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Research data on runoff as influenced by tree harvesting and man-made plantations are presented. Two small forest (brush) watersheds, W_1F (1.45 ha) and W_2F (0.87 ha) were calibrated for 8 years (1961-68). During calibration period, W_1F gave 18 per cent more runoff and 63 per cent higher peak rate of runoff as compared to W_2F. In the year 1969, W_1F was clear felled and reafforested with *Eucalyptus* spp. The post-calibration relationship

indicates that W_1F (treated) after afforestation gave 10 per cent less runoff and peak rates of runoff as compared to W_2F (untreated). The total reduction of 28 per cent in runoff and 73 per cent in peak rate is due to afforestation resulting in fully stocked plantation and a dense undergrowth. The study has quantitatively indicated the effectiveness of afforestation in reducing runoff and its peak rate by 28 and 75%, respectively.