

## Why did we conduct this research?



### Important value of Edmonton's River Valley (ERV) and urban parks

The North Saskatchewan River supplies water to Edmonton and many downstream communities. As a group of urban parks, ERV also provides essential recreation opportunities. Its an important biodiversity reserve and connectivity corridor.

Lessons from this urban park are applicable to other Canadian urban parks.

### Negative environmental outcomes produced by current recreation activities

- Examples of urgent Edmonton issues: "Accidental Beach" formed along the river's shoreline and created social disturbance of residents; Rapid expansion of the mountain biking technology and high levels of pandemic-related trail use cause disturbance to wildlife and ecological systems

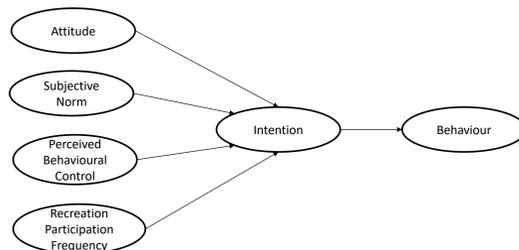
### Recreation engagement and nature stewardship: What research tells us?

- Increased documentation of positive relationship between time spent in nature and pro-environmental behaviour (PEB) (e.g., Ibáñez-Rueda et al., 2021; Martin et al., 2020; Rosa et al., 2018).
- Recreation in parks fosters place attachment (Daryanto & Song, 2021; Halpenny, 2010; Scannell & Gifford, 2010), which is linked to park-specific environmental stewardship, and potentially everyday related behaviors (spill-over effect).

## Research Method

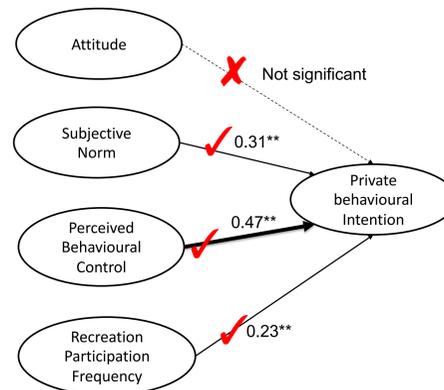
- Data collection: In total, 1,501 respondents through a random digit dial (RDD) telephone survey, stratified sample based on proximity of residence to ERV and gender
- Data analysis: Structural Equation Modeling (SEM) through Mplus

- Proposed model: Theory of Planned Behaviour (Ajzen, 1991) + Recreation participation frequency



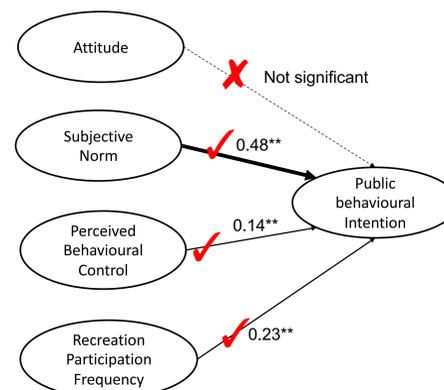
## Private-sphere stewardship behaviours

- Examples: Pick up litter; Enhance knowledge that help protect the river valley; Reduce my consumption of water; Make a donation



## Public-sphere stewardship behaviours

- Examples: Sign a petition in support of protecting ERV; Being a volunteer; Make your concerns about the river valley known to elected officials



## Practical Implications

### Confirmed! Recreation frequency is correlated, and a significantly positive predictor of PEB intentions

- RV specific actions: such as "Make your concerns about the ERV known to elected officials"; "Learn about the ERV"
- Household/everyday activities: such as "Engage in water conservation strategies (e.g., take shorter showers ; reduced watering of lawn)"; "Intervene if you saw a neighbour engaging in an activity that negatively impacts water quality and availability (e.g., emptying wastewater directly into a storm drain)"

This **support efforts to prioritize accessibility of the river valley**, through efforts such as the opening of the 100 Street Funicular in 2017 and the Ribbon of Green SW+NE modernization of the North Saskatchewan River Valley (2017-2024), and National Urban Park development.

### Provide education and communication campaigns to increase sense of efficacy and confidence to engage in PEBs, especially private-sphere PEBs

- Best practices include City of Edmonton Off-leash dog program, Horticultural Societies, community gardens, and Master Composter and Master Garden programs, and Strathcona Science Park's 'Best Riding' mountain bike program.

### Activate social norms to promote public-sphere PEBs

- Equip park rangers and conservation steward volunteers (Master Naturalists) with messaging for spontaneous education opportunities. Volunteer opportunities provided by City of Edmonton, such as Capital City Clean Up Litter Kit, Root for Trees.
- School outreach programs – children share messaging with elders.



The 100 Street Funicular near ERV  
 (Photo credit: City of Edmonton)

