

Figure 5B. Example of DEM processing used to delineate relic stream valleys in part of the Central Kentucky karst terrane. The image shows the surface-flow routes generated by artificially filling all sinkhole depressions depicted in figure 5A to their spillover points. In GIS, these flow routes—which delineate potential relic stream valleys—are overlaid and compared with the “blue-line” streams data coverage to discriminate them from present-day valleys having actively flowing surface streams.

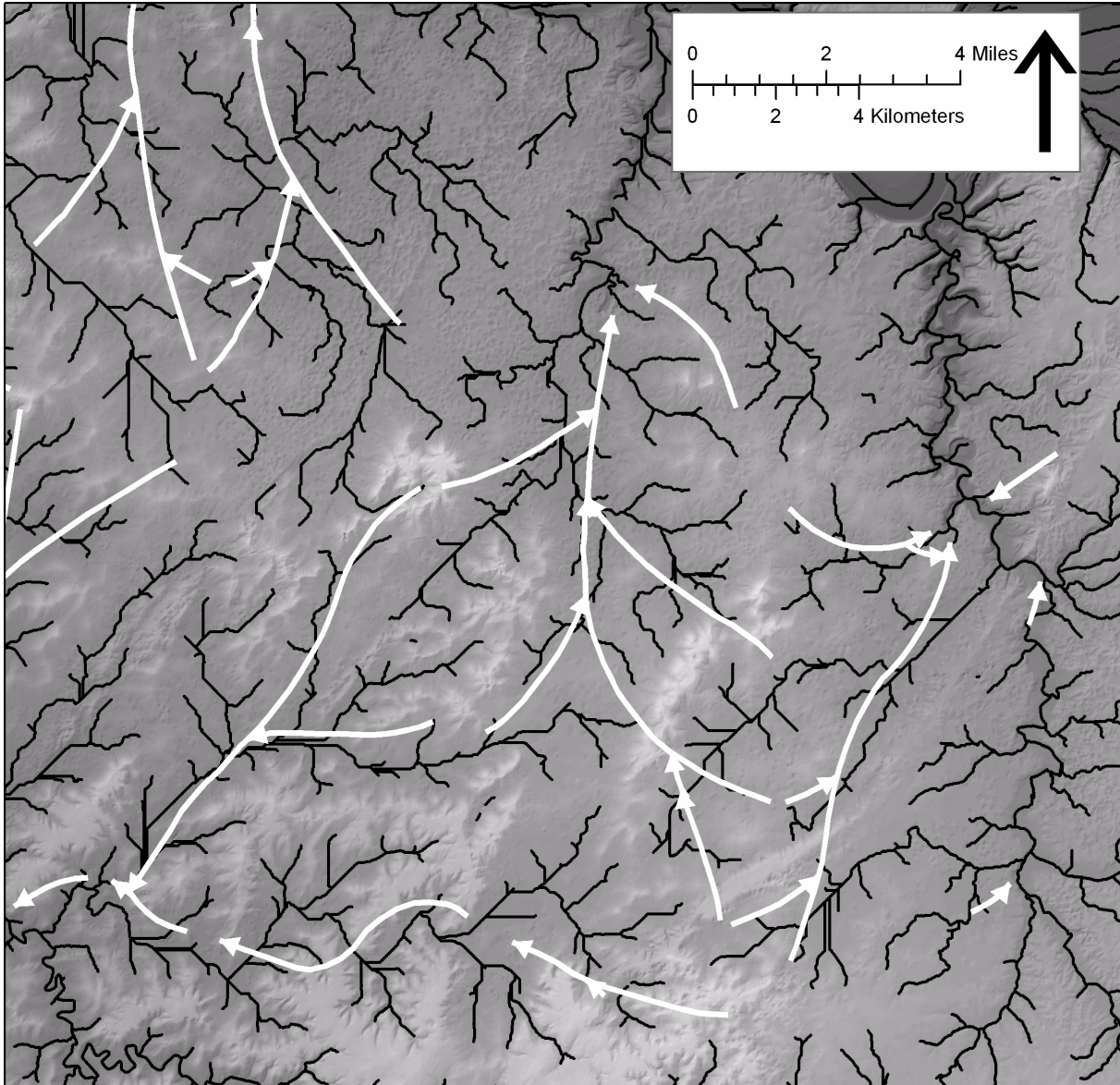


Figure 6. GIS-processed image showing the apparent relation between relic stream valleys shown in figure 5B and subsurface-flow routes inferred from results of previously published dye-tracer tests (Taylor and McCombs, 1998). The curvilinear arrows that represent the dye-tracer flow paths were drawn to follow the configuration of the potentiometric surface mapped in 1997-98 and were not altered to follow the GIS-generated trends for the relic stream valleys.

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