Supplementary Information for:

A novel model for simulation of nitrate in aquifers

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SI Figure Captions

Figure S1. Location of 12 observation wells (piezometers), land use map, production wells used for industrial and agricultural activities, and groundwater table in the Karaj Aquifer for April 2011 (the two red lines indicate boundary conditions containing given heads)

Figure S2. Thickness of the Karaj Aquifer

Figure. S3. Spatial variation of calibrated hydraulic conductivity in the Karaj Aquifer

Figure S4. Spatial variation of recharge in the Karaj Aquifer

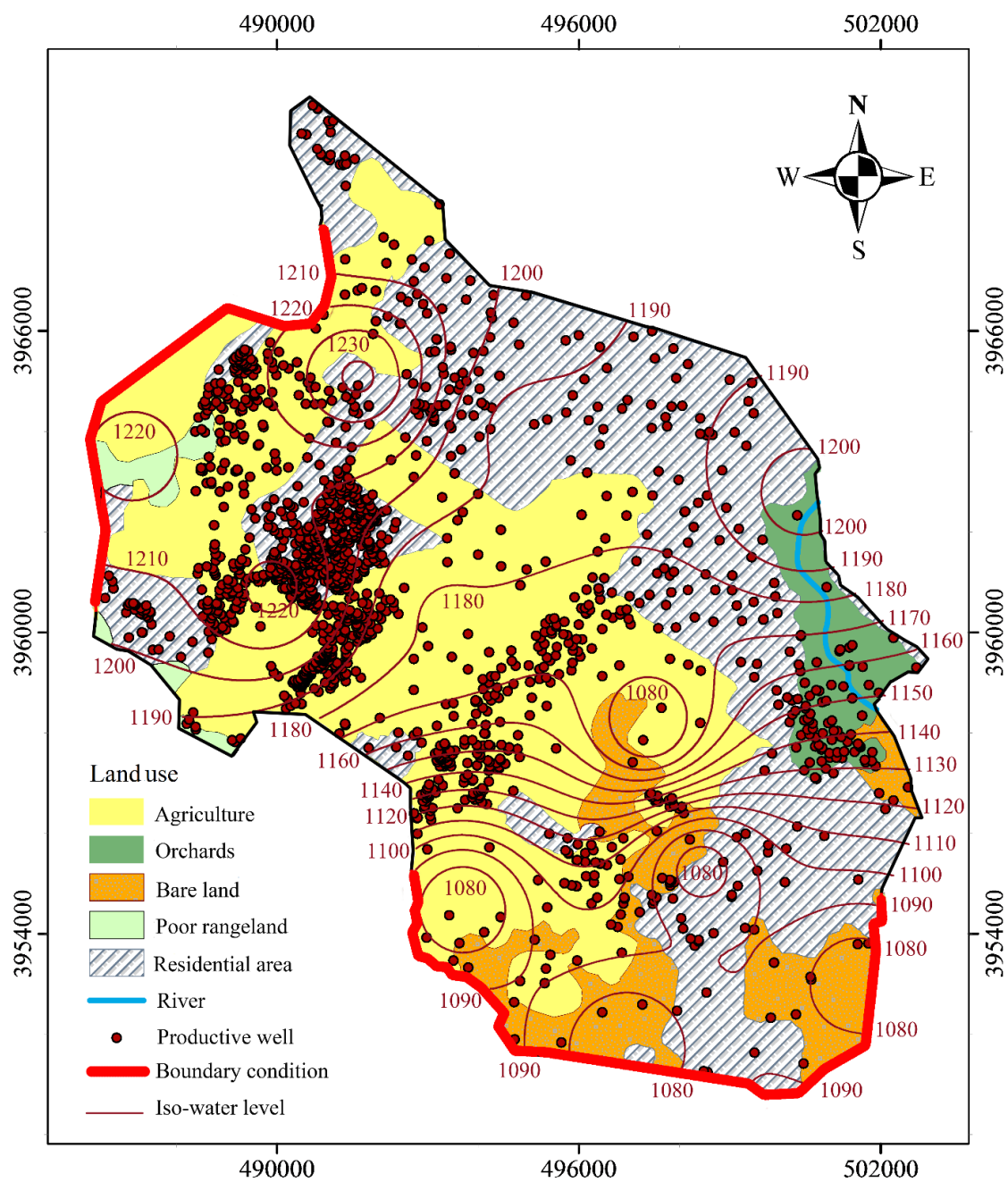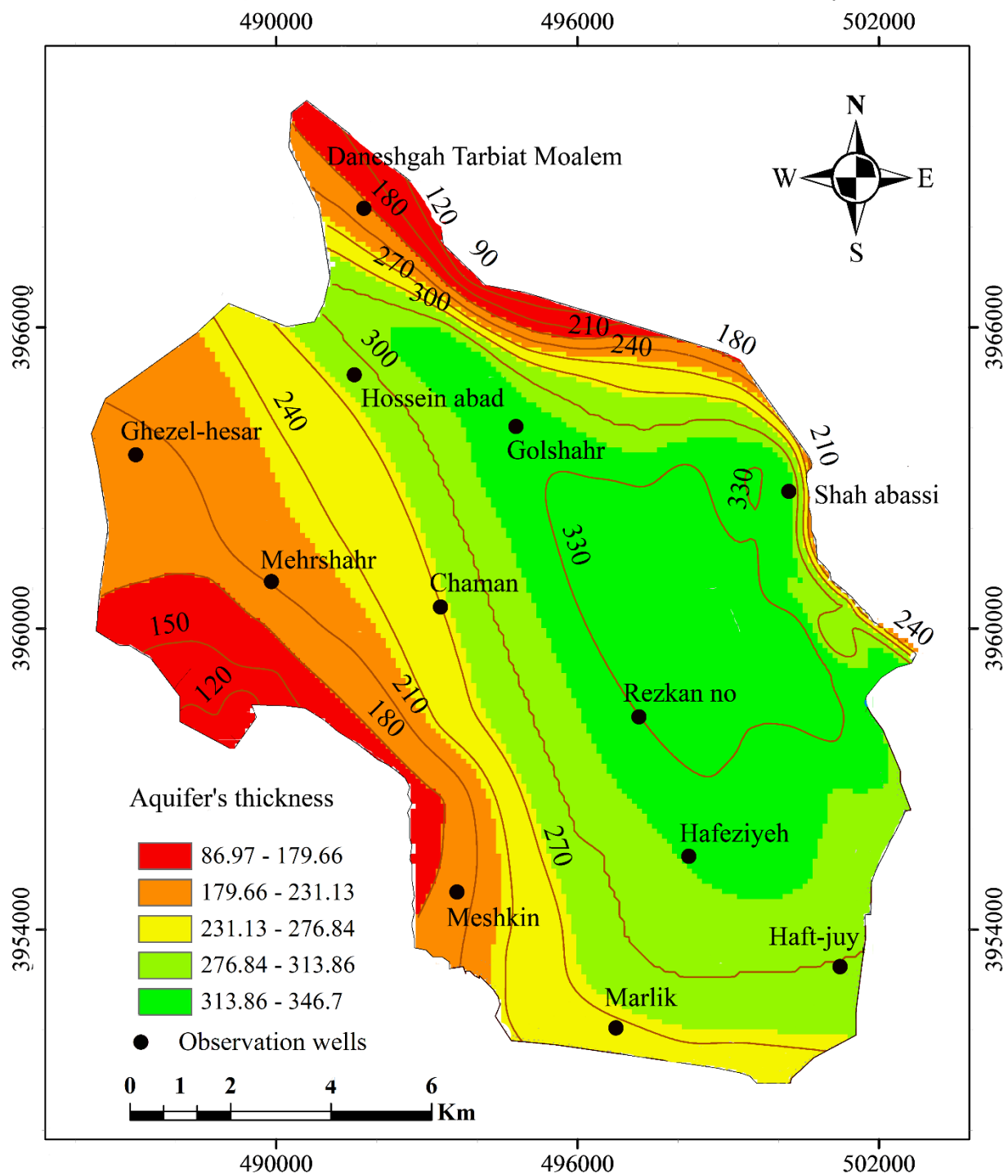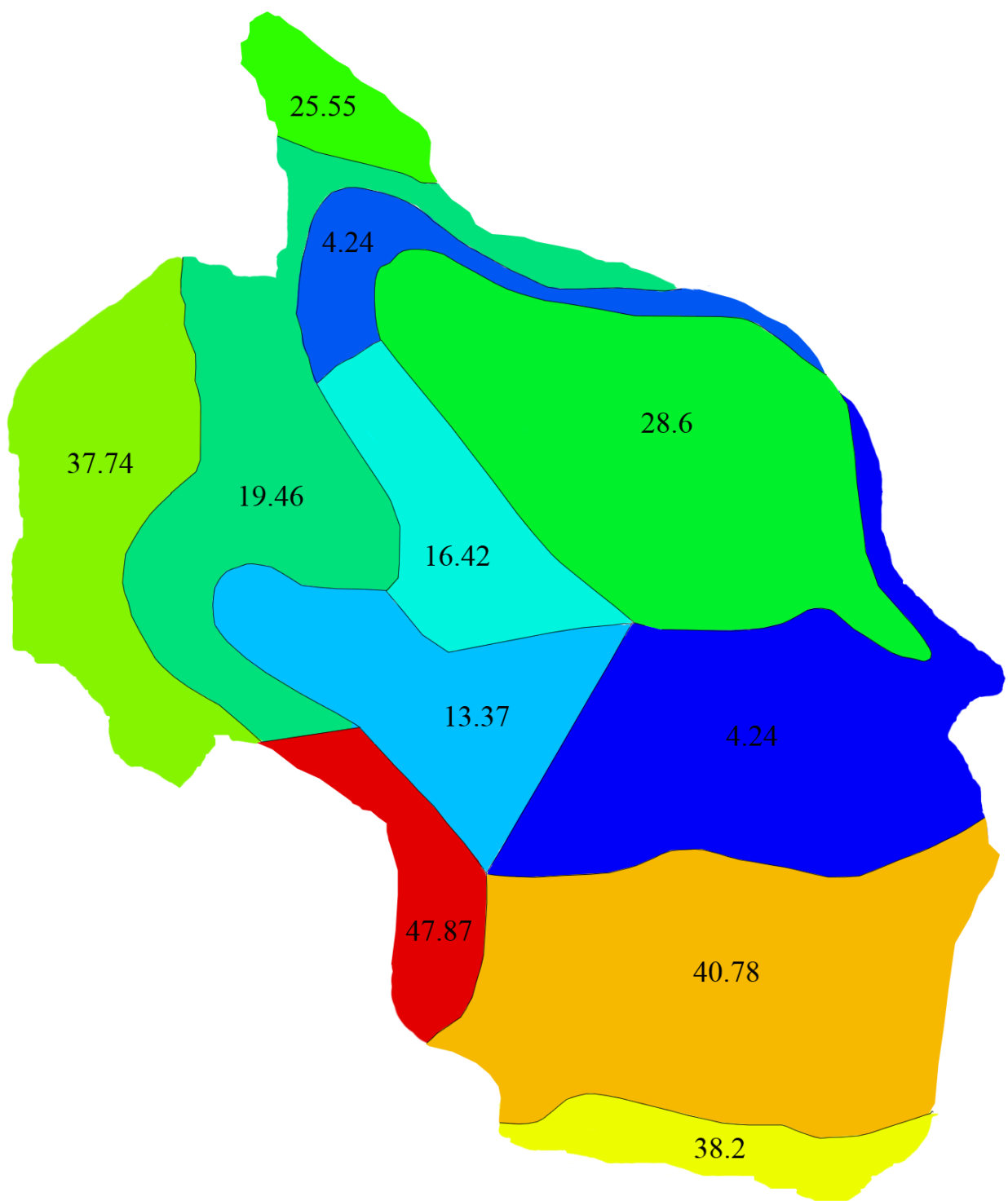**Figure S5.** Spatial variation of calibrated specific yields in the Karaj Aquifer
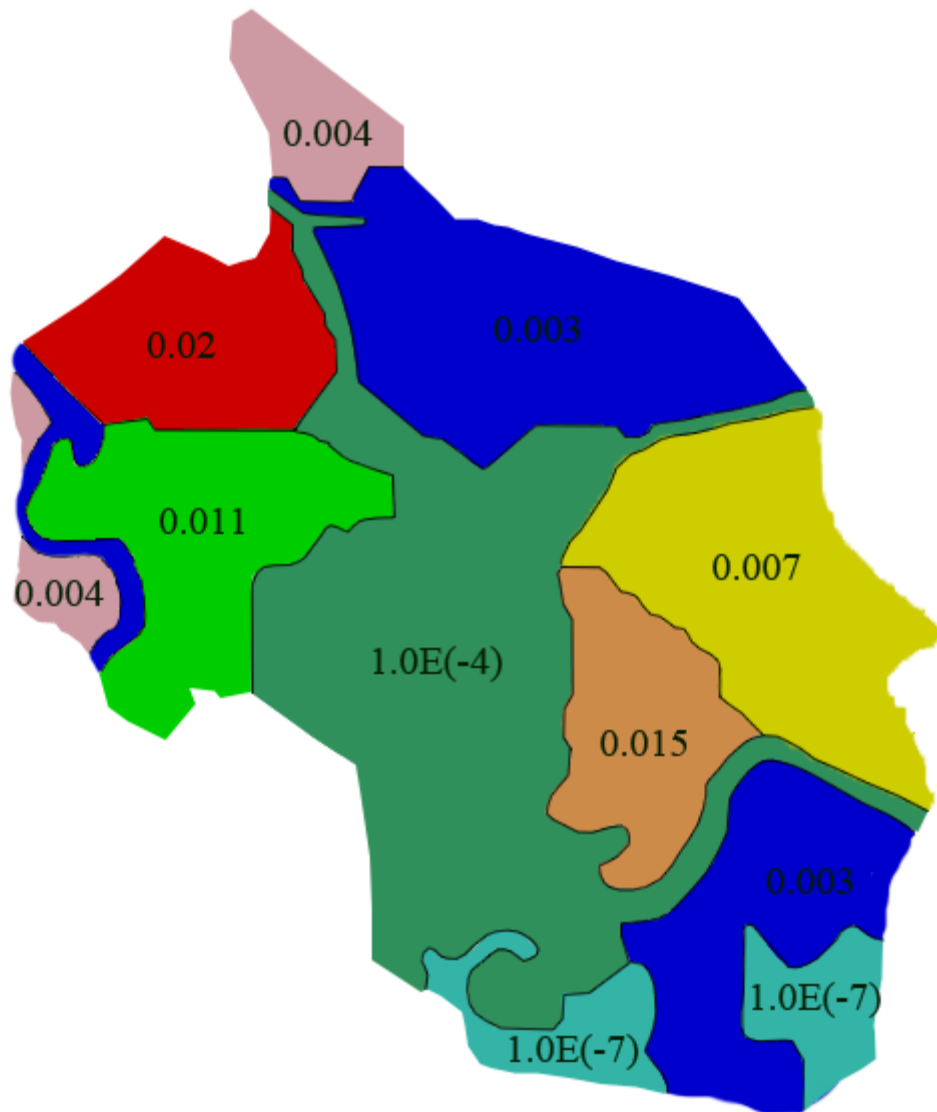
Figure S1

Figure S2

Figure S3

Figure S4

Figure S5