

Reframing Trees: Leveraging the Lesser-Appreciated Benefits of Urban Trees

By Paul D. Ries



Three Key Messages and Research Studies That Prove Them

1. Trees are a matter of life, and death
2. Trees make, and save, us money
3. Trees can make, or break, our communities

Three Strategies for Reframing Trees

1. Reposition trees as essential
2. Advocate for tree equity
3. Foster community engagement

Research Studies Cited in this Presentation

Urban trees influence birth outcomes

Donovan, G. H., Michael, Y.L., Butry, D.T., Sullivan, A.D., Chase, J.M., (2011). Urban trees and the risk of poor birth outcomes. *Health & Place*, (17) 1, pp 390-393. <https://doi.org/10.1016/j.healthplace.2010.11.004>

Trees reduce our stress levels

South, E. C., Kondo, M. C., Cheney, R. A., & Branas, C. C. (2015). Neighborhood blight, stress, and health: a walking trial of urban greening and ambulatory heart rate. *Am J Public Health*, 105(5), 909–913. doi:[10.2105/AJPH.2014.302526](https://doi.org/10.2105/AJPH.2014.302526).

Lack of trees leads to increased deaths

Donovan, G. H., Butry, D. T., Michael, Y. L., Prestemon, J. P., Liebhold, A. M., Gatzolis, D., & Mao, M. Y. (2013). The relationship between trees and human health: evidence from the spread of the emerald ash borer. *Am J Prev Med*, 44(2), 139–145. doi:[10.1016/j.amepre.2012.09.066](https://doi.org/10.1016/j.amepre.2012.09.066)

Trees provide us more value than most people realize

Endreny, T., Santagata, R., Perna, A., Stefano, C. D., Rallo, R. F. & Ulgiati, S. (2017) Implementing and managing urban forests: a much needed conservation strategy to increase ecosystem services and urban wellbeing. *Ecol. Model.* 360, 328–335. <https://doi.org/10.1016/j.ecolmodel.2017.07.016>

Trees provide economic benefits not just to cities, but to individuals

Bridges, L.E. (2016) The value of canopy cover: Hedonic Pricing Study in Lakeland, Tennessee. MS Thesis, Mississippi State University. <https://ir.library.msstate.edu/handle/11668/17640>

We lose money by not having trees

McDonald, R.I., Kroeger, T., Zhang, P., Hamel, P. (2020). The Value of US Urban Tree Cover for Reducing Heat-Related Health Impacts and Electricity Consumption. *Ecosystems* 23, 137–150 (2020). <https://doi.org/10.1007/s10021-019-00395-5>

There is a connection between trees and crime rates

Kondo, M.C, Han, S., Donovan, G.H., MacDonald, J.M. (2017). The association between urban trees and crime: evidence from the spread of the emerald ash borer in Cincinnati. *Landsc. Urban Plan.*, 157, pp. 193-199. <https://doi.org/10.1016/j.landurbplan.2016.07.003>

Lack of trees is an Environmental Justice issue

Hoffman, J. S., Shandas, V., & Pendleton, N. (2020). The effects of historical housing policies on resident exposure to intra-urban heat: A study of 108 US urban areas. *Climate*, 8(1), 12. <https://doi.org/10.3390/cli8010012>

Trees are central to the quality of community life

Mansor, M., Said, I. and Mohamed. I. (2012) Experiential Contacts with Green Infrastructure Diversity and Well-being of Urban Communities. *Procedia – Social and Behavioral Sciences* (49) pp 257-267. <https://doi.org/10.1016/j.sbspro.2012.07.024>