

# ASSESSING VISUAL QUALITY THROUGH A GIS-BASED REMOTE ACCESS METHODOLOGY<sup>1</sup>

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**Abstract.** Reclamation specialists, planners, designers, governmental agencies, non-profit environmental organizations, and citizens are interested in scientifically based tools to assist in the study of the environment. In this investigation, we present a science based visual and environmental quality predictive model useful in preparing and assessing landscape treatments for a wide variety of applications including surface mine reclamation. The equation explains 67 percent of respondent preference, with an overall p-value for the equation  $\leq 0.0001$  and a p-value  $< 0.05$  for each regressor. Regressors employed in the equation include an environmental quality index (which includes economic, cultural, and ecological predictors), plus other more typical physical landscape regressors. The equation can be explained with an Intrusion/ Neutral Modifier/ Temporal Enhancement Theory which suggests that human intrusions upon other humans result in landscapes of low preference and which also suggests that landscapes containing natural and special temporal features can enhance the value of a landscape scene. The investigation implies that economic, ecological, and aesthetic indicators covary together and are not necessarily orthogonal constructs. Recently, we have applied this equation to constructed GIS 3-D images of real environments to test for similarity between photographic images and ArcGIS 9.0 images. We have discovered a concordance of similarity between photographs and computer generated images ( $p \leq 0.05$ ).

**Additional Key Words:** landscape architecture, landscape planning, environmental psychology, landscape design, environmental indicators

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