LID Cost-Benefit Reference List

The following reference list provides a general overview of cost analysis and comparison of LID practices. This list is not exclusive, rather, it is meant to be a starting point for investigating the costs and benefits associated with LID.

Adams, L., Schulte, S., Rivarola, M., McDonald, C., and J. Ruhl. 2010. *Alternative Futures: Economic and Water Resource Analysis of Traditional vs. Low Impact Redevelopment.* Abstract presented at the 2010 International Low Impact Development Conference. San Francisco, CA.

Paper compares the life cycle costs, return on investment (ROI), and water quality benefits of traditional and LID approaches. The document examines a mixed use commercial redevelopment, a multi family development and a typical suburban single family residence.

Braden, J., Ghalayini, D., Grant, J., Kloss, C., MacMullan, Ed, Morse, S., Montalto, F., Nees, D., Nowak, D., Peck, S., Shikh, S., Yu, C., and S. Wise. 2010. *Integrating Valuation Methods to Recognize Green Infrastructure's Multiple Benefits.* Abstract presented at the 2010 International Low Impact Development Conference. San Francisco, CA

Paper reviews the economic and social values of green infrastructure practices applied in urban settings through a case study analysis.

Conservation Research Institute. 2005. *Changing Cost Perceptions: Analysis of Conservation Development.* Prepared for Illinois Conservation Foundation and Chicago Wilderness. Prepared by the Conservation Research Institute. Chicago, IL.

Report provides cost analyses and environmental benefits of conservation approaches to development. Includes a literature review, build-site cost analysis, and template cost analysis for the Midwest region.

MacMullan, E. and S. Reich. 2007. *The Economics of Low Impact Development: A Literature Review.* ECONorthwest.
Available at: http://www.econw.com/casestudies/casestudy?study=low-impact-development

Literature review provides a brief description of LID techniques and summarizes literature that measures the varied economic benefits of LID.

NAHB Research Center, Inc. 2003. *The Practice of Low Impact Development.* Prepared for U.S. Department of Housing and Urban Development, Office of Policy Development and Research, Washington, D.C. Prepared by NAHB Research Center, Inc. Upper Marlboro, MD.

Report discusses conventional and alternative land development techniques that developers can integrate into existing practices, along with certain economic and environmental considerations.

Smullen, J., and M. Vanaskie. 2010. *Planning-Level Cost Estimates for Green Stormwater Infrastructure in Urban Watersheds*. Abstract presented at the 2010 International Low Impact Development Conference. San Francisco, CA.

Paper evaluates and provides cost estimates for different green infrastructure techniques.

Stratus Consulting. 2009. *A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds*. Final Report. Prepared for Howard M. Neukrug, Director, Office of Watersheds, City of Philadelphia Water Department. Prepared by Stratus Consulting. Boulder, CO.

Report provides a triple bottom line benefit-cost assessment of combined sewer overflow alternatives in four Philadelphia watershed areas.

USEPA. 2007. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices. EPA 841-F-07-006. 2007. Available at: http://www.epa.gov/owow/NPS/lid/costs07/documents/reducingstormwatercosts.pdf

Report compares projected or known costs of traditional development compared with LID practices. Provides a cost comparison of 17 national case studies.

Wagner, R. *Calculation of LID Benefits in Meeting New Development Standards.* 2010. Abstract presented at the 2010 International Low Impact Development Conference. San Francisco, CA.

Paper discusses stormwater runoff for developed and undeveloped areas and evaluates pervious pavement, green roofs, rain gardens, and swales.

Wulkan, B. *Evolution of Low Impact Development in the Puget Sound Region.* 2010. Abstract presented at the 2010 International Low Impact Development Conference. San Francisco, CA.

Paper discusses environmental, social, and political factors of low impact development (LID) in the Puget Sound region.

Additional cost-benefit resources can be found through municipal programs as well. For example, Seattle Public Utilities has compared several of their *Natural Drainage System* implementation projects with conventional approaches: http://www.seattle.gov/util/

If you have a cost comparison case study or cost-benefit analysis you'd like to include on this reference list, please email us at info@texaslid.org.