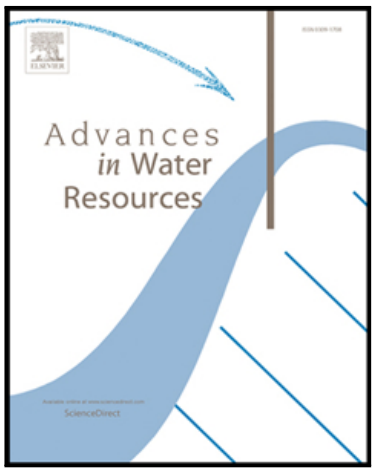

Effects of trees on mean wind, turbulence and momentum exchange within and above a real urban environment

M.G. Giometto, A. Christen, P.E. Egli, M.F. Schmid, R.T. Tooke, N.C. Coops, M.B. Parlange

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Highlights

- LES and tower measurements are used to quantify effect of urban trees on flow
- Roughness length and displacement height increase with increasing foliage density
- The ratio of turbulent to mean kinetic energy increases with increasing foliage
- Dense trees reduce downward turbulent transport of high-momentum fluid.