

## SAVE THE EARTH, RIDE A BIKE

### Mission Statement

Our app places aim and focus on accessibility to put emphasis on the importance in accommodating outdoor recreation in sustainable communities. With the creation of this app, it is our goal to create an interactive software whereby local residents, visitors and tourists can gain information about public washroom and park accessibility. Users will be shown the most effective bike routes to navigate throughout Vancouver in order to reach their areas of interest, and parks which fit their needs.



### Web Application Link

[http://simonfraseru.maps.arcgis.com/apps/webappviewer/index.html?id=6d36e8c86b814f39bdefb5b644134081&fbclid=IwAR0jY-bennbGUb8ZNa8VWOMNXfoyu4aKqRIUF\\_MaAdxyLrJpVZTQPwVxoDE](http://simonfraseru.maps.arcgis.com/apps/webappviewer/index.html?id=6d36e8c86b814f39bdefb5b644134081&fbclid=IwAR0jY-bennbGUb8ZNa8VWOMNXfoyu4aKqRIUF_MaAdxyLrJpVZTQPwVxoDE)



### Problem Addressed

Current compact city strategies put additional pressure on green structure within the city (Koppen, Sang, & Tveit.2014). Urban parks not only moderate the temperature in the city, they are sites for recreational purposes and provides safe routes for different modes of transportation. It has been estimated that poor accessibility and lack of access to recreational areas accounts for around 3.3% of global deaths (WHO). Many studies have also shown that recreational spaces such as green space plays a pivotal role in population-level mental health (NCBI). Recent research has also further shown that the distance or proximity to a recreational landscape affects how people perceive their own health (Van den Berg et al., 2010).

Urban parks have proven their value and importance as components of the urban infrastructure improving the quality of life. Urban parks offer ecological and social services to the population (recreation, leisure, better population health state), increase the economic, social and aesthetic value of urban ecosystems, offer the opportunity to reserve space for future town-plan

projects and assist in conserving local biological diversity. The size of urban parks represents an important indicator for assessing the sustainability and competitiveness of urban ecosystems - their availability is an expression of the housing quality (Ioja et. al.2010).

As previously stated, this application aims to bring together the growing importance of environmental sustainability with link to public accessibility as part of a sustainable urban system. Residents of low-income communities are usually found to have lower physical activity, and this may be due partly to a disparity in access to parks and other recreation environments (Floyd, T & Whitt-Glover. 2009). This open data application is designed to be a contributing factor to reducing such disparities.



## Application Detail

The interactive data set allows the user to select bike and park related features on the map at their discretion and retrieve valuable information, such as the type of route for cycling or whether the chosen park contains a dog park. This part of the app is set up for user to be able to explore spatial data and derive conclusions specific to their needs. In addition, the user has the ability to toggle the washroom features on and off, which highlights public washroom facilities around the city.

## Provided Widgets

- **Directions:** offers different types of transportation modes, including biking, walking and driving routes
- **Near me:** presents the nearby parks from a user-defined location within a specified radius
- **Carbon Emissions Calculator (added link):** allows to calculate user's carbon footprint based on driving activity

## Team Members

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## Data Sources

- Bikeways - City of Vancouver Open Data
  - <https://data.vancouver.ca/datacatalogue/bikeways.htm>
- Dog Parks - City of Vancouver Open Data
  - <https://data.vancouver.ca/datacatalogue/publicPlaces.htm>
- Parks - City of Vancouver Open Data
  - <https://data.vancouver.ca/datacatalogue/parks.htm>
- Public Washrooms - City of Vancouver Open Data
  - <https://data.vancouver.ca/datacatalogue/public-washrooms.htm>
- Wheelchair Accessible Bathrooms - City of Vancouver Open Data
  - <https://data.vancouver.ca/datacatalogue/public-washrooms.html>

## References

Floyd, Taylor, & Whitt-Glover. (2009). Measurement of Park and Recreation Environments That Support Physical Activity in Low-Income Communities of Color: Highlights of Challenges and Recommendations. *American Journal of Preventive Medicine*, 36(4), S156-S160.

Ioja, C., Patroescu, M., Nita, M., Rozyłowicz, L., Vanau, G., Ioja, A., & Onose, D. (2010). Categories of residential spaces by their accessibility to urban parks-indicator of sustainability in human settlements case study: Bucharest. *WSEAS Transactions on Environment and Development*, 5, 307-314.

Koppen, Sang, & Tveit. (2014). Managing the potential for outdoor recreation: Adequate mapping and measuring of accessibility to urban recreational landscapes. *Urban Forestry & Urban Greening*, 13(1), 71-83.

Van den Berg, A.E., Maas, J., Verheij, R.A., Groenewegen, P.P., 2010. Green space as a buffer between stressful life events and health. *Social Science & Medicine* 70 (8), 1203-1210

<https://covapp.vancouver.ca/ParkFinder/parkdetail.aspx?inparkid=181>

<https://cyclevancouver.com/stanley-park-spotlight-two-spirits-statue/>

<http://www.vancouvereconomic.com/blog/events/leading-cities-sustainable-production/covlogo-share/>

<https://www.vectorstock.com/royalty-free-vector/smiling-woman-and-boy-riding-bikes-mom-and-son-vector-16511262>

<http://reconciliationcanada.ca/walk-for-reconciliation-2017/program-and-schedule/>

