3. EROSION ON RANGE LAND

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Maintenance of adequate watershed protection on forest and range lands is vital to the continued prosperity of the West. Five hundred and eighty-seven million acres of semi-arid and arid range land and 237 million acres of forest land in the United States are grazed. The forage on these lands is the foundation of the range livestock industry in which is invested nearly two billion dollars. Range forage furnishes 75% of the feed for all the livestock in the 11 western states. Water from the watersheds on which the forage grows furnishes the basis for extensive power developments and for irrigating nearly 20 million acres of farm land. Erosion, following depletion of the once dense carpet of herbaceous and browse plants, has not only seriously depleted the productivity of range lands but is also endangering established irrigation projects and making prospective ones uncertain.

Although numerous other factors influence erosion, of which climate, soil, topography, and geologic formation are doubtless the most important, the vegetative cover is the main single controllable factor. Because of its protective value, forest growth, including its understory of herbaceous and shrubby vegetation, should be maintained wherever possible on the head waters of all streams used for irrigation, power, or navigation. West of the 100th meridian, however, forests grow on only 13% of the land area. Herbaceous and shrubby vegetation must therefore afford the necessary protection to the soil and streamflow on the remaining 87%.

EROSION AGENCIES

Annual rainfall is ordinarily scant and varies widely one year with another. Other climatic factors are also none too favorable for growth of vegetation. The vegetative cover, accordingly, seldom covers the ground completely, except under the more favorable soil and moisture conditions. The natural balance on these arid and semi-arid lands between the forces that tear down and those that build up the soil and vegetation is a delicate one, but if the vegetative cover is not excessively used erosion is usually slight. Natural agencies, such as drought, cloudbursts, landslides, and snowslides, may occasionally produce abnormal erosion. Man’s activities, however, by reducing the vegetative cover or altering the topography

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