

TR-108

Evaluation of the Impact of Texas Lignite Development on Texas Water Resources

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Fuel shortages and resultant rising fuel costs as well as federal policies prompting energy independence have served to encourage power companies to exploit available lignite deposits of the western states as a viable fuel source. Large reserves of lignite found in a northeasterly trending belt through Texas have been only partially tapped. To develop this natural resource, large volumes of water will be required for mining, handling, processing, cooling, power generation, and land reclamation.

Throughout the Texas lignite belt, physical characteristics vary widely depending mainly upon the amount of water present in any form. Research into the potential impact of the development of the Texas lignite resources on both the surface and groundwater resources of Texas has produced three separate areas within the lignite belt which have varying capabilities of supporting lignite development. The northeastern section of the lignite belt has sufficient surface water resources and backup groundwater resources to allow extensive development of lignite. The central section will support mining and development, but care must be taken to conserve and regulate water use. The southwestern section of the lignite belt does not possess sufficient ground or surface water resources for much, if any, lignite development. The most water thrifty methods of production would have to be employed for even limited development .

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