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Exploring affordable options for private water and septic systems: Informing planning of affordable housing

Introduction

The **City of Kawartha Lakes** is a rural municipality located in south-central Ontario with a population of 79,247. Kawartha is the second largest municipality in the province at over 3,000 km² with most of its residents (49,036) living in communities outside of urban areas.

Many communities do not have municipal water or sewage services available and rely on well water for daily water usage and a septic system for wastewater.

The cost of installing traditional water and septic systems in new build projects creates barriers to constructing affordable housing as the cost of these services increases the price of the property. **This limits the opportunities in affordable housing** for residents who live in communities without municipal services.

Researchers: Ryan Sankar & Hilary Wright (2022/23) for ERSC 3160



? Research Questions

1. Can **affordable water and septic systems** be used to support affordable housing solutions?
2. Is affordable housing **socially, environmentally, and economically** viable in Kawartha?
3. What **resources and barriers** exist to support?

Objective

Identify private water and septic technologies to address affordable housing in rural areas.

Analyze the **economic, environmental, social viability** in the local context of Kawartha Lakes and Haliburton County.

This research is **inspired by the efforts to increase affordable housing options** in the City of Kawartha Lakes and Haliburton County.

Methodology

Literature review of current technologies and existing projects incorporating private systems in affordable developments.

Meetings with industry professionals to gain practical insight into the opportunities and challenges in private water and septic.

Host Supervisors: Michelle Corley & Aaron Mulcaster
Human Services, City of Kawartha Lakes

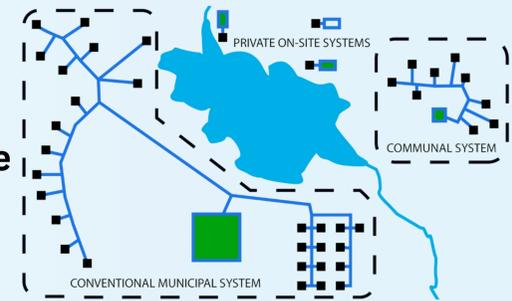
Faculty Supervisor: Tom Whillans
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TCRC Supervisor: Brittany Finigan

Preliminary Findings

Communal systems could support land-efficient development that is more affordable than private options.

As these systems can service small-to-moderate development sizes (10 to 300 units) they are highly adaptable to suit the local context for each development.



Benefits:

Social: increased options for affordable housing and reliable access to clean water and waste treatment.

Environmental: installing communal systems over private systems reduces the impact of the development while focusing monitoring and maintenance to one site for better environmental protection.

Economic: onsite communal systems can reduce housing development costs and overall market price making home ownership and maintenance more affordable.

Recommendations

Installation and maintenance of water and wastewater systems can vary significantly by region; however, **to increase affordable housing options in the City of Kawartha Lakes and Haliburton County**, we recommend:

- Utilizing **communal water and wastewater systems** in future rural developments.
- Continue to recognize the need to **prioritize sustainable water and septic systems**.
- Maintain industry connections to gain **insight into regional successes**.

