

Study on distributed hydraulic model

Whole term

2005.7 ~ 2006.3

(Purpose)

"The distributed hydraulic model profit practical use manual" was published in 1999 for the purpose of applying it in drafting / inspection of an effective inundation measure. Furthermore, it put practical use to a combined sewer improvement measure in a field of vision, and the first revision was done in June, 2003.

With a change of social conditions such as enforcement (2002) of a combined sewer emergency improvement business, the enforcement (2004) of a revised sewer method enforcement order, enforcement of specification city river inundation damage control, a practical use range of " distributed hydraulic model " is opening afterwards.

In view of such situation, JIWET carried out questionnaire survey to relate to a foregoing volume manual for self-governing bodies as a peculiar study of the whole country from 2004 to 2005.

This study added correspondence to a problem / a demand provided in a peculiarity study and the matter which related to flooding analysis newly to a high manual application-related in a wide area for the purpose of revising it and renovated examples and planned more substantiality of manual contents and enlarged a practical use range of "Distributed hydraulic model" more.

(Results)

(1) Rearranging of a problem / a demand matter of a manual for 2003 years for

The following matters were nominated for a problem / a demand matter of a manual by peculiar findings and analysis knowledge investigation.

- 1 . Rearranging of a theory-style and parameter about quantity of contamination load analysis
- 2 . Addition of a judgment element / a criterion of case of calibration / simulation
- 3 . Rearranging of modeling technique such as infiltration institutions
- 4 . An effective usage of electronic data (equal a sewer account book)
- 5 . Correspondence to new needs such as flooding analysis

(show Fig.1 a change and analysis contents of the duties results according to the year.)

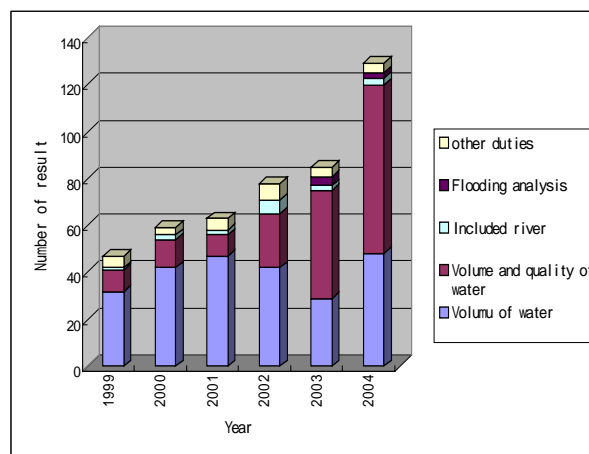


Fig.1 A change and analysis contents of the duties results according to the year

(2) A revision summary of a manual

This revision plans substantiality of contents such as a review of an estimate, addition of flooding analysis in correspondence with a problem and a demand matter of the manual which mentioned above.

Show below a main revision summary of a manual.

- 1 . Arranged theory types in quantity of contamination load analysis and calibration parameters and decided to plan substantiality of an example. In addition, mentioned a commentary of specifications / a parameter of quantity of contamination load of sediment such as earth surface or pipe with a table about analysis.
- 2 . Inspecting it think in a way with technique of calibration and filled up and mentioned a commentary about adjustment judgment by the presentation of a check flow in calibration.
- 3 . Filled up in a way of thinking / a point to keep in mind of modeling and added new modeling (modeling about an earth surface / infiltration).

- 4 . Resembled that included sake corresponding to a surge of recent flooding analysis needs, flooding analytical technique by the two-dimensional uncertainty style newly and arranged the flooding analytical technique that utilized an existing " distributed hydraulic model " (three overseas models) in total.
- 5 . About river integration analytical technique, reviewed classification technique with a manual and commentary content last time and arranged it intelligibly.
- 6 . A large review of a multiplication document based on the operative results.

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key words

Distributed hydraulic model, Quantity of contamination load analysis, Modeling infiltration institutions, Flooding analysis