

Stream Extraction from 1m-DTM Using ArcGIS

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Abstract : Streams are important in providing water supply for industrial, agricultural and human consumption, In short when there are streams there are lives. Identifying streams are essential since many developed cities are situated in the vicinity of these bodies of water and in flood management, it serves as basin for surface runoff within the area. This study aims to process and generate features from high-resolution digital terrain model (DTM) with 1-meter resolution using Hydrology Tools of ArcGIS. The raster was then filled, processed flow direction and accumulation, then raster calculate and provide stream order, converted to vector, and clearing undesirable features using the ancillary or google earth. In field validation streams were classified whether perennial, intermittent or ephemeral. Results show more than 90% of the extracted feature were accurate in assessment through field validation.

Keywords : digital terrain models, hydrology tools, strahler method, stream classification

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