**GUARDEN**

Combating local food insecurity through community gardens.

**Developed by Naina Mehta, Mariah Wong, and Amrit Parmar of Simon Fraser University. GUARDEN was created using ESRI ArcGIS Online App Builder (2016).**

What is a community garden? A community garden is a portion of city or private land that is gardened collectively by a group of people. The land is broken down into individual plots that are assigned to each family where they are then able to grow and maintain any foods of their choice. Community gardens can be a significant source of food for many low- income families residing in the urban city. Therefore, they enhance community food security and also is a space where people can learn environmental stewardship and interact with other community members and neighbors. The City of Vancouver is addressing food insecurity through the creation and implementation of community gardens. In hopes of relieving hunger, improve nutrition, and increase access to and distribution of healthy food.

Mission Statement: Even though the benefits of community gardens overweigh the drawbacks of these city green lands. It is important to highlight the quality of produce these community gardens provide for urban citizens. As a recent study (2014) done by University of British Columbia found that there was metal contamination found in 16 Oaks Community Garden in Vancouver which was associated with high traffic areas. This was a result of accumulation of metal contaminated particles from automobile, train and marine traffic over the years. Hence the application ***GUARDEN*** reflects on the quality of community gardens in the City of Vancouver so that community engagement and sustainability can be increased.

Why this Issue: urban agriculture such as gardens contribute to community food security through group food growing. This process fosters learning, community and business opportunities, increase land use availability for food production and also supports the infrastructure for community food systems. This is the reason why the city of Vancouver is attempting to relieve food insecurity through the implementation of community gardens. Additionally, affordability is a large concern for low-income families and their relationship to the consumption of healthy foods. Since high prices for foods can limit the access to fresh, healthy and safe foods, resulting in low income families to rely on unhealthy food options. Moreover, local food production contributes to secure consumption, which reduces food waste and the overall carbon footprint of the municipality.

We all have a stake in our food system, whether it is:

* Having more opportunities to grow our own food
* Having a local food market within walking or cycling distance
* Helping improve access to affordable food
* Participating in community compost programs
* Taking part in community food celebrations

Goal: Make an app which encourages the community engagement and sustainability in terms of food security

* Community garden and community centers
* Bike routes so that children and parents can access easily
* Schools are also important factors so that walking distance between schools and community centers is captured

Crowdsourcing in app: encourages public polling regarding the community gardens. So general public can report an issues around their plot area, add notes and also notify other on the bases of severity.

About us: Integration in the community is encouraged with the involvement of adults and children. GUARDEN is a desktop and mobile-friendly application based in Vancouver, BC. We believe accessibility to fresh, sustainable, and affordable produce (AKA: Food Security) should not be an option but a basic human right. Community gardens can effectively address the reality of food insecurity (this is particularly true among areas with lower-income populations). This app serves two purposes. The first is to connect its users to the community gardening component of their local food network. The second is to provide the means for users to think critically about the quality and suitability of current and future plot locations without the stress of going through complex data sets. With the 'Suggest or Report a plot' feature, GUARDEN has a crowed source component that allows users to suggest new plot locations.

