

CHAPTER 6

RELATIONSHIP BETWEEN SHORT-TERM AND LONG-TERM PRODUCTIVITY OF THE ENVIRONMENT

The region has an established coal industry (fifteen mines are already operating or pending approval), and is facing continued development of other minerals such as oil, gas, and uranium. Projected coal development (including the site-specific project under consideration) in response to national energy needs would increase production to 173.3 million tons annually from fifteen mines by 1990. Production could level off or continue to increase beyond the 1990 projection, depending on market demands.

By 1990, about 2 billion tons of coal would be mined, or 9.2% of the estimated strippable reserves of the region. This low-sulfur coal would be made available to the region and other parts of the country; it would be consumed in the production of electricity or synthetic natural gas. About 150 million tons of coal would be lost by 1990, because current mining technology does not permit its economic separation from overburden and partings.

The 1978 population of Campbell and Converse counties is estimated at 37,780. By 1990, this figure would reach 59,394.

In the short term, the increased employment due to coal mining and coal transportation would create labor shortages in the nonmine sectors of the economy. In the long term, as more people move into the region, a labor force of sufficient size to meet the needs of all employers would be available. In addition, this increased employment would tend to hold the unemployment rate at its current low level.

Increased wage earnings and higher per capita income would in turn increase retail and wholesale trade over the life of each mine. This would be a short-term gain, while the loss of buying power of people on fixed incomes would be long term.

In the short term, housing shortages would continue and crowded conditions would be exacerbated. However, over the long term, the housing stock would eventually increase and match the demand.

Crowding of classrooms and increased student/teacher ratios would occur in the short term. In the long term, new facilities would be built, more teachers would be hired, and the tax base would increase to pay for these needs.

Health care in this region may never be considered up to standard, but over the long term the population/health care specialist ratio would at least remain at the current level.

Although there would be a short-term overtaxing of some local services (water, sewer, police and fire protection, solid waste disposal, transportation), this situation would be corrected as new sewer and water systems are built, more police and fire personnel are hired, and new solid waste disposal sites are developed, and highways and airports are improved.

Since mined areas can be reclaimed and restored to other uses, mining represents a short-term commitment of land use. Land occupied by expanded urban areas or new transportation facilities would be permanently committed to those developments.

Short-term disturbance of the soil resource would disrupt the productivity levels, destroy existing soil profiles, and increase soil erosional losses on 59,403 acres (1% of the region) by 1990. Soil productivity levels would be restored in the long term to varying degrees, and in some cases could equal 100% of the premining levels with successful reclamation.

Regional development would result in short-term losses of vegetation on 59,403 acres (1% of the region) by 1990. Vegetative productivity would be regained within 10 years after reclamation begins. The diversity typical of native vegetation would take 30 or more years to redevelop on reclaimed areas (University of Wyoming, Black Thunder Project Research Team 1976). This would, in turn, affect wildlife diversity.

The use of 3,242 acres for housing and support services would be a long-term conversion of land use. Productivity in relation to soils, vegetation, livestock grazing, and wildlife habitat would be lost, but productivity as measured in benefits to people would be enhanced.

A total of 59,403 acres of wildlife habitat (1% of the region) would be lost for the short term by 1990. One percent of the regional pronghorn and mule deer populations would be lost due to direct habitat destruction. A total of 1.7% of all mule deer yearlong habitat, 2.6% of pronghorn yearlong habitat, and 2.7% of pronghorn winter concentration-yearlong habitat would be destroyed or affected by new roads, fences, increased human activity and noise. A total of 1.4% of all big sagebrush habitat and 3.6% of all silver sagebrush habitat in the region would be destroyed by 1990. Under current reclamation practices, these areas would be reclaimed to grasslands. Repopulation of reclaimed areas by small mammals and some nongame birds should occur after a healthy stand of vegetation is established. The rate of repopulation, and postdisturbance densities are unknown.

SHORT TERM VS. LONG TERM

The loss of an average of 3,981 animal unit months (AUMs) of grazing annually, the effects of dispersed recreational activities on livestock management, and the effects of haul road dust and fugitive coal dust on vegetation would be short-term losses.

Regional mineral development would temporarily consume a small part of the prevention of significant deterioration of air quality (PSD) increments. However, violations of Wyoming air quality standards are not expected except at or within mine boundaries.

Increased traffic and urbanization due to population growth would cause a long-term rise in pollutant concentrations in and near towns.

Disturbance of cultural resource sites, even with salvage, would represent a long-term commitment.

The Buckskin Mine is included in the above discussion of cumulative regional development.