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中文文摘	<p>昌平区是北京市西北部地区的重要生态屏障,《北京市昌平区“十一五”期间水务发展规划》明确指出昌平区水务发展规划的目标是加大水环境治理力度,确保生态环境良好。温榆河流域占昌平总流域面积 91.5%,因此研究温榆河水污染并提出相关治理措施是保证昌平区水环境良好的前提。本文介绍了昌平区各主要河流的基本情况,采用了适合昌平温榆河水系的分布式水文模型—DWSM 模型,并将温榆河流域划分成有相对均匀属性的子流域,采用 DWSM 模型进行降雨产汇流模拟,模拟出支流降雨后十三陵水库入库径流规律,利用该模型模拟计算后,能较好地反映降雨后十三陵水库径流入库的规律以及流域的水量总体状况;并采用一维水流模型和一维水质模型对温榆河干流水质水量过程进行模拟。模型由实测资料进行验证和率定,根据建立和率定的水流和水质模型,模拟得到设计暴雨条件下温榆河干流河道水流演进过程以及水质在河道内的变化规律。论文在调查了温榆河流域的水污染现状的基础上,结合昌平区工农业发展预测和人口预测,综合考虑各种因素,计算出点源污染物排放量。非点源污染则由率定过的 DWSM 模型进行预测。同时,根据《全国水功能区划(试行)》,对全区地表水功能进行区划,依据水体功能及北京市地表水要求,参照国家《地表水环境质量标准》GB3838-2002,提出水功能区规划水质目标。将计算结果与确定的水质目标比较,得出污染物的总量控制与消减方案,并指出治理措施。本文研究的最终目标是在昌平区温榆河流域污染现状的基础上,结合水务发展规划,以还清水体,恢复河道的自净能力为目的,通过数学模型预测流域范围内各水体的水流演变过程,并结合城市发展规划,产业布局 and 结构调整以及规划污水处理厂及其配套污水管网工程、截污工程和排污口优化工程等,确定出入河污染物的控制和消减量,为昌平区温榆河水系的整治和管理提供技术支持。模型系统则为进一步建立温榆河流域水污染预警与防治综合系统打下基础,还为昌平区的污染防治规划、恢复温榆河水系的河道生态环境功能提供科学的支撑。</p>
外文文摘	<p>Changping district is an important ecological barrier of the north-western region in Beijing. It is clearly pointed out that the objective of water service development planning is to increase the water environment to ensure a good ecological environment in the document of the Beijing Changping District Eleventh Five-Year Period Water Development Planning. About 91.5% area of Changping District belongs to Basin Wenyu River, so that excellent water quality of Wenyu River can provide an excellent water environment of Changping District. This paper introduces the basic situation of major rivers in Changping District. The distributed hydrological model DWSM is used to divide Wenyu River Basin into some sub-basins having relatively uniform attributes. The model is also used to simulate the rainfall and runoff, and then find out the input discharge of the Ming Tombs Reservoir. The calculations agree well with the measurement of flow in the Ming Tombs Reservoir. One-dimensional mathematical model of flow and water quality model are used to simulate the water quality and quantity in the main stream of the Wenyu River. We use the measured data to validate the model. Integrated the above hydrology and hydrodynamic model, the water environment of Wenyu River basin is evaluated. Based on water pollution investigation, combined with industrial and agricultural development in Changping District, the population projections and forecasts, a variety of factors considered to calculate the point source emissions. Non-point source pollution from off DWSM rate prediction model. At the same time, in accordance with the "National water function zoning (Trial)", on the region's surface water division functions, according to the water body functions and the requirements of surface water in Beijing, in the light of the country, "Surface Water Environmental Quality Standard" GB3838-2002, proposed water feature area planning water quality objectives. The results will determine the water quality objectives and comparison, the total amount of pollutant control and abatement program, and pointed out that</p>

	<p>governance measures. The final goal of this paper is on the basis of the pollution in Wenyu River basin in Changping District, combining the objective of water service development planning target at stilling water bodies and resuming the river self-purification ability, predicting the water evolution process using the mathematical model, combining the city development planning, industrial distribution, structural adjustment and sewage treatment plant effluent pipe network engineering, pollutant outfall engineering and optimization projects, to determine access to river pollution control and abatement of the amount of water for the Wenyu River, Changping district training and management to provide technical support. Model system for the Wenyu River to further the establishment of early warning and prevention of water pollution lay the foundation for an integrated system, but also provide scientific support for the Changping District of pollution prevention and control planning and the ecological environment of the river.</p>
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