

THE RELATIONSHIPS BETWEEN URBAN VEGETATION CHANGE AND
QUALITY OF LIFE CHANGE IN CHICAGO, ILLINOIS FROM 1970 TO 2000

An Abstract of

A Thesis

Presented to the

Department of Geography

Western Illinois University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

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August, 2004

ABSTRACT

This study contributes to the understanding of the relationship between quality of life change and urban vegetation change in Chicago, Illinois from 1970 to 2000. This research investigates two questions: First, what are the relationships between urban vegetation change and quality of life change? Second, are there neighborhood, or contagion, effects throughout the city of Chicago? Five quality of life variables have been chosen, and two Landsat satellite images have been acquired to answer these two research questions.

An examination of the relationship between quality of life change and vegetation change shows a definite link between the two variables. Pearson's Product-Moment Correlation proved that three out of the five quality of life change measures have a relationship with vegetation change, and one of these (the ratio of children to women) had an inverse relationship. A multiple regression analysis was shown to be a stronger statistical test, proving a relationship between all five quality of life change measures and vegetation change. As with Pearson's Product-Moment Correlation, the ratio of children to women had an inverse relationship with the change in vegetation.

A Moran's *I* test for spatial association proved that neighborhood effects do occur in the city of Chicago. A Local Indicator of Spatial Association (LISA) was able to represent these neighborhood effects in map form. The relationships between quality of life change and vegetation change proven by Pearson's Product-Moment Correlation and multiple regression analysis were also represented in map form by LISA.