

GIS Applications

Harmonized Space-Time Data and Measures: A Study of Race, Ethnicity and Poverty

Center for Regional Development

PURDUE UNIVERSITY
CENTER FOR REGIONAL DEVELOPMENT
PCRD.PURDUE.EDU

analyze
using advanced data tools

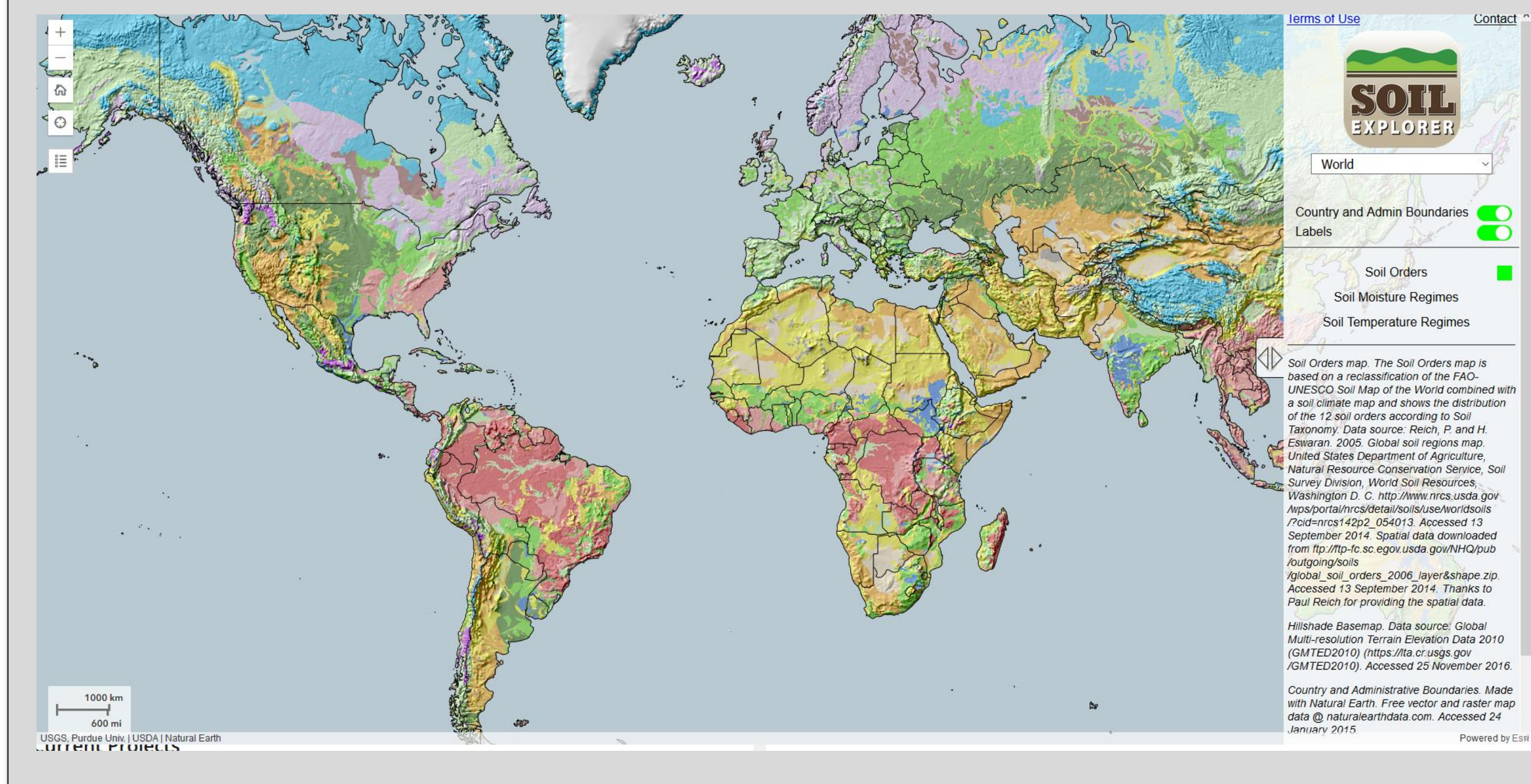
See how **Regional Decision Makers** and **Demographic Profiles** can help visualize critical data for better decision making.

<p>Data for Decision-Makers</p> <p>Visualizing critical data that informs local leaders and organizations of their region's unique characteristics.</p> <ul style="list-style-type: none"> Regional Decision Maker Demographic Profiles Digital Divide Index 	<p>Collaborative Leadership</p> <p>Building trusting relationships among key players that spur the movement of ideas into action in an agile manner.</p> <ul style="list-style-type: none"> Great Lakes Training Initiative 	<p>Strategy & Planning</p> <p>Promoting the development of a high quality multi-year plan that builds on the economic strengths of the region.</p> <ul style="list-style-type: none"> Stronger Economies Together EDA University Center 	<p>Economic Development & Business Growth</p> <p>Suite of programs that foster a balanced investment in the economic development activities of a region.</p> <ul style="list-style-type: none"> Economic Gardening Small Business (ISBDC)
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SoilExplorer: <https://soilexplorer.net/>

Center for Environmental and Regulatory Information Systems (CERIS)
Prof. Darrell Schulze, Agronomy

<p>Mobile</p> <p>We provide mobile application development for both iOS and Android devices.</p>	<p>Web</p> <p>We create complete custom website solutions.</p>	<p>Mapping</p> <p>We develop customized mapping solutions.</p>
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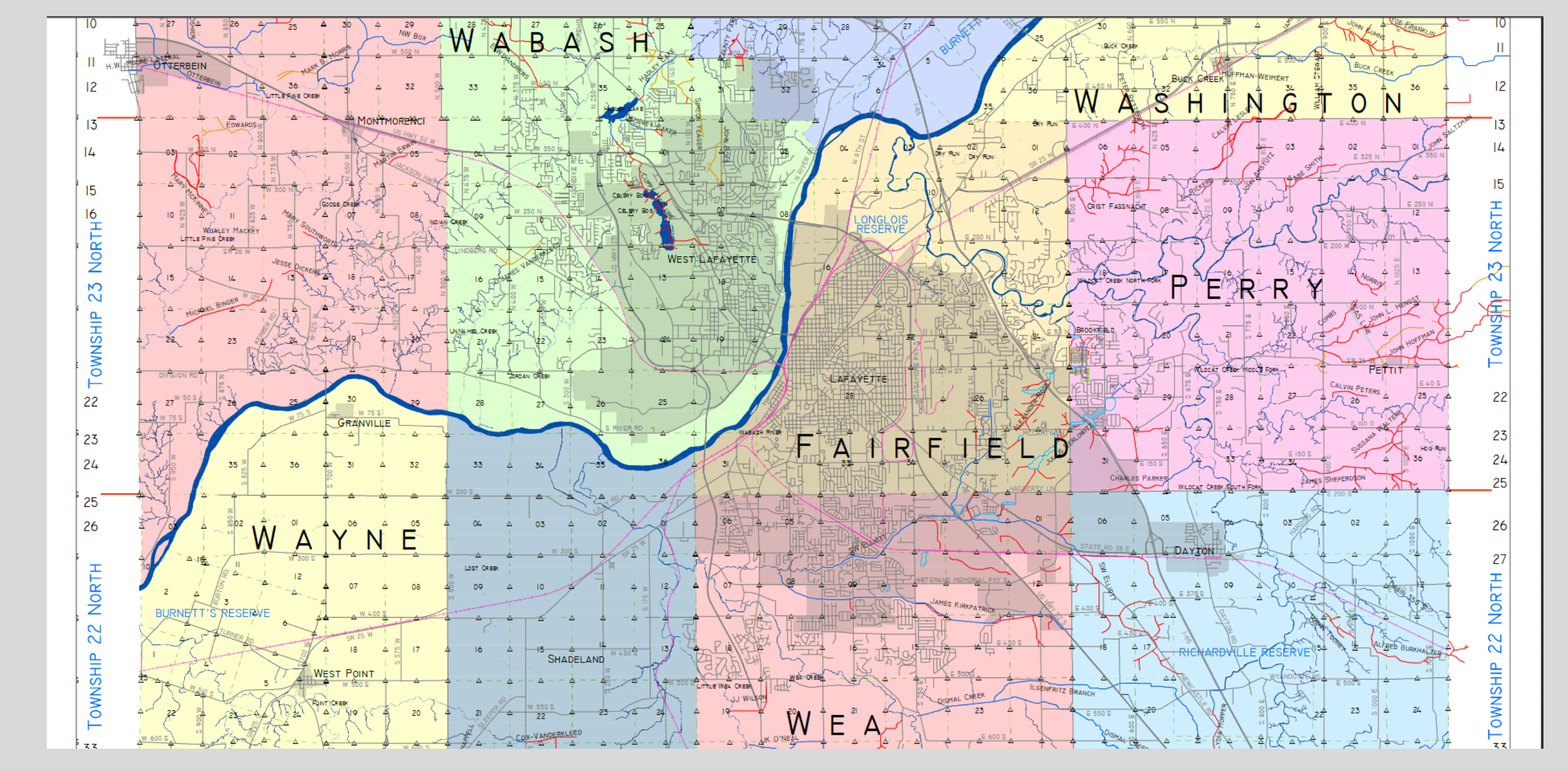
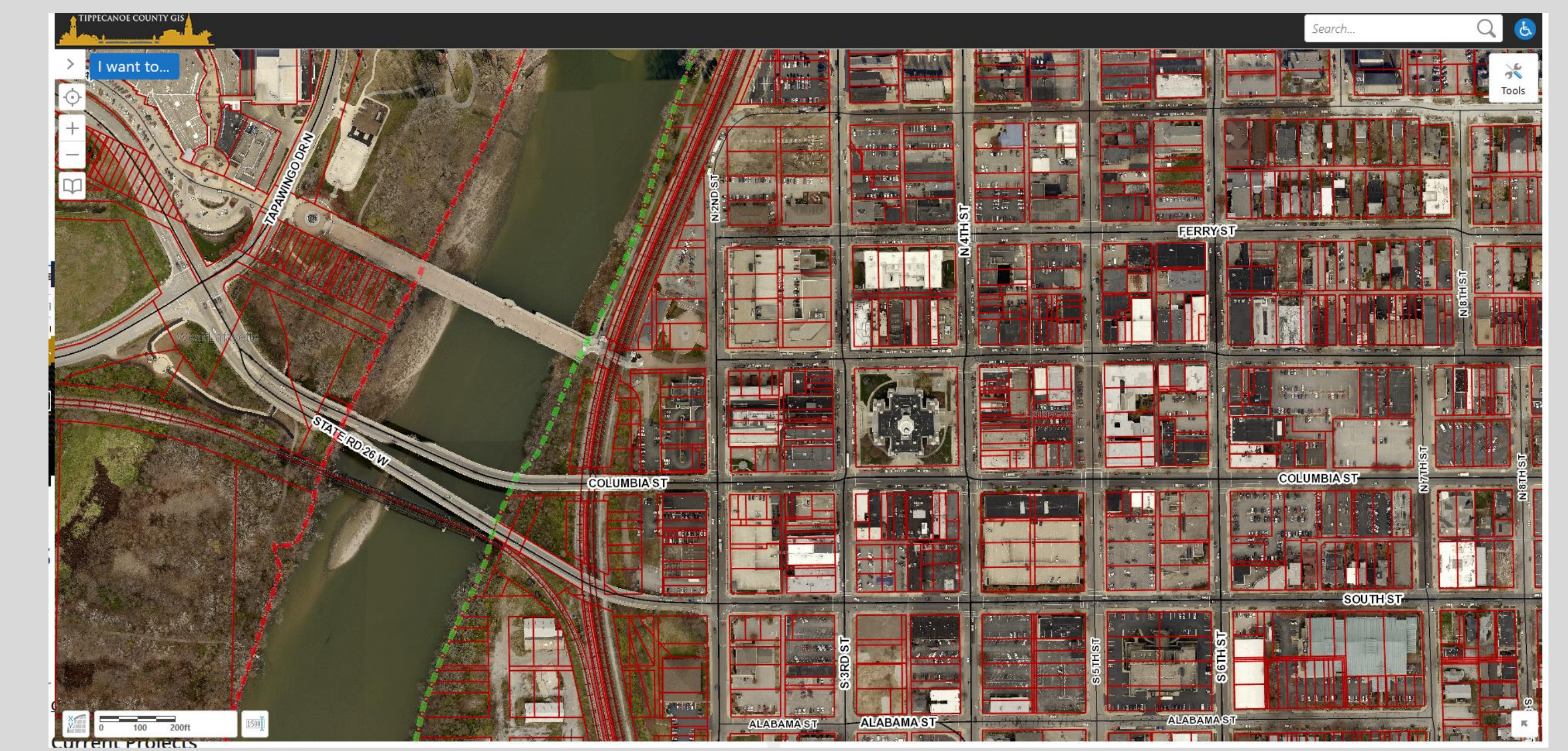


Tippecanoe County GIS & Maps

Mark Ehle, GIS Administrator

TIPPECANOE COUNTY
GIS

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Harmonized Space-Time Data and Measures: A Study of Race, Ethnicity and Poverty

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Indraneel Kumar
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This presentation looks into the spatial harmonization techniques or how to account for changing geographies at the sub-county level, primarily using the U.S. Census Bureau Data. In support through a collaborative project between Purdue University and the Economic Research Service, U.S. Department of Agriculture, we have spatially harmonized more than 2,000 socioeconomic variables for nearly 72,000 tracts and 3,100 counties for various decades between 1970 and 2010. For a set of consistently defined variables, not only we have developed spatially harmonized data for the five decennial census, but also developed annual interpolations for four decades. The database provides a unique opportunity to study spatial and temporal socioeconomic processes in various regions of the U.S. The presentation demonstrates ArcGIS Pro based visualization techniques of complex spatiotemporal data based on space-time data cube analysis on the examples from Chicago, Detroit, and Indianapolis areas. The objective of the research is to understand the spatial characteristics of poverty. We will demonstrate how harmonized data can be used in real applications using an example of the recent Story Map developed by the PCRD on behalf of the North Central Regional Center for Rural Development, covering the U.S. Midwest.