

West Chester, Pennsylvania, USA

On Track Towards EcoMobility in West Chester



West Chester has been trying to re-activate passenger rail service since its discontinuation in 1986 to provide citizens with more sustainable transportation options. The project has potential to become an EcoMobility success story. A cooperative network between political leadership and local stakeholder groups is key to realizing this common vision.

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ICLEI Case Studies

August 2013

Abstract

West Chester's aim has been to reduce its GHG emissions by promoting integrated public transportation and non-motorized modes within its jurisdiction. One of its continued efforts has been to reclaim the use of its former rail connection to Philadelphia. The West Chester Branch is just one of hundreds of disused suburban rail lines in the US. This dormant infrastructure could provide a more environmentally-friendly, socially inclusive mode of transportation in the heavily-trafficked areas between densely populated suburban towns and the nearby city. West Chester has thus far succeeded in preserving a large portion of the tracks. The project's main challenge has been gaining support and cooperation from the other municipalities along the rail line, as well as the regional public transportation planners. An incremental extension on the line has proven unsuccessful, and the project is currently stalled. However, eight local stakeholder groups are identified which have the resources and specialized knowledge necessary to create powerful strategies for building public support for the project. These local actors will be key to the success of West Chester's modal shift back to rail.

The importance of rail

Six decades of highway expansion prioritization in the US has led to many rail branches on the outskirts of cities being cut out of regional public transportation systems. Many of the areas around these dormant tracks have since been taken over by suburban sprawl. In the absence of an adequate public transportation network, car use increases along with GHG emissions, while economically disadvantaged groups have fewer mobility opportunities. The available transportation modes shape the way we can live our lives and fulfill our goals and aspirations.

Disused suburban rail lines can serve as much more than deteriorating remnants of their former importance; they hold untapped potential to improve the sustainability of suburban transportation systems. Re-activating passenger service on these rail lines can therefore be an important step towards EcoMobility in the suburbs.

West Chester is one such town which could benefit from the re-activation of its former rail line. It is currently in need of a modal shift away from its car-dominated infrastructure. Over the years, it has tried – unsuccessfully – to rally the local public transportation planners to re-activate passenger rail service on the West Chester Branch. However, the project lacks funds and there is a lack of consensus from the 13 other municipalities along the rail branch. Despite these set-backs, this case study will show that West Chester already has many local resources necessary to turn it into an EcoMobility success story.



Population

18,461 inhabitants (2010 US Census)

Land area

1.85 sq miles (4.79 km²)



West Chester is an ICLEI member since April 2007.

Case Study

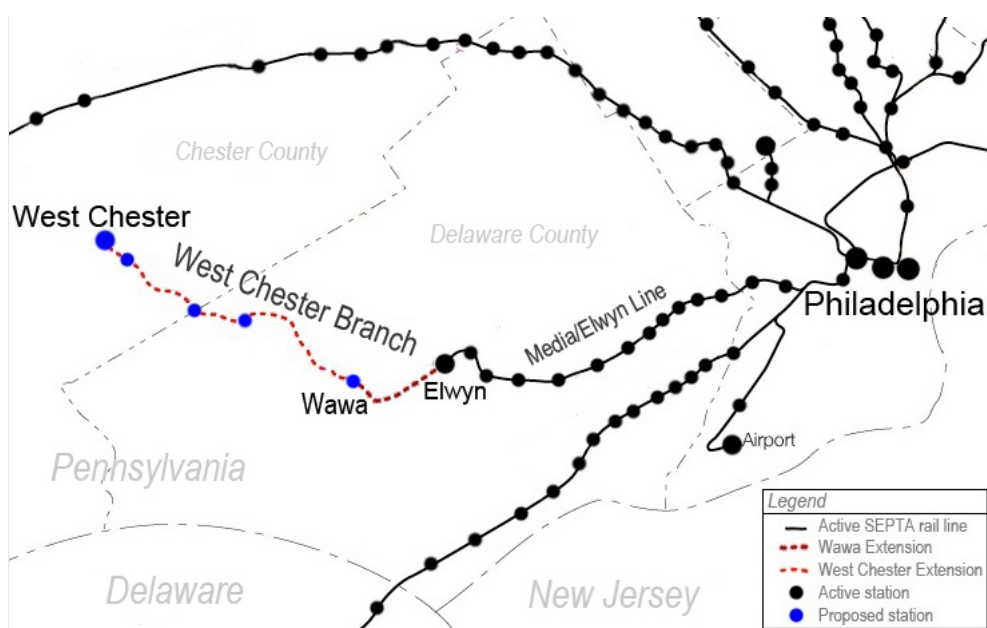
West Chester in context

West Chester, located 25 miles (40 km) west of Philadelphia, is an important cultural center and university town which attracts visitors from across the Greater Philadelphia area onto its historic streets. It is the county seat of Chester County, Pennsylvania, and has a population of 18,461.

Public transportation coverage is limited in West Chester and the surrounding area. It's currently served by four bus lines, only one of which reaches Philadelphia city limits. These bus lines have a combined average weekday peak hour wait time of 43 minutes. Their usability is further decreased by a lack of integrated pedestrian and bicycle access. West Chester and the surrounding area suffer from chronic car traffic congestion and ever-increasing demand for parking facilities.

Roads and highways dominate the landscape around West Chester. A recent survey of the 13 municipalities between West Chester and Philadelphia shows that some believe that public transportation is not for them because of their wealthier and 'more mobile' residents. Many of these municipalities prefer to continue supporting car users and have not set goals for reducing their GHG emissions. This further promotes car use around West Chester while marginalizing public transportation and significantly contributing to the area's GHG emissions.

A adapted from Lucius Kwok / CC-BY-2.5



Map of the West Chester Branch in relation to existing SEPTA rail lines.

West Chester has made GHG emissions reductions a priority. Participation in ICLEI's Cities for Climate Protection Campaign resulted in the creation of the ad hoc, all-volunteer committee Borough Leaders United for Emissions Reduction (BLUER) in 2006. Its goal is to reduce GHG emissions 10% below 2005 levels by 2015. BLUER's transportation sub-committee is working to improve accessibility to more environmentally-friendly modes of transportation.

West Chester: EcoMobility derailed in the suburbs

Up until 1986, West Chester was the terminus of a passenger rail line that extended 26.5 miles (43 km) to Philadelphia. The West Chester Branch of this rail line served 9 stops along 12.4 miles (20 km) of tracks. The local public transportation provider, Southeastern Pennsylvania Transportation Authority (SEPTA), took the West Chester Branch out of service due to track deterioration and low ridership caused partly by inconvenient timetables. Bus service originally replaced rail service in some areas, although SEPTA eventually discontinued several of these bus routes as well.

West Chester's modal split

Since passenger rail service was stopped in 1986, West Chester is the only county seat served by the Southeastern Pennsylvania Transportation Authority (SEPTA) which does not have rail. Consequently, residents primarily commute to work by car. Public transportation use is nearly the same for West Chester and the other less densely populated municipalities along the West Chester Branch. This highlights West Chester's lack of much-needed public transportation options:

A relatively high percentage of people walk to work in West Chester due to the dense streets which have sidewalks. However, immediately outside of West Chester, the sidewalks end, streets are primarily residential, and there is reduced public transportation service. This has resulted in fewer mobility options for residents along the West Chester Branch.

	West Chester	Other 13 municipalities on West Chester Branch
Single occupancy vehicle	69.7%	84.2%
Carpool	7.6%	5.6%
Public transportation	2.9%	2.2%
Walk	13.2%	1.7%
Other	3.7%	1.2%
Work at home	2.9%	5.1%

West Chester's efforts to re-activate its passenger rail service have been rooted in the desire to provide its residents and visitors with a more sustainable and efficient mode of transportation. West Chester is currently leasing the tracks from SEPTA, and has successfully preserved a portion of the rail line. In 1997, permission was given to the all-volunteer West Chester Railroad Heritage Association to open a 7.7-mile (12.4-kilometer) tourist railroad. They have acted as stewards of nearly two-thirds of the West Chester Branch, ensuring that it's usable for running their antique trains. In 2003, West Chester gave the rail right of way zoning protection, deeming it a 'transportation corridor'. This ensures that the land under the tracks will never be acquired by developers for non-transportation uses.

In 2008, West Chester was among several local actors who signed a petition to regional transportation planners, asking them to bring back passenger rail service. However, when West Chester talked with some of the other 13 municipalities, some of them were not in favor of the rail line for various NIMBY reasons. This has turned several municipalities into physical barriers for the rail extension project.

Building the case for rail to West Chester

West Chester stands in stark contrast to the other 13 municipalities along the West Chester Branch. It's seven times more densely populated and has a much larger proportion of citizens living below the poverty line. Between 1990 and 2010, all of the other 13 municipalities along the West Chester Branch saw a noticeable population increase spurred by suburban sprawl away from Philadelphia. Fragmented residential and commercial development along their extensive road network has created mobility challenges for many residents. This is particularly true for the low-income residents and large university student population.

	West Chester	Other 13 municipalities on West Chester Branch
Population (2010 Census)	18,461	78,668
Population increase (1990-2010)	2.3%	32.1%
Population density	10,033 people per sq mi (3,874 per km ²)	1,424 people per sq mi (550 per km ²)
People living below poverty line	24.1%	3.6%

On the other end of the West Chester Branch, SEPTA has done some development on a 3.2-mile (5.1-km) extension up to the unincorporated community of Wawa, Pennsylvania. Located in a sparsely populated part of Delaware County, Wawa is to be served by a large station accompanied by mixed-use transit oriented development (TOD). The plans also include a 600-space parking garage and propose widening a main road from four to seven lanes to accommodate increased car traffic to the station. Only one bus route runs near the station and does not serve the rest of the West Chester Branch corridor. Additional inter-linking bus routes are not proposed. In 2011, when SEPTA announced that the project would be put on hold indefinitely due to lack of funds, the budget was \$90 million. The budget has since risen to \$110-120 million.

The only official analysis of the feasibility of the West Chester Branch extension is DVRPC's ridership forecast, completed shortly after the Wawa project was put on hold in 2011. It predicts that the rail line would capture 990-1,410 riders per day, or about five to seven percent of the total for the study area (DVRPC, 2011: 23). SEPTA deemed these numbers too low to justify investing in the project. However, the study is based on the assumption that most riders would drive to the station and park their cars. It therefore focuses heavily on the need for parking facilities and does not mention the ridership benefits of inter-linking bus routes or walking/biking paths. It also does not adequately capture students' trip distribution or mode choice, and therefore modestly underestimates the total number of trips on the extension.

Results and impacts in the community of stalling the project

Increased use of single occupancy vehicles: The lack of rail and insufficient bus service to West Chester has resulted in an increase in daily commuters' car use. Between 2000 and 2010, single occupancy vehicle use in West Chester increased by 2.4%, from 67.3% to 69.7%.

Public transportation use has flat-lined: Very little has been done to change or improve public transportation coverage in West Chester in recent years. As a result, public transportation use stayed relatively the same between 2000 and 2010, increasing by only 0.3%, from 2.6% to 2.9%.

3.2-mile (5.1-km) extension stalled indefinitely: Multi-stakeholder opposition to the Wawa extension initially slowed its progress. Ultimately, lack of funding has put the project on hold until further notice. Two opposition groups spoke out against the size of the proposed station and its large 600-space parking garage that would increase car traffic to the area. One of the groups opposed the TOD planned for the semi-rural area, while the other group criticized the \$30 million-per-mile budget.



Photo by Dr. James A. Jones,
West Chester University of
Pennsylvania

One of the two SEPTA-run bus routes that serve West Chester.

No rail to West Chester planned for a long time to come: Budget-strapped SEPTA has stated that once funding becomes available for rail extension projects, its top priority is the Wawa extension. However, the full extension to West Chester is one of the transit authority's last priorities. This is due partly to the low ridership predictions from DVRPC's study on the West Chester Branch. In line ahead of West Chester is the construction of an entirely new rail line to the King of Prussia Mall, the largest shopping mall in the US. DVRPC, which is also the body that allocates state and federal transportation funding, has also stated that the West Chester Branch extension project is on the side-burner "until it becomes more real."

Lessons Learned

A key to reducing GHG emissions within West Chester is to increase public transportation service that extends beyond West Chester. Re-activating its passenger rail service to Philadelphia would be a major step in this direction. The success of this project relies heavily on cooperation and support from the surrounding municipalities and regional public transportation provider and planners.

State, regional and county-level transportation decision-makers cannot make the project happen on their own. Their budgets are overwhelmed with maintenance needs across the region. SEPTA has attempted an incremental extension to Wawa which was ineffective for bringing equitable mobility to the region. The large and expensive parking garage and lack of bus service would have attracted increased car traffic to the area. Due to its location in a sparsely populated area just off of a highway, its TOD would have primarily served park-and-ride users. The Wawa project is now one of the main reasons that the full West Chester Branch extension has been stopped.

Adequate background information about the affected communities is needed to determine what would be beneficial for each community and the region. DVRPC's ridership forecast perpetuated belief that such suburban rail lines should primarily serve park-and-ride users and therefore should be planned to include large parking facilities. By only providing car access at stations, rail ridership is constrained to the number of parking spaces available. This is the case at a number of SEPTA train stations in the suburbs. There is a need for an integrated bus network in conjunction with walking and bicycle accessibility.

Political leadership at the local level could rally local stakeholders to form a network with the common vision of re-activating rail. Eight local stakeholder groups represent a large constituency that would find it in their interest to advocate for the West Chester Branch extension: West Chester Borough, BLUER, West Chester University, Cheyney University, Westtown School, West Chester Railroad Heritage Association, Pennsylvania Transit Expansion Coalition (PA-TEC), and Delaware Valley Association of Rail Passengers (DVARP).

These **local stakeholders have the resources and specialized knowledge necessary to create powerful strategies** for building public support for the project. West Chester University, Cheyney University and Westtown School are educational institutions that would have a station adjacent to their campuses serving their combined population of approximately 19,503. BLUER and its transportation sub-committee work on behalf of West Chester Borough to reduce West Chester's GHG emissions and can advise and influence West Chester in its transportation-related actions. Finally, DVARP and PA-TEC are regional rail advocacy groups which could support advocacy for the project.

Re-activating the West Chester Branch would improve residents' access to more environmentally-friendly transportation options. It would also improve

social sustainability by increasing the mobility opportunities for economically disadvantaged groups. Additionally, the West Chester Branch could encourage **appropriately-scaled TOD** around the stations. This could help to shift the other 13 municipalities away from their trend of sprawling, fragmented development. As a result, the area as a whole could become less polarized and more socially inclusive.

Replication

The results of this case study point to the possibility that wherever there are disused rail lines, there might be potential for reactivation that facilitates a modal shift towards more equitable mobility. As pre-existing transportation corridors, they hold a variety of feasibility advantages over entirely new rail projects, e.g. through existing right of way, re-useable materials, or even social support through historic nostalgia. Re-activating rail lines between densely populated suburban centers and nearby cities could reduce the trend of suburban sprawl in the less-densely populated areas in between these two points.

When it comes to a transition towards EcoMobility, the problem, the vision and the implementation are not always clear to those actors who hold the power to make the transition happen. The West Chester case suggests that the resources and power necessary to re-activate these rail lines are available at the local level.

This holds promise for the thousands of other disused rail lines in the US, particularly those in car-dominated suburban areas. There is great potential to reactivate this dormant infrastructure throughout the US while contributing to a nation-wide transition to more socially and environmentally sustainable transportation.



Present-day West Chester station, currently used by the tourist railroad West Chester Railroad

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- West Chester BLUER website: <http://www.wcbuer.org/>

Acknowledgements

- Author: Kristin Tovaas
- Contributors: Mayor Carolyn T. Comitta, Borough of West Chester
- Jim Wylie, Secretary of West Chester BLUER, and Chair of the BLUER Transportation Committee
- We would also like to thank interviewees from West Chester Railroad Heritage Association, West Chester University, Cheyney University, Westtown School, Chester County Planning Commission, Transportation Authority of Chester County, Delaware County Transportation Authority, Pennsylvania Transit Expansion Coalition, Delaware Valley Regional Planning Commission, and Southeastern Pennsylvania Transportation Authority.
- Editor: Kathrine Brekke (ICLEI World Secretariat)



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August 2013