QGIS Landscape Classification Protocol

**Download the landscape data from here:**

<https://open-data-portal-metrovancouver.hub.arcgis.com/datasets/5a505c71327b4e73a6760058791d4258_6/explore?location=49.196696%2C-123.054085%2C11.64>

**Load in all the data (sites and landscape)**

1. Add sites (with lat/long) to qgis as a delimited text file
2. Reproject to EPSG:32610 - WGS 84 / UTM zone 10N
3. Add 500m buffer
4. Add vector layer of landscape stuff: “2014\_and\_2020\_Tree\_Canopy\_Cover\_and\_Impervious\_Surface.shp”

Should look something like this:

A map of a city

Description automatically generated

**Use clip to pull out the landscape around each site:**

1. First join attributes (site name etc) to the buffer -> vector -> data management tools -> join attributes by location -> use buffer as input and the reprojected points as the overlay
2. Select the clip tool
3. Select landscape layer as input and the joined buffer layer as the overlay

A computer screen shot of a map

Description automatically generated

**Now we will need to associate each landscape “cookie” with the corresponding site name:**

1. Join features in “clipped” by comparing to “joined buffer layer”.
2. Now every census block should also have the name of the site that it’s associated with as below -

A screenshot of a computer

Description automatically generated

**We also want to add geometry attributes.** I wanted to standardize by the area of the polygons so that a big polygon with lots of impervious surface cover will be weighted as more imp surface in the full buffer relative to a small polygon with lots of impervious surface.

1. Select the joined layer
2. Geometry tools -> Add geometry attributes

Finally export the file as .csv

A screenshot of a computer

Description automatically generated

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To make the final comparison I:

1. Multiplied percent impervious by the area of the census block within the site cookie to get area of impervious within the census block within the site cookie.
2. Added all the outcomes of the above, after grouping by site cookie.
3. Divided the sum of those outcomes by the area of the cookie to get a percent impervious surface of the entire cookie.
4. Repeated for canopy cover.
5. Compared for the control versus enhanced sites using a simple 2-sample t test.