

RELEASE NOTE

Water availability and water quality models are widely used for environmental regulation such as developing Total Maximum Daily Loads (TMDLs) for water quality-impaired water bodies, environmental policy (e.g., water quality criteria development), and sustainable development and management of land and water resources. To meet EPA's goals, the National Exposure Research Laboratory (NERL) develops and uses fate and transport models, modeling tools and approaches to simulate water availability and water quality constituents. The Hydrological Simulation Program - FORTTRAN (HSPF) is a comprehensive watershed model capable of simulating water availability and water quality constituents at user-specified spatial and temporal scales. HSPF is a mixed land-use model applicable to both urban and non-urban watersheds and was developed by EPA in collaboration with the United States Geological Survey (USGS). HSPF is the core watershed model in the BASINS (Better Assessment Science Integrating Point and Nonpoint Source Pollution) modeling system. While BASINS has a number of databases available to HSPF users, oftentimes model users need to create HSPF simulations with data from sources other than BASINS. Because HSPF requires extensive input data, the HSPF Data-Formatting Tool (HDFT) allows users to format model input data and import it into a WDM file. This tool is also for users who are building their data from scratch from study areas outside of the United States. HDFT aids HSPF's GRAY and GREEN infrastructure modeling applications that use sub-hourly temporal resolutions. GRAY infrastructure is most often used in urban environments where stormwater usually flows into stormwater system pipes before reaching a local stream, lake, or wastewater treatment plant. GREEN infrastructure systems mimic natural processes to infiltrate, evaporate, and/or reuse stormwater to maintain the pre-development hydrology and water quality of urban environments.