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Evaluation of "Dry Year Option" Water Transfers from Agricultural to Urban Use

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- Full Text

This study investigated the economics of an Edwards Aquifer region "dry-year option" buyout directed toward decreasing agricultural water use in an effort to augment springflow. The research involved several phases. First, we applied crop growth simulation models to quantify the expected yield of major crops by weather year for alternative irrigation strategies. Second, crop enterprise budgets were developed for these strategies for entry into a farm level simulation model. Third, equations were developed which predicted the monthly springflow implications of changes in agricultural water use. Fourth, a "dry-year" agricultural model which predicted the agricultural consequences of exercise of various forms of the dry-year option was developed. Fifth, a model and literature-based evaluation was undertaken to arrive at a definition of the term "dry-year option". Sixth, the agricultural model was used to determine willingness to sell water at alternative prices. Seventh, a regional input-output model was developed to allow estimates of regional impacts of the dry-year option. Eighth, the input-output model was used to estimate the effect of water transfers on local communities, by sector. Ninth, the proposal that there should be compensation to third parties was examined. Tenth, the LP model was put in a form for delivery to the sponsor and a training workshop was scheduled. Eleventh, data on the nonagricultural demand for water were developed.

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