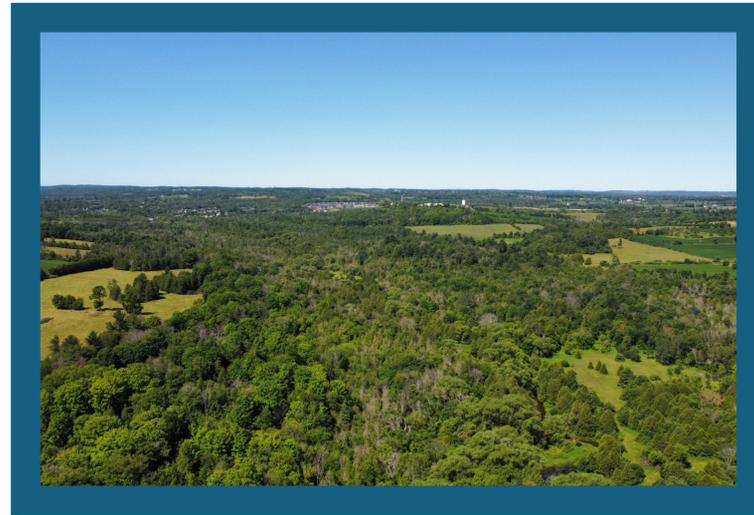


# ECOSYSTEM SERVICE VALUATION OF THE BAXTER CREEK WATERSHED

## BACKGROUND

The Baxter Creek Watershed Alliance (BCWA) partner with local government in Cavan-Monaghan, Ontario to assist in watershed management decision-making. BCWA is investigating the relevance of Ecosystem Services Valuation (ESV) - which helps assign value to the benefits humans receive from the natural world - in their sub-watershed management context. The purpose of this study is to fill this knowledge gap for BCWA and to help them understand how ESV might be effectively implemented in their management practices.



An aerial view of the Baxter Creek watershed. Baxter Creek Watershed Alliance, N.D.

## RELEVANCE

Ecosystem Services Valuation (ESV) is particularly relevant for the Baxter Creek sub-watershed because of recent development pressures in the surrounding municipality. ESV, by assigning monetary value, allows ecosystem services benefits to be properly compared with the costs of development.

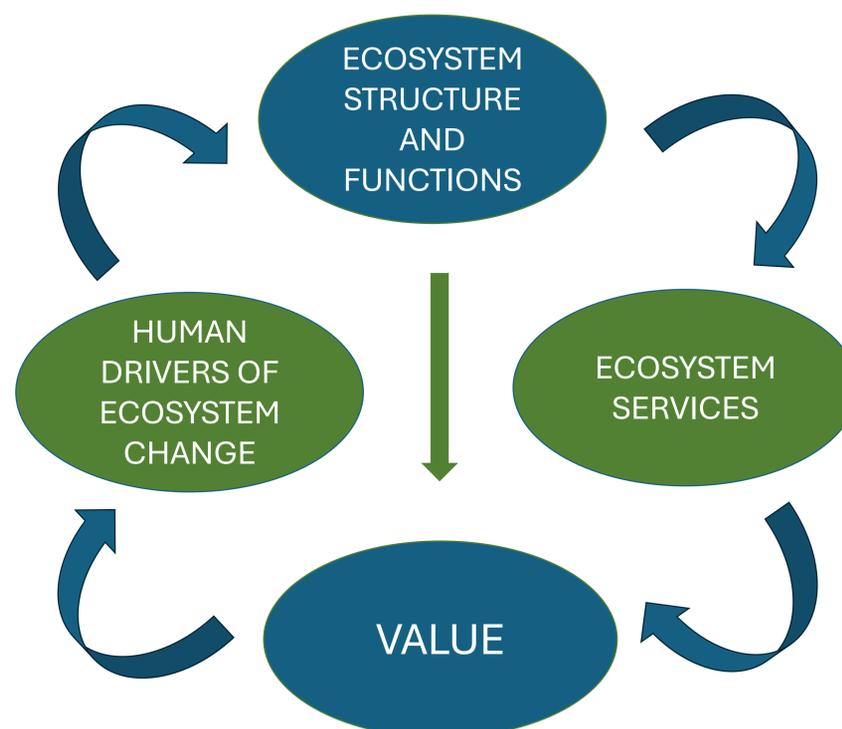
## METHODS

- Conduct a literature review to determine applicable valuation frameworks for Ontario.
- Identify and map key sites relevant to ESV using GIS and satellite imagery.
- Refine valuation strategies based on specific ecological and social factors.
- Integrate data into BCWA database and ensure accessible formats for stakeholders.

Researchers: Scott Cecchin, Aaron Shimkofsky, Crystal Van Lare, and Nico Ossa Williams  
Faculty: Dr. Tom Whillans  
TCRC Coordinator: Matthew Walmsley  
Baxter Creek Watershed Alliance  
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## RESEARCH QUESTIONS

- What ecosystem services of economic value or benefit can be identified within the Baxter Creek Watershed?
- Where are ESVs located within the Baxter Creek Watershed?



## FINDINGS

Numerous frameworks are used to facilitate the valuation of ecosystem services. Services are divided into categories based on use or benefit, such as provisioning, regulating, cultural, and supporting services. Key features to include in a valuation of the Baxter Creek sub-watershed are:

- Water Quality, Supply, and Regulation - Filtration and Flood Control
- Clean Air - Oxygen Production and Air Purification
- Carbon Sequestration and Climate Services - Carbon Storage, Climate Regulation and Climate Resilience
- Biodiversity and Ecological Support - Habitat Provision and Pollination Services
- Soil Health and Conservation - Erosion Control, Soil Formation, Fertility, and Nutrient Cycling
- Recreation and Cultural Services - Outdoor Recreation, Green Spaces, and Cultural Value

## RECOMMENDATIONS

Based on our preliminary findings, ESV (and other similar valuation models) can be an effective tool in helping to direct watershed planning and development decisions. In the Ontario context, various ESVs have been published and should provide an appropriate model for BCWA to implement in their own context. Therefore, we recommend BCWA:

- Estimate Baxter Creek ESV values using existing studies
- Map Baxter Creek ESV values with GIS software
- Make ESV data publicly available to stakeholders