Wash-away of contaminant downstream of a backward-facing step over a range of Schmidt number. HANNAH MIN, PAUL F. FISCHER, ARNE J. PEARLSTEIN, University of Illinois at Urbana-Champaign — We report computations of two-dimensional unsteady convective mass transfer in flow over a backward-facing step, in which a contaminant initially present downstream of the step is "washed away". Results are presented for a range of Schmidt numbers, showing how the recirculation region downstream of the step not only serves to retain contaminant near the step, but also transports contaminant upstream towards the step. The results for the highest Schmidt number considered (2650) are relevant to wash-away of low-molecular weight species in liquids, for which some implications are discussed.