NATURAL ENVIRONMENTS FOR URBAN POPULATIONS NC-4902

A Research Work Unit of the North Central Research Station, Forest Service, US Department of Agriculture

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Ecologically Friendly Industrial Sites

A strong majority of Americans believe that it is possible to have a healthy economy and a healthy environment at the same time, but making this come true is a complex task. In our work in the Calumet rustbelt landscape in Illinois and Indiana— a crazy quilt of industry and important wildlife habitat—we have been exploring ways to balance these two important goals. One approach is to make the industrial landscape as supportive of ecological goals as possible. Traditional landscape ordinances, however, are not designed with ecological health and habitat integrity in mind. The City of Chicago requested research assistance framing a new landscape ordinance for the Chicago portion of the Calumet industrial region. Chicago policy makers needed to know what kinds of landscaping solutions would be feasible; accepted by the industry owners, workers, and local residents; and would enhance the ecological functioning of the entire Calumet region. In the first phase of this project, ecological principles to guide the landscape ordinance were developed for the City.

Policy makers are not the only significant audience for this work. The findings to date challenge basic tenets of ecological design, creating interest in the scientific community as well as the policy-making community. **The landscape principles developed in this study are designed to protect wildlife and human health. They raise questions about the use of native plants in areas of uncertain toxicity, and the potential unintended outcomes of phytoremediation and other more "natural" clean-up techniques.** The landscape principles fit the ecological design of a given parcel into the surrounding framework of industrial sites, rivers, and open spaces. At the same time, landscape designs should locate industries and manufacturers in such a way that waste products from one can be the useful raw materials or energy for another, thereby saving costs and minimizing environmental impacts.

The current phase of the research investigates the social acceptability of different landscape designs — because any landscape that is not easily maintained and appreciated by people will not provide long-term benefits to humans or wildlife. Instead, it will become an eyesore and problem. This research will go a long way to discovering techniques to live up to the expectations of the American public: a thriving economy in the midst of a healthy, thriving environment.