

HUMAN WELL-BEING, ECOSYSTEM SERVICES AND WATERSHED MANAGEMENT IN THE CREDIT RIVER VALLEY

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WHY DID WE DO THIS RESEARCH?

The Credit River watershed is located in one of the most densely populated regions of Canada and home to some of the most diverse landscapes and ecosystems in southern Ontario. Within all watersheds, especially highly populated ones like the Credit River watershed, environmental health is intrinsically linked to human health. For example, the percentage of canopy cover in a given area is an indicator of human and watershed health; more shade lowers surrounding temperature and helps to reduce rates of heat stress and skin cancer caused by sun exposure. Human health and well-being are greatly impacted by the health and quality of services provided by local ecosystems. This project aimed to make this relationship more clear and to enrich peoples' understanding of their impacts on nature and, in turn, nature's impact on their well-being.



WHAT DID WE DO?

- Surveyed residents within the Credit River watershed about their perceptions of the connection(s) between human health and their surrounding environment.
- Facilitated a workshop to identify key indicators of relationships between human well-being and the environment, resulting in the design of an interactive web-based tool.
- Created an interactive website and web-mapping tool using web-GIS to educate the public about ecosystem services and their influence on human well-being. The tool displayed provincial, regional, and municipal data related to the Credit River watershed, including indicators of health and descriptions of how they influence human health and well-being.
- Integrated a storytelling component into the web-mapping tool, providing an opportunity for residents within the watershed to share their own personal experiences of their connection to the environment.

WHAT DID WE FIND?

Human health and well-being are influenced by the health and quality of services provided by local ecosystems. Some residents of the Credit River watershed understood that such basic relationships exist among the natural environment and their health; for example, many believed that places associated with water, such as streams and ponds, had a stronger effect on their health than other green spaces.

Governance stakeholders identified several environmental indicators of health that would better communicate environment and health relationships. The top three were:

- Percentage of canopy cover
- Access to green space
- Percentage of impervious surfaces

WHAT ARE THE IMPLICATIONS FOR DECISION MAKERS?

Other watershed managers could implement a similar website and web-mapping tool in their own jurisdictions so as to help residents, visitors and stakeholders visualize the connections between the environment, ecosystem services, and how these affect aspects of human health and well-being. Similar surveys and workshops could also be undertaken in order to gain a better understanding of the types of environments more valued by residents and the best indicators of health for their watershed. Such work would assist managers and planners to strive for “co-benefits” that improve both ecosystem health and human well-being.

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