

is not possible now to estimate pump capacity factors with precision. In our cost analysis we assumed that the average annual rate of pumping would be fifty percent of pumping capacity in each project area.

(5) There is uncertainty as to the degree of salinity of the ground water in many areas, and it is not possible to predict accurately the amount of saline water that can be diluted with surface water and used in irrigation, and the amount that must be exported. Our analysis of the cost of salt-export wells and conveyance channels is based upon predications made in the Water Budget in which $2/3$ of mined water in the saline area is used for crops and $1/3$ exported to waste lagoons or desert areas.

(6) Not all the pumps used for water supply in a project need be large deep-well pumps. In the earlier projects it will be possible to use small, shallow, skimming wells for recovery of recharge-water in the fringe areas around the mined zones. This can be done during the interim period when project areas are not contiguous. Also after completion of all projects, small wells may be used in peripheral areas and in places near major recharge sources such as in the riverain lands, where the water table will remain at comparatively shallow depths. Our cost analysis was based upon deep mining wells and no allowance was made for possible economies associated with inexpensive, small, skimming wells even though it is conceivable that in some projects a substantial water supply may be obtained from these.

(7) A considerable amount of uncertainty is involved in estimating the costs of canal remodeling and other modifications of the distribution system that are needed to provide for proper mixing of pumped and surface water for quality control of water applied to crops and to provide for redistribution of flow to different regions. The cost of revamping for additional capacity will be high when if necessity the canals have to be kept in operation. Moreover, canal enlargement and installation of more check structures for new gravity service channels will bring problems of siltation. The severity of these cannot be closely estimated and therefore maintenance costs cannot be predicted with accuracy. It seems probable that siltation problems will be mitigated to a significant extent with construction of the Settlement Plan dams. Another related uncertainty arises from the lack of sufficiently detailed data pertaining to canal silt-load parameters and soil properties in the areas near canals; it is difficult to estimate precisely the proper distance to set mining wells from canals and distributaries. If these are located too close to canals, uneconomic recycling of pumped water will occur. If they are located too far from existing distribution channels, the cost of new feeder channels becomes a large item of expense. It is pertinent to note, however, that a high degree of flexibility as to tubewell location inheres in our plan because a large number of wells for each project will be located outside the area of intensive irrigation. Moreover construction of wells in a project can be phased so that well installations