

Hydrological Studies of Lake Naini, District Nainital, Uttar Pradesh (Part-I)

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ABSTRACT

Lake Naini (popularly known as Nainital lake) in district Nainital of Kumaun Himalaya region is well known for its importance from tourist point of view in India. It is also the only source of drinking water to the thousands of people living in Nainital town and surrounding area. Unfortunately, due to unscientific use of lake water and improper management, the water availability in lake has been affected with respect to its potability. The sedimentation at a higher rate is reducing the lake water capacity. Many of the subsurface inflow sources, either have been dried or diverted, The lake water is being polluted by different types of human activities. Therefore keeping these in view, to study different aspects of the lake such as water balance, sedimentation, pollution, hydrodynamics and identification of recharge sources/areas from hydrological point of view, the department of Environment, Govt. of U.P. financed a project through Nainital Lake Development Authority to the National Institute of Hydrology, Roorkee.

In the present report, the detailed information like geology. geomorphology of Naini lake have been reported along with the methodology for studying the water balance, sedimentation and pollution aspects etc. of the lake. During the last 7 months i.e. from Feb. to Sept. 1994, study of hydrodynamics of lake along with water quality, including stable isotopic composition of lake water were carried out. The results of these studies are given in this report with the conclusion drawn. The details of instrumentation installed at the lake site and in its catchment have also been mentioned in this report. As this is only an interim report, therefore, much emphasis has been given on the primary part of the studies to be carried out and little about the studies carried out so far. The details of the studies of different process going on with the lake and are being studied by the Institute (for a period of one year, Feb.94 to Feb. 95) using nuclear techniques, remote sensing techniques, chemical techniques and conventional techniques will be given in details in the report which will be brought out in the month of May/June, 1995.