimodal transportation methods.

Both projects have completed their design preliminary review. Given the findings of the design review several adjustments were made to the buildings to meet building design standards, and best practices. We are projecting a LEED v.3 Gold rating for Cleveland Commons and a Platinum rating for the residence hall. These scores are contingent upon building performance and aspects of the construction phase. The Office of Sustainability has applied to Cascade Natural Gas and Pacific Power for incentives for these projects. At this point roughly \$30,000 in incentives have been authorized. With additional incentives the office will likely generate over \$40,000 in incentive payments for the buildings .

### **Campus Renewable Energy Systems:**

As part of our institutional Climate Action Plan we are integrating onsite renewable energy systems as part of our emissions mitigation strategies. At this time the campus has existing photovoltaic systems on the Environmental Interest House, Bratton Tennis Center, and one trust property. The Office of Sustainability monitors the operation of the Bratton Tennis center array and the Environmental Interest House array. At this time the Bratton Tennis Center 21kW array generates around 25,218 kWh per year. With incentives and energy generation the array will provide revenue of approximately \$37,200 after payback.

The new array on the residence hall will add 73.28 kW of generation capacity. This combined with the Cleveland Commons array of 57.92 kW will increase the campus annual generation by 162,225 kWh per year. Projected generation and incentives will provide net revenue of approximately \$303,000 after payback. This is due to increased array efficiency and solar cost falling substantially since construction of the Bratton Tennis Center Array. As a result we are strongly encouraging a rollout of

onsite renewable systems over the next decade to offset roughly 10% of campus energy use. Projects paired with research would allow the institution to tap into state grant funding.

### **Efficiency and Retrofit Projects:**

The Office of Sustainability is constantly coordinating with Plant staff to increase campus energy and water efficiency. As part of this program the Office of Sustainability monitors all campus utilities. Since the start of the municipal water monitoring program the office has identified over \$12,000 in billing errors resulting in a \$5,346 refund from the city. In addition to this savings the office has identified leaks resulting in \$500 in monthly savings. The Office now generates monthly reports for the grounds crew and maintenance staff to address major leaks. Lack of building level monitoring prevents more aggressive savings.

In addition to these efforts the Office of Sustainability has worked with plant staff on small lighting retrofits in Baker Faculty Center, Reid Campus Center, the Physical Plant, and the Hall of Science. In total these energy retrofits will result in an annual energy savings of \$1,176, in addition to significant maintenance savings. The office has received approval for a retrofit project transitioning all campus exterior post lamps to LEDs. This project is being funded through the Sustainable Revolving Loan Fund. The project is slated to save 40,428 kWh of energy annually, with annual savings of \$3,112.99. Without incentives the project has a 1.53 year payback, and will create substantial material and labor savings. As part of the project the office has received approval for \$2,625 in incentives from Pacific Power.

The Office is additionally pursuing small retrofit projects on exterior lighting, and area lighting within the Hall of Music and Olin Hall.

### **Office of Sustainability Outreach:**

As the College's representative to external sustainability organizations the Sustainability Coordinator sits on the City of Walla Walla sustainability committee. In this capacity the coordinator assists and advises the city on integration of sustainability efforts throughout its jurisdiction and policy. Within this capacity, we are assisting the city with grant development to encourage multimodal transportation. Specifically the college is advising the city on grant applications for electric vehicle infrastructure and renewable energy development at the old landfill. This presents the college with opportunities to collaborate with city efforts and increases regional sustainability.

The Sustainability coordinator also sits as the college's representative to the Mill Creek Working group. This multi-agency group is addressing ground water issues, health of the mill creek watershed, regional resiliency, efforts to improve stream restoration, flood management, fish habitat improvements, and recreational access to Mill Creek. The Mill Creek Working group agencies have received grant funding to improve fish

passage within Mill Creek adjacent to the college in summer of 2019. We are working closely with this group to assist in any manner possible.

In addition to this collaboration the Office of Sustainability works closely with the Walla Walla Sustainable Living Center, WWCC's Water and Environment Center, the Sustainable Partnership of the Northern Rockies and other sector specific organizations. The Office engages with community groups like the Walla Walla Audubon Society and Leadership Walla Walla to provide community sustainability education and support.

### **Operation China Sword:**

Within the last several months the Office of Sustainability has been heavily involved in regional efforts to maintain recycling services within the Walla Walla Valley. Operation China Sword was an effort by China to push internal environmental initiatives. As part of this operation the United States and other western countries were notified in 2013/14 to clean up our recycling stream. Unfortunately the west did not take corrective action. This has led to China virtually shutting down their recycling industry. China accounted for the purchase of 60% of the United States recycling. This loss in the market coupled with increased contamination standards has resulted in significant economic impact to the Walla Walla Valley. In 2017 the City of Walla Walla generated \$4000 a month from recycling sales. This last month the City was paying \$97 a ton to dispose of recycling resulting in a monthly loss near \$17,000. Due to these impacts the City of College Place has discontinued their recycling program. The City of Walla Walla is implementing an increased surcharge for recycling. In order to meet standards Whitman's Recycling program has begun rejecting some materials and increasing sorting efforts. At this point our recycling program is still generating some revenue from material sales; but has seen a significant decrease in our revenue generation. We have additionally coordinated with Bon Appetit to transition away from plastic to-go containers.

### ***Upcoming Events-Earth Week:***

The Office of Sustainability is coordinating with student clubs, ASWC Sustainability, the Environmental Interest House, and faculty to put on programming events throughout Earth Week. These events are focused on behavioral change, transportation, decreased emissions, and student engagement.

### **Sustainability Advisory Committee:**

The committee is encouraging the integration of sustainability through the institution's strategic planning process. The committee has additionally drafted letters to the administration to encourage the adoption of a campus idling policy and efforts to mitigate dining hall waste and the use of plastic.

*This flash report attempts to provide a high level overview of sustainability. For more comprehensive information please email [bishopbj@whitman.edu](mailto:bishopbj@whitman.edu)*