

Distribution of floodwater depth and damages of road structures in Joso City, Ibaraki Prefecture, caused by the Kanto-Tohoku torrential rain in September 2015

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The torrential rain on September 2015 in Kanto-Tohoku regions caused the collapse and overflow of embankment along the Kinu River, and floodwaters inundated the widespread area of Joso City, Ibaraki Prefecture. Flood inundation depth in Joso City was estimated based on the height of flood marks on buildings and houses. Field reconnaissance in inundation area was conducted to measure the height of flood marks by using leveling rod. The height of flood marks were obtained at 100 sites in the inundated area. The height of flood marks in the inundated area were less than 3 m, and most of these obtained values were similar or below the values that were presented on the flood hazard map of Joso City. In the inundated area, severe damages of road embankments and structures were observed in the back marsh area (paddy fields) between the natural levees along the Kinu River and Kokai River.

Keywords: Kanto-Tohoku torrential rain in September 2015, Kinu River, floodwater depth, hazard map, damage of road structure, Joso City