WATERSHED MANAGEMENT BEGINS ON THE LAND

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What happens to our water after it falls upon the land as rain and snow, is dependent upon the climate, topography, geology and use or uses made of land resources within the watershed. The questions of whether we have enough water or too much water at certain times, or whether the water is available when and where we need it depends greatly on how we use and treat our watersheds.

In using lands we invariably alter their original conditions. These changes can result in changes in water movement. This, in turn can change plant cover and growth, change wildlife habitat, or change the character of the soil which may affect water intake rates and water holding capacities and on and on. This cause and effect chain reaction is complex and far-reaching and beyond the scope of my comments. I do, however, wish to emphasize that we must not fail to recognize that any action taken anywhere in a watershed that affects one resource will inevitably affect others.

Research and experience has shown that each piece of land is better suited for some one use or combination of uses than another piece of land in the same watershed. Thus, our watersheds must be managed on the capabilities of the land and treated on the basis of what is needed to be done to provide optimum utilization of resources, And this must be accomplished with a minimum amount of conflict among the various beneficial uses associated with the entire watershed.

I don't believe it is necessary to elaborate greatly on the many beneficial uses that our watersheds have in New Mexico. The one single use which all watersheds share in common is that they receive precipitation which falls on the land. Our watersheds are the source of our water supplies for our homes, our farms and ranches, and for industrial uses. It is true that some of our watersheds produce more water than others. For example we know that upstream watersheds on the Rio Grande produce more usable water than Tortugas watershed just south of the campus. Each of these watersheds do not function under the same set of environmental conditions. Thus each watershed differs in its capacity of use. Each watershed must be treated differently to afford optimum utilization of its resources.

Someone has said that watershed management is one of the most complex activities undertaken by man. It is complex because many different needs and purposes must be served. In our state the situation is further complicated by competing and conflicting needs among all water users. For example, downstream water users view with alarm any upstream activity which appears to encroach upon or reduce maximum surface runoff. Fish and Game enthusiasts likewise frown upon streambed practices to control and eliminate phreatophytes. On the other hand, there are proponents who advocate that watershed planning and management should be based on the multiple-use concept. The object of this approach is to seek efficiency in the manner of water use among all beneficial users - along with justice in the allocation of water rights.

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Efficiency of water use, as I understand it, is the ratio between our available water supply and the resulting beneficial uses. In our state water is the limiting factor in development and growth. Because of this we must be extremely careful in planning future water requirements to meet increasing population demands and changing beneficial uses. Certainly it appears logical to conclude that our watershed management programs must be developed to assume the greatest good to the greatest number of people in the long run. If we fail to build upon this thesis, we may find that our water problems will become more acute--the costs of water development will be prohibitive and we will fail in our attempts to develop, conserve and wisely use our meager water supplies.