

5. CONCLUSIONS AND RECOMMENDATIONS

The potential impact of a highway project can be so complex that more than one technique may be necessary. Each technique for assessing the land-use impacts of a highway project has both strengths and weaknesses. Major trends in urban development can be identified by a Lowry Model, but localized impacts are better addressed by an expert panel. On the other hand, it would be a mistake to expect a Lowry Model to forecast localized impacts by making zones very small, and it would be an equally serious mistake to expect an expert panel to judge the relative impacts of two alternatives that differ only in the speed of traffic. The Wisconsin Rapids case study demonstrates that the expert panel and the Lowry Model are compatible techniques, which together produce a complete picture of future urban development.

The four case studies illustrate that land-use impacts from highway projects can vary greatly in both quantity and quality. Simple, general rules for determining the magnitude of impacts are not available. Without extensive analyses, similar to those presented in this report, forecasts of impacts would be quite shallow and may be unreliable.

The Eau Claire case study shows that a seemingly large project can have a relatively small impact. It would be advantageous if the techniques could be applied in an ascending order of complexity -- simple checklist, detailed checklist, Lowry Model, and expert panel. If an earlier technique demonstrates that the impact will be inconsequential, then the later, more complicated, techniques can be foregone.

It may be possible to develop guidelines for categorically excluding certain projects from land-use impact assessment. For example, projects that do not significantly change travel times and do not significantly affect access to land or other transportation facilities will not cause a secondary land-use impact. Four case studies are not a sufficient number to permit determination of such guidelines, but projects with minimal impacts would be easier to identify as more field experience is gained with these techniques.

An important feature of an assessment technique is the ability to help build a consensus about the proposed project. The expert panel and the Lowry Model are the best in that regard. Both can be treated as independent viewpoints. The panel can be made up of disinterested individuals, and the Lowry Model is inherently impartial. People can differ on the interpretation of the forecasts, but a common ground for discussion would be established.

Some of these techniques, especially the Lowry Model and the structured expert panel, produce results that are far too complicated for a lay audience. Some interested citizens may wish to see the complete analysis, but most citizens and community leaders would be better served by a digest. WisDOT should work toward developing a method of presenting land-use assessments that is concise, fair and accurate.

None of these techniques are unreasonably difficult to execute. Neither the costs nor time requirements are excessive, considering the potential that exists for learning more about the desirability of the project and incorporating mitigation measures in project plans.

All of the techniques, however, require some technical expertise. It is recommended that at least two people be involved in a land-use impact assessment: one person who is well versed in the theory and practice of land-use forecasting; and a second person who is familiar with both the project and the city. Training of both district and central office personnel is required to assure that such expertise is available at the time of project design.