



TR-20

A Study of the Economic Impact of Water Impoundment Through Validity Testing of a Comparative-Projection Model

J. E. Pearson, K. E. Heideman

- [Full Text](#)

An established economic simulation model for reservoir development was applied to ten reservoir projects throughout Texas. The model as a predictor of economic impact was given a difficult test because of the diversity of geographic, economic, and social characteristics surrounding the reservoirs. Additional difficulty was provided because the reservoirs were in different development stages--Construction, Fill-up, and Post Fill-Up.

The simulation model was developed in a previous research effort on two central Texas reservoir areas--Belton Reservoir and Whitney Reservoir--and these areas were retained in the study for check purposes. A third reservoir area--Somerville Reservoir--for which earlier predictions were made was observed for differences between model predictions and actual development.

A synthetic (or "business activity") index was developed for measuring accuracy of the model in the thirteen reservoir areas. Initial applications pointed out weaknesses in recreation projection and total impact calculations.

Only partial success with an early application of the model to all reservoir areas necessitated a detailed analysis of all internal model relationships. Revisions were incorporated by using primary data from on-site observations at each area and secondary data from various sources. A reapplication of the model showed the revisions had increased the accuracy for all but two reservoir areas. The revised simulation model provided a systematic and relatively accurate tool for measuring and projecting economic impact surrounding a developing reservoir area.

The project data, the results and recommendations of the study are published as Technical Report No. 20 of the Water Resources Institute, Texas A&M University. Copies of the report have been sent to all persons cooperating and furnishing data for the study.

Texas Water Resources Institute

1500 Research Parkway A110
2260 TAMU
College Station, TX 77843-2260

Phone:
979.845.1851
Fax: 979.845.0662
Email:
twri@tamu.edu

TWRI and the [Texas A&M Institute of Renewable Natural Resources](#) are working together to foster and communicate research and educational outreach programs focused on water and natural resources science and management issues in Texas and beyond.

[Compact with Texans](#) | [Privacy and Security](#) | [Accessibility Policy](#) | [State Link Policy](#) | [Statewide Search](#) | [Plug-ins](#) | [Veterans Benefits](#)
[Military Families](#) | [Texas Homeland Security](#) | [Open Records/Public Information](#) | [Equal Opportunity Statement](#) | [Risk, Fraud & Misconduct Hotline](#)



© 2013 All rights reserved. Problem with this page? Contact: twri-webmaster@tamu.edu



[SSO](#) |

[CANOPY](#)