

Figure DR1. Cross-sectional profiles at three locations surveyed pre- (2002) and post-flood (2007); also shown for section C are surveys from 1978 and 1985. Section A is located 4.3 km upstream of the study reach, section B is immediately downstream of the study reach and section 3 is 5.8 km downstream of the study reach. Sections A and B have been unaffected by the flood, experiencing both erosion and deposition but with no significant change to the maximum depths across the section, with maximum depth being ~0.5 m deeper in the pre-flood survey. Section C does show greater scour after the 2005 flood, with maximum channel depth increasing by over 1 m. However, this scour is spatially-restricted and similar to the depths of scour that could be expected from the other surveys. For example, the main channel was over 1.5 m deeper in 1978 compared to the post-flood survey in 2007. These changes in bed

height are likely due to the presence or absence of a unit bar in the cross-section rather than a widespread change in bed elevation.



Figure DR2. Comparison of the thicknesses of unit bar deposits for bars formed: a) after the 2005 flood in annual floods, and b) during the 2005 large flood. Note that the foresets (labeled FS) produced at the margin of migrating bars are of the same size (the foresets thicken and steepen towards the bar margin). The base of the unit bar sets are indicated by white arrows and can be traced over several 10s of meters

between GPR survey lines. The style and scale of unit bar deposits thus appear similar despite the different discharges prevalent at the time of their formation.