

U022-P13

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Marginary for the engineering works of the urban flood

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¹NPO River Basin

In our country where a lot of people have come to live from the convenience of traffic and the industrial production in the flood plain, the measure that confines the water as much as possible and flows out early has been taken. Moreover, the drainage road (newer rain water sewage separation type) is maintained upper and lower water service for the city resident's drinking water securing, usually decreases the river flow rate in normal circumstances.

River and sewage improvement have designed to have capacity to flow in probability rainfall according to regional importance. Probability rainfalls have been calculated from rainfall data of meteorological observatory where the data of the amount of rainfall per hour becomes complete for years by the diagram and the expression is made to flow. According to the importance of the basin, kinematical wave method to reflect land-use, reservoir function to reflect dam, or the distribution type model considering saturation etc.

Such rivers have protected to overflow flood up to the probability rainfall, not a few concreted three sides, deep bed though is also the criticism on an environmental side. Where main stream banks are too high to flow down drainage the pumps must be operated to prevent inland water disaster. The city hardened with concrete evaporates at once the moisture of the soil, and becomes it is easy to cause the heat island phenomenon. After 1997 The river law mending, in main river basins plans are researched. Even the overall plan it is assumed to be a public works reduction in nonessential from financial matters, and it is the realities to require the long tract of years.

The flood control that doesn't depend on a dam alone is said, and as for the report of IPCC, an extreme phenomenon such as extremely big rain and winds comes to happen frequently by global warming, and correspondence to the flood that exceeds what decided in year of the probability is requested. Overflow bank, flood hazard maps, river rangers, etc. are taken for the river of general people becomes familiar, but many people are interesting only in own house soak down, own child drowned in a river to death or the purchase of the apartment house landscape etc.

Removing barrier earth science and engineering, it is quite important to catch hazard rainfall by the residents. In the education of the physical geography of the elementary school to be taken, and to change because of not only piling up and the transportation action but also the erosion of the river and diastrophism due to the earthquake. When the danger of becoming it impossibility for my house to run away by being flooded up to the second floor or the levee breach judged because there is a possibility that the house collapses high when hazard rain falls, where outside the house should run away or does it run away to the second floor and does it only have to be given the thing?

Catching and the forecast system of the rainfall go up by improving the concept and the physical forecasting of radar that can catch the narrow zone accuracy, there is a possibility to be able to use if regional reception facilities that can be used with resident's senses are installed. A real-time display of the rainfall and the water level is also advanced, and it is useful for the river user though the observation of the temperature and the wind is little in the diplomatic relation ministry.

Take shelter to a private building such as apartment houses and offices should be likely to be done if there is no public, high building to be near. It is necessary to set the right by sectional surface.

Ohtaki-Dam extreme rainfall experience and rescue training in canoe or fishing are useful to raise five senses to catch hazards rain and flow.

Considering more harmful debris hazards, ground water center flow notion which sucking out soil pore moving up water pressure is important.

Keywords: City flood flow, soil moisture, hazard rainfall, the five senses education, refuge compensation, ground water stream