



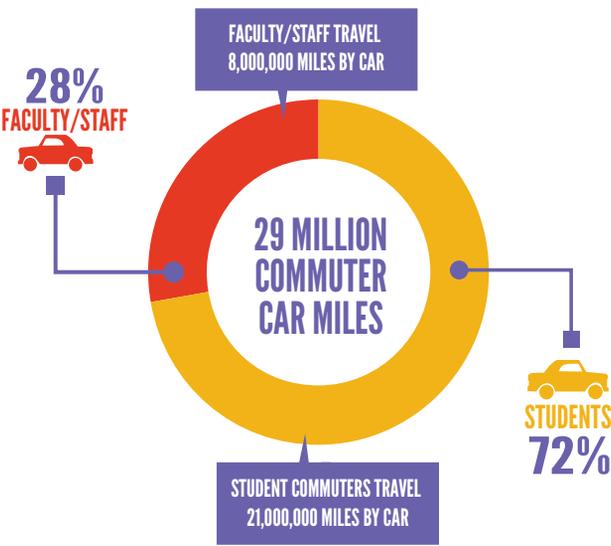
TRANSPORTATION

INTRODUCTION

Based on WCU’s GHG inventory, emissions from University vehicles consuming gasoline, compressed natural gas (CNG), and B20 fuel (20% biodiesel; 80% petroleum-derived diesel) make up 3% of Scope 1 emissions. Scope 3 emissions – those over which the University has the least direct control – are dominated by faculty/staff and student commuting (65% and 25%, respectively). All commuters traveled an estimated 29,000,000 car miles. Surveys indicate that student commuters annually travel 21,000,000 miles by car, and employees travel 8,000,000 miles by car and 270,000 miles by bus.

GOALS

Achieve significant annual reductions in greenhouse emissions associated with a) the operation of university vehicles; b) faculty, staff, and student commuting, and c) university-related employee travel.



SUMMARY OF PROJECTS AND INITIATIVES

1. **Transportation Planning & Financing**
 - Objective 1.1 – Establish a Campus Transportation Committee
 - Objective 1.2 – Finance Transportation Initiatives with a Price on Carbon (Increased Parking Fees)
2. **University Fleet**
 - Objective 2.1 - Complete the Transition to Alternative Fuels
3. **Commuting & Telecommuting**
 - Objective 3.1 – Promote the e Rideshare Program
 - Objective 3.2 – Offer Discounts for Hybrid & High Fuel Efficiency (HFE) Vehicles
 - Objective 3.3 – Develop Electric Vehicle (EV) Charging Stations on the Campus
 - Objective 3.4 – Expand the Subsidized SEPTA Bus Token Program
 - Objective 3.5 – Pilot an Alternative Work Week for Office Staff

- Objective 3.6 – Develop a Telecommuting Policy & Pilot Program
- Objective 3.7 – Investigate Alternative Course Scheduling

4. Bicycling

- Objective 4.1 – Improve and Expand Bicycling Infrastructure
- Objective 4.2 – Initiate a Bicycle Rental/Sharing Program
- Objective 4.3 – Promote Walking and Biking among Faculty, Staff, and Students

5. Air Travel

- Objective 5.1 – Reduce, Consolidate, and Offset Air Travel

6. Regional Transportation

- Objective 6.1 – Expand access to SEPTA Rail Service via Shuttles to/from Campus
- Objective 6.2 – Provide Public Transportation Passes for Students & Employees
- Objective 6.3 – Work with TMACC & SEPTA to Optimize Bus/Train scheduling
- Objective 6.4 – Work with SEPTA to (re)Open the Train Route to West Chester

PROJECTS AND INITIATIVES

1. Transportation Planning & Financing

OBJECTIVE 1.1 – ESTABLISH A CAMPUS TRANSPORTATION COMMITTEE:

Transition the current Parking Committee into the WCU Transportation Committee with a new, comprehensive, integrated mission to reduce parking demand, promote transportation alternatives, mitigate traffic congestion, develop and maintain commuter programs, promote health and safety, improve campus aesthetics, and reduce the University’s carbon footprint. It will accomplish these goals in part through the implementation of Transportation Demand Management (TDM) strategies/policies that reduce travel demand of single occupancy vehicles.

Transportation Committee Outcome: The Climate Action Plan Implementation committee develops the mission of the new Campus Transportation Committee in collaboration with the VP for Finance and Administration and other designated representatives.

- Resources Needed: Funding for a Transportation Committee Coordinator/Intern
- Implementation Time Frame: By 2015

OBJECTIVE 1.2 – FINANCE TRANSPORTATION INITIATIVES WITH A PRICE ON CARBON

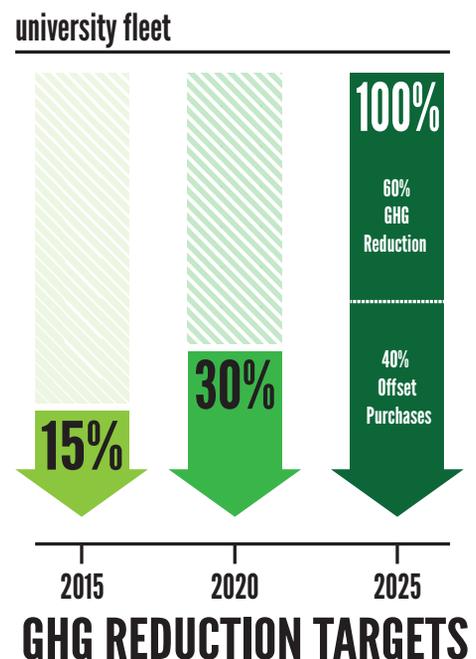
Transportation Finance Outcome: Increase parking fees and use revenue to finance transportation initiatives that are consistent with the mission of the new Transportation Committee and with the goals of the Climate Action Plan. Increased parking fees can be one manifestation of WCU’s commitment to value carbon in decision-making and purchasing.

2. University Fleet

OBJECTIVE 2.1 - COMPLETE THE TRANSITION TO ALTERNATIVE FUELS

University Shuttle Bus Outcomes: The University Shuttle Bus will operate all of its buses on alternate energy and target a 100% reduction in GHG emissions by 2025. This will be accomplished through a strategy of 75% GHG reduction and 25% Offset purchases.

- Implementation Time Frame (% of buses): 2015 – 25%; 2020 – 50%; 2025 – 100%
- Primary Responsibility: Director of Facilities Financial & Support Services
- Resources: Funding for the University Shuttle comes from student fees. A fractional share is provided by University Student Housing for transporting students at the Village.

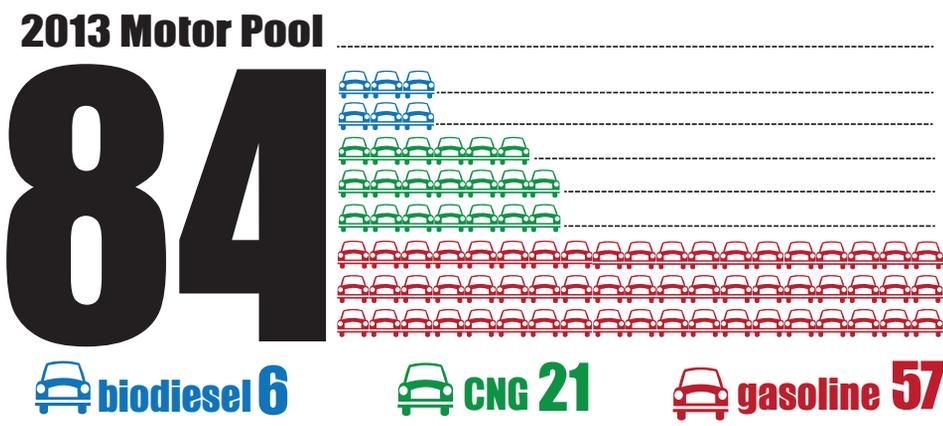


- GHG Reduction Targets:
 - 2015 – 15% GHG Reduction
 - 2020 – 30% GHG Reduction
 - 2025 – 100% GHG Reduction (60% GHG Reduction & 40% Offset Purchases)

University Motor Pool Fleet Outcomes: The University Motor Pool Fleet will operate all of its fleet on alternate energy or high fuel efficiency vehicles and target 100% reduction in GHG emissions by 2025. This will be accomplished through a strategy of 60% GHG reduction and 40% Offset purchases.

- Implementation time frame: 8% of the fleet per year with completion by 2025
- Resources: The University Motor Pool is self-funded. Income is solely from user fees. Assigned vehicles are charged a flat monthly fee plus a charge per miles driven. Daily rental vehicles are charged a daily fee plus mileage. The monies received are used for gas, maintenance, repairs, salaries, and set asides for eventual replacement vehicles.
- GHG Reduction Targets
 - 2015 – 20% GHG Reduction
 - 2020 – 50% GHG Reduction
 - 2025 – 100% GHG Reduction (75% GHG Reduction & 25% Offset Purchases)

University Motor Pool Fleet Notes: The University operates a fleet of 84 vehicles. Of these, 27 presently run on alternate fuels (21 CNG & 6 Biodiesel). Each year, an estimated 8% of the fleet vehicles will be replaced. Selection of vehicles shall be either alternate energy or among the top 90% of fuel efficiency with the category of vehicle types. An ongoing analysis of need for vehicles can determine if the fleet can be downsized in numbers and physical vehicle size. Following these guidelines, the fleet fuel economy will increase and pollutants produced will decrease each year. By 2025, the percentage of the fleet reliant on alternate energy is



hoped to be 60%. This will reduce the carbon emissions for the University fleet to as close to zero as technology permits. The Climate Action Plan policy for new fleet vehicles must be multifaceted. Various categories of vehicle types need to be established: Long distance passenger transport, local passenger transport, on-campus passenger transport, light duty cargo, heavy duty cargo, and specialty vehicles. Requirements in each grouping need to be evaluated. Each department reliant on fleet vehicles needs to assess the vehicle’s genuine use and demonstrate the necessity for the desired specifications. This evaluation may include the actual need for a vehicle. When feasible, a reduction in size class should be adopted for replacement vehicles. Selection of replacement vehicles should be either an alternate fuel powered engine or at least among the top 90% fuel efficient models for the purchase year for the vehicle’s classification. In 2025 carbon offset purchases will be made to bring the GHG emission reduction to 100%.

3. Commuting & Telecommuting

OBJECTIVE 3.1 – PROMOTE THE E RIDESHARE PROGRAM

E Rideshare Outcomes: Sell carpool spaces each year to groups of two or more students, faculty and/or staff who agree to car pool to campus each year. The goal in year 1-3 is to sell 25 car pool tags; for years 4-6 double the number to 50 tags sold per year; and years 7-9 regularly sell 100 tags each year.

- Action Steps: a) Inform all commuting students, faculty and staff about this program during years 1-3 using email, electronic brochures, and an advertising campaign promoting the web link for **commuter students** or **for faculty and staff** (available at www.eRideShare.com); b) Sell car pool decal to two or more individuals who register for designated Ride Share spaces on various campus car pool lots. The designated areas reserved for Ride Share would require car poolers to place the parking decals for both riders on the dashboard of the automobile. Only cars with two or more individuals tags prominently displayed would be allowed

in the designated spot. As the success of the program grows, more spaces in parking garages and lots can be added.

- Areas Responsible: Human Resources Department, Department of Public Safety, and Off Campus and Commuter Services.
- Resources Needed: Most of the resources are in place to promote the e Rideshare Program and to sell the decal to interested campus members.

OBJECTIVE 3.2 – OFFER DISCOUNTS FOR HYBRID & HIGH FUEL EFFICIENCY (HFE) VEHICLES

Provide incentives for campus commuters to reduce carbon emissions by using a hybrid or high fuel efficient [HFE] vehicle. HFE cars will qualify for discounted parking decal passes in selected parking locations.

Hybrid & HFE Discount Outcomes: Years 1-3: Sell 50 HFE vehicle tags annually. Years 4-6: Sell 100 HFE vehicle tags annually. Years 7-9: Sell 100 HFE vehicle tags annually.

- Action Steps: During annual parking decal sign-ups, promote the specially discounted HFE vehicle parking pass for owners of qualifying cars. The new WCU Transportation Committee will be responsible for defining the miles per gallon requirement needed for a vehicle to be designated a High Fuel Efficiency vehicle.
- Areas Responsible: Primary responsibility for this project will fall on the Public Safety Department (Parking Enforcement), with support from the University Transportation Committee.
- Resources Needed: The program can be implemented using resources and processes already in place. Information regarding the purchase of this discounted tag can be included in promotional materials sent out each year during parking decal sales. Lost revenue from the 50% discount will need to be offset by increased parking fees, but using the goals of 100-200-300 in sales as described above can be managed.

OBJECTIVE 3.3 – DEVELOP ELECTRIC VEHICLE (EV) CHARGING STATIONS ON THE CAMPUS

Charging Station Outcomes: Install five Electric Vehicle (EV) charging stations on the campus in years 1-3, add five more EV charging stations on the campus in years 4-6, and during years 7-9 add another ten EV stations. Over a nine year period, a total of twenty EV charging stations will be located on the campus and available for faculty, staff and student use.

- Action Steps: Facilities personnel will be asked to review the various EV charging station models available for commercial use and recommend a preferred system for phase I (1-3 years). The Facilities Department, Department of Public Safety's Parking Enforcement Unit, and University Transportation Committee will identify sources of electricity readily available for EV charging station installation and the preferred locations for EV stations. Charging locations will be promoted during parking decal sign-ups and a formula to recoup energy costs – preferably through a new parking fee structure – will need to be developed by Facilities personnel and members of the Transportation Committee.
- Areas Responsible: Department of Facilities, Department of Public Safety Parking Enforcement Unit, and University Transportation Committee.
- Resources Needed: Costs will vary depending on the technology selected. As colleges and universities begin to install the EV Charging Stations on campus, they are passing along the direct costs to the user. In September of 2012, the University of California at San Diego installed several charging stations with the user being billed through a network interface at a cost of \$3.0 for an 80% charge. The charging station can be reserved for a maximum of four hours, and users are required to have a campus permit or pay for visitor parking. In 2012 Temple University joined Drexel and the University of Pennsylvania in hosting EV Charging Stations on campus.

OBJECTIVE 3.4 – EXPAND THE SUBSIDIZED SEPTA BUS TOKEN PROGRAM

Bus Program Outcomes: Currently, the SSI Ticket Office in Sykes Union sells SEPTA token packs (5 per pack) at a cost of \$7.75, or \$1.55 per trip, which is a savings of 23% over the normal \$2.00 ride. Between July 2011 and July 2012, the SSI Ticket Office sold 1,950 SEPTA Token packets, the equivalent of 9,750 rides. The goal will be to increase tokens sales to students, faculty, and staff by 30% over next three years (10% per year).

- Action Steps: Promote and market the discounted SEPTA tokens through campus wide email, electronic flyers, and social media. Create and maintain Transportation website with a prominent link to the SEPTA website for trip planning. Use GIS to map clusters of employees and students located around mass transit routes.
- Areas Responsible: Off Campus and Commuter Services, Off Campus Commuter Association, members of the CAP Implementation Committee, and relevant courses (e.g. Marketing). The SSI Ticket Office staff will continue to sell the tokens at a reduced rate.
- Resources Needed: Funds for advertising and promotion.



OBJECTIVE 3.5 – PILOT AN ALTERNATIVE WORK WEEK FOR OFFICE STAFF

Alternate Work Week Outcomes: Develop a four day work week for 25% of the campus staff over three years (5% year one, and an additional 10% percent in year two and three) in order to reduce employee vehicle trips to the campus. The offices will remain open five days per week in order to serve student needs, but staff will have a staggered work week schedule in order to complete the required 40 hours over a four day work week.

- Action Step: Identify five percent of the offices on campus that have sufficient staff to “pilot” a four day work week schedule. Based on a positive evaluation and assessment of the pilot program, expand the program by an additional 10% of the offices in year two and another ten percent of the offices in year three.
- Areas Responsible: Divisional Vice Presidents will work with their departmental managers to identify the initial group of offices for the pilot program. The Office of Human Resources will also work closely with bargaining units and area supervisors on campus on the establishment of this program.
- Resources Needed: No significant additional resources are needed provided there is employee support for this program, with agreements that no overtime will be paid.

OBJECTIVE 3.6 – DEVELOP A TELECOMMUTING POLICY AND PILOT PROGRAM

Telecommuting Outcomes: Draft and implement a telecommunicating policy that encourages staff to work four days a week in the office and one day a week from home. The goal is to identify 25% of the administrative staff over three years (5% year one, and an additional 10% percent in years two and three) in order to reduce employee vehicle trips to campus. All offices will remain open five days per in order to serve student needs, but staff will have a staggered work week schedule in order to cover the telecommuting schedule.

- Action Step: Identify five percent of the offices on campus during 2013 that have sufficient staff to “pilot” the telecommuting plan, with four days of work in the office and the fifth day from home. Based on a positive evaluation and assessment of the pilot program, expand the telecommuting program by an additional 10% of the offices in year two and another ten percent of the offices in year three.
- Areas Responsible: Divisional Vice Presidents will work with their departmental managers to identify the initial group of offices for the pilot program. The Office of Human Resources will also work closely with bargaining units and area supervisors on campus on the establishment of the telecommuting policy and actual phased-in program.
- Resources Needed: Beyond potential IT equipment (Laptops and connections) no significant additional resources are needed provided there is employee support for this program, with agreements that no overtime will be paid.

OBJECTIVE 3.7 – INVESTIGATE ALTERNATIVE COURSE SCHEDULING

Alternative Course Scheduling Outcomes: Conduct a study of alternative course scheduling and methods of instruction to reduce the number of days per week that students commute to campus. Specific outcome measures and targets would be developed depending on final recommendations of the study.

- Action Step: Form a University wide committee to explore three hour time block courses during evenings and on Saturday mornings and afternoons. Once a week courses would appeal to commuter students as well as individuals with full-time employment. Other areas for review would include the expansion of hybrid courses where students spend a certain amount of time each week in class with the remainder of instruction via Distance Education, as well as the continued development of the Distance Education Program. Such a program will be strictly voluntary, dependent on the needs and opportunities of/for the individual departments.
- Areas Responsible: University faculty, Department Chairpersons, and Academic Deans will all need to be involved in the process. Additional input from Facilities and related key administrative offices would also need to provide support information.
- Resources Needed: Based on collective bargaining payment schedules and/or incentives needed, additional compensation may be required to encourage Saturday teaching and Distance Education initiatives. Additional housekeeping and support personnel will also need to be estimated to staff Saturday hours.

4. Bicycling

OBJECTIVE 4.1 – IMPROVE AND EXPAND BICYCLING INFRASTRUCTURE

Bicycle Infrastructure Outcomes: Increase availability of bicycle racks, lockers and pathways for bikes on campus and through the university community.

- Action Step #1: Assess needs and begin collecting funds for infrastructure through increased parking fees and other sources. Establish working relationships with the Borough of West Chester, **BLUER**, and the **Chester County Cycling Coalition**.
- Action Step #2: Work with Borough to identify pathways and develop bike lanes. While bicycle routes have already been identified by the Borough, increasing the bike-friendliness of these routes will make them more attractive and more frequently used.
- Action Step #3: Close Church Street but maintain a bike lane that highlights bike culture and can be a starting place for a bike lane that connects directly to South Campus (per the University's campus master plan).
- Action Step #4: Increase availability of bicycle racks and outdoor bike lockers by purchasing additional bicycle racks and installing them in the parking lots especially on South Campus near Q lot to promote bicycle riding. Purchase lockers that can be strategically placed on North and South campus.
- Areas Responsible: Transportation Committee, Facilities Department, Student Affairs, Climate Action Plan Implementation Committee.
- Resources Needed: Average costs from the **Bicycle Information Center**
 - i. Bicycle Rack: \$1000-1200
 - ii. Bicycle Locker: \$1,000-4,000
 - iii. Pathways: (relative) >\$10,000
 - iv. Bike air pumps
 - v. Fully Furnished Workshop: >\$10,000 (See 4.2 for possible business partnership)
 1. Building (including showers, lockers, racks and classrooms)
 2. Staff
 3. Bicycle repair/maintenance tools and supplies (private company)
- Implementation time frame:
 - By 2015 – Identify funding areas: Action Step #1; buy racks/lockers (#4)
 - By 2020 – Completion of retooled bike paths: Action Step #2. As demand increases, increase bike racks and lockers (#4)
 - By 2025 – Close Church Street (#3)



INSTEAD OF



BY 2015

OBJECTIVE 4.2 – INITIATE A BICYCLE RENTAL/SHARING PROGRAM

Bicycle Rent/Share Outcomes: Identify and contract with a bike rental company (e.g., **Fuji University**) who would be willing to establish a branch at WCU. This company would also open a fully furnished workshop for bicycle repairs and maintenance, and provide a free air pump.

- Areas Responsible: Campus Facilities Department and Student Affairs to identify space/create contract private vendors.
- Resources Needed: the space; contract with the bicycle company

OBJECTIVE 4.3 – PROMOTE WALKING AND BIKING AMONG FACULTY, STAFF, AND STUDENTS

Biker/Pedestrian Outcomes: Significantly increase the percentage of faculty, staff, and students who bicycle or walk to campus.

- Action Step: Provide incentives for faculty, staff, and students who bike to campus instead of driving. (e.g. annual drawing for a fitness center membership)
- Implementation Timeframe: By 2015

5. Air Travel

Background: Emissions from air travel are based on an analysis of University-funded trips taken during FY 2011 that indicated 1,145,075 air miles traveled.

OBJECTIVE 5.1 – REDUCE, CONSOLIDATE, AND OFFSET AIR TRAVEL

Air Travel Outcomes: Reduce the number of air miles travelled per year and the impact of the miles travelled by

- Increasing the use of webinars. Evaluate the feasibility of including incentives for participating in webinars or video conferencing rather than physically attending those conferences with these options. Exceptions to such a policy should be available as necessary, but the default should be remote attendance.
- Refining the approval process for air travel to eliminate unnecessary trips.
- Centralizing booking of flights. Identify or devise a system for on-line (campus-wide or PASSHE-wide) flight reservations that make it mandatory that individuals going to the same destination be on the same flight. If multiple stops are required, this might be feasible even for different destinations on the same day. The same idea should be instituted for travelers using ground travel.
- Identifying the most environmentally conscious airlines.
- Carbon-offsetting. Require departments to purchase carbon offsets for flights, which is an increasingly common practice, and a small outlay relative to the price of the ticket. A 5,000 mile round trip flight from Philadelphia to San Francisco, for instance, would generate just under a ton of CO₂, and would cost \$9.36 in offsets according to carbonfund.org. In addition, carbon offsetting for student study abroad programs can be built into program costs.
- Implementation timeframe:
 - By 2014: System in place to track miles
 - By 2020: All air travel miles offset



6. Regional Transportation

OBJECTIVE 6.1 – EXPAND ACCESS TO SEPTA RAIL SERVICE VIA SHUTTLES TO/FROM CAMPUS

Expanded Rail Access Outcomes: Have regularly scheduled shuttle buses synchronized with train and class schedules that will run between the Exton and/or Downingtown SEPTA train stations and the WCU campus.

- Action Step #1: Use campus-wide survey data to ascertain the need and potential impact of implementing shuttles and/or expanding bus service to campus. Include Cheyney University in any discussions with SEPTA.
- Action Step #2: Develop a relationship with and become a member of the Transportation Management Association of Chester County (TMACC)
- Action Step #3: Identify whether to use a WCU shuttle, additional SEPTA bus service, or a private contractor (e.g. Paradise Transit).
- Action Step #4: Actively review additional needs or services every other year.
- Resources Needed – Fulltime Sustainability Officer to monitor progress.
- Implementation time frame:
 - By Fall 2014: Action Step #2 and limited (“closed system”) shuttle service at highest traffic times for train travel.
 - By 2015 – Action Step #1 & #3
 - By 2020 – Action Step #4: Continued expansion of public transportation options

OBJECTIVE 6.2 – PROVIDE PUBLIC TRANSPORTATION PASSES FOR STUDENTS & EMPLOYEES

Public Transportation Pass Outcomes: Provide free or subsidized public transportation passes for all faculty, staff, and students. Some colleges and universities offer pre-tax transit pass purchases which can save the employees significant and can provide the incentive to purchase the pass. At some schools, public transportation passes for students are built into student fees and arranged with the transit system at a discount because of the large spike in ridership and income this offers. Subsidies can also be covered through stepped increases in parking fees.

- Action Steps: Evaluate the cost, propose that the University and SEPTA both subsidize; evaluate potential benefit of WageWorks.com’s services and implement.

OBJECTIVE 6.3 – WORK WITH TMACC & SEPTA TO OPTIMIZE BUS/TRAIN SCHEDULING

Bus/Train Scheduling Outcomes: To make the use of public transportation more attractive, work with TMACC, SEPTA and our campus community to identify the optimal schedule for trains, buses and shuttles.

- Action Step #1: Identify/appoint WCU/SEPTA liaison; permanent member Transportation Committee
- Action Step #2: Once our survey and GIS data and other evaluation allows us to estimate potential increase in ridership, our WCU SEPTA liaison will map out possibilities and corroborate with SEPTA and updated scheduling.
- Areas Responsible: Director of Sustainability to oversee: WCU/SEPTA liaison, HR and Public Safety having a voice; Larry Dowdy

OBJECTIVE 6.4 – WORK WITH SEPTA TO (RE)OPEN THE TRAIN ROUTE TO WEST CHESTER

Train to West Chester Outcome: The SEPTA R3 West Chester line is re-established, linking West Chester with Philadelphia and points in-between.

- Action Steps: Continue advocacy efforts directed at encouraging SEPTA to re-think train routes.
- Resources Needed: SEPTA buy-in; statistics gathered from initial Transportation Survey; WCU/SEPTA liaison
- Implementation time frame:
- By 2025 – Have the train route established and the train running