

The usual length of the dry season is not over 40 days, but during exceptionally dry years there have been three months of very light runoff. The average yearly runoff measured at the point of diversion is about 275 cu. ft. per sec., and the area tributary to this point is close to 60 square miles, giving an average runoff of about 4.5 cu. ft. per sec. per square mile. The heaviest floods are usually caused by warm rains and winds coming at a time when the greater part of the catchment basin is covered with several feet of snow. During the peak of the heaviest recorded flood the rate of runoff was slightly over 200 cu. ft. per sec. per square mile.

On account of the nature of the country with its thick covering of timber and underbrush, the runoff coefficient is high, averaging about 70 per cent. of the total precipitation.

The fact that the rate of runoff varies between wide limits makes it necessary to provide reservoirs of comparatively large capacity in order to take advantage of any considerable portion of the runoff.

*Reservoir Sites.*—The total reservoir capacity of the system is 2,661,000,000 cu. ft., which is divided among five reservoir sites as follows:—

Height of Dam.	Location.	Capacity, cu. ft.
75 ft.	Bear Creek .....	607,000,000
125 ft.	Jordan River (Diversion Point) ..	612,000,000
50 ft.	Jordan Meadows .....	980,000,000
50 ft.	Alligator Meadows .....	352,000,000
35 ft.	Wye Lake .....	110,000,000
	Total .....	<u>2,661,000,000</u>

At the present time only two of these reservoirs have been developed. A 57 ft. dam impounds the water in Bear Creek, creating in a storage of 328,000,000 cu. ft., but this dam can be raised to the full height of 75 feet, when necessary, and the storage nearly doubled. The reservoir at the diversion point on Jordan River is developed to its full capacity. These two reservoirs provide a storage capacity of 940,000,000 cu. ft., which is sufficient for all present requirements.

#### GENERAL PLAN OF DEVELOPMENT.

The power house is located on the beach near the mouth of the river, the centres of the water wheel nozzles being only a few