The Value of Trails

Why are Bicycle and Pedestrian Trails Important?

The Puget Sound region is growing rapidly and experiencing increasing urban density and sprawl. Climate change is only adding to the challenges, and pollutants like carbon dioxide or nitrous oxide threaten air and water quality. Residents are losing precious time to commuting on packed roadways, and traffic congestion is causing additional public health issues.

Pedestrian and bicycle trails can provide relief from the pressures of city life – more opportunities for recreation, options for bike commuting, green space that improves air and water quality, and more. It's time that more consideration was given to transit systems that include pedestrian and cycling alternatives.

One City's Solution: New York City's Broadway Makeover

Some cities have started to adopt innovative plans that incorporate pedestrian and bicycle transportation alternatives – and the results are encouraging! Beginning in 2009, the New York City Department of Transportation (NYC DOT) embarked on a redesign project of Broadway Boulevard and nearby streets that transformed the area from an unsafe, congested vehicle thoroughfare into a safer, smoother flowing route that incorporates space for pedestrian and bicycle traffic.[i]

Best of all, the project showed great gains all across the board, from improving travel times to reducing traffic-related deaths and accidents:

- Travel speeds improved in nearly all cases, with speeds improving by anywhere from 3% to 17% depending on the direction of travel,
- Safety saw huge improvements, with motorist and passenger injuries down 63% and pedestrian injuries down by 35%,
- Overall pedestrian counts in the area increased by 6% to 11%, and
- A stunning 74% of New Yorkers agreed that Times Square improved dramatically through the project.[ii]

The Broadway redesign clearly benefitted the city. Traffic, safety, and pedestrian counts can all improve with better pedestrian and bicycle infrastructure, but these aren't the only benefits. As reflected in the Broadway redesign and projects around the nation, trails can also help to build social connections and help residents interact more with their communities. Moving at a slower pace, trail users are more likely to visit with each other and stop at local businesses, building cohesion and resilience.

Ecosystem Services and Human Health Benefits of Trails

Far too often, the full benefits of pedestrian and bicycle trails are forgotten or ignored. Ecosystem services and the human health benefits they support are two key examples.

Ecosystem services are the benefits that nature freely provides to people, like fish in a stream or the clean water supply that a healthy watershed produces. When green spaces and bike and pedestrian trails are implemented in urban design, local residents benefit from nature in a number of ways.

- **Air quality:** Access to bike commuting options can reduce the number of car trips. In Philadelphia, a city with a strong network of bike trails, bicyclists travel 260,000 miles daily, which avoids yearly emissions of about 47,450 tons of CO_2 from car trips that would otherwise happen.[iii] This level of emissions is the equivalent of driving 210 cars non-stop for a full year![iv]

- **Water quality:** Trail design and reducing vehicle use can help with water quality issues. Landscape buffers surrounding trails can contribute – rain gardens and other green infrastructure can help filter toxins and mitigate the effects of flooding from intense rain events.
- **Aesthetic value:** Environmental aesthetics have been linked to economic value in terms of higher housing values, wages, and locational decisions,[v] and degraded landscapes have been associated with economic decline.[vi] Healthy, beautiful bike and pedestrian trails can contribute to the overall value of a community.
- **Recreational opportunities:** Recreation is an important source of joy, health, and happiness for people, and access to trails facilitates recreational activity. Whether used for recreating, commuting, or both, bike and pedestrian trails are valuable community assets.

Trails also support **human health** through the ecosystem services they provide. Easy access to pedestrian and bike trails means that people are one step closer to exercise and a healthier lifestyle, and this translates into healthcare cost savings.

- Improving access to spaces for physical activity and informing populations about access options can **increase the exercise rate by up to 48%**.[vii]
- Bicycle commuting burns calories – one study found **bike commuters burned 540 calories an hour**. [viii]
- A study in Portland, Oregon suggests that avoided healthcare costs related to obesity reduction and calorie burning from bike and pedestrian trail activity could amount to **health savings of up to $81 million per year**. [ix]
- Trails and parks aren't just good for physical health – they also promote mental health.[x]

Holistic Analysis Makes a Great Case for Trails

As more factors are included in trail benefit-cost analysis, trails are shown to be critical community assets that provide a real return to the local economy. In the past, trails have been considered add-ons that are often eliminated from large transportation projects when budgets get tight. Today, trails are important multi-benefit assets that can connect and energize communities - supporting health, providing access to jobs, connecting low-income communities, providing recreation, and preserving much needed urban open space.

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[i] http://www.pps.org/reference/broadway-boulevard-transforming-manhattans-most-famous-street-to-improve-mobility-increase-safety-and-enhance-economic-vitality/

[ii] http://www.nyc.gov/html/dot/html/pedestrians/broadway.shtml

[iii] http://bicyclecoalition.org/wp-content/uploads/2014/01/Double-Dutch-Bicycling-Jumps-in-Philadelphia1.pdf

[iv] http://www.yousustain.com/footprint/howmuchco2?co2=47%2C450+tons

[v] Palmquist, R.B., 2002. Hedonic models, in: Bergh, J.C.J.M.v.d. (Ed.), Handbook of Environmental and Resource Economics. Edward Elgar Publishing, Cheltenham, UK.

[vi] Power, T.M., 1996. Lost Landscapes and Failed Economies. Island Press, Washington, D.C., Covelo, CA, and London.

[vii] Sherer, P. 2006. The Benefits of Parks: Why America Needs More City Parks and Open Space. San Francisco: The Trust for Public Land.

[viii] http://bjsm.bmj.com/content/41/1/8

[ix] Physical Activity and the Intertwine: A Public Health Method of Reducing Obesity and Healthcare Costs. A Report to the Intertwine Alliance Partners Kurt Beil, ND, LAc, MPH January 21, 2011 http://bikeportland.org/wp-content/uploads/2011/02/IntertwinePAObesityAssessment.pdf

[x] Sturm, Ronald and Deborah Cohen. Proximity to Urban Parks and Mental Health. The Journal of Mental Health Policy and Economics, v.17 no.1, 2014: 19-24.