



Suitable Land Plots for UA in Montreal

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BENEFITS OF UA

■ Environmental

- Reducing food miles
- Reducing CO₂ emissions
- Waste recycling

■ Social

- Community development
- Educating people on sustainability

■ Economic

- Employment and income





UA IN MONTREAL

- Santropol Roulant
- The Summer School on Urban Agriculture
- Lufa Farms
- Urban Seedling
- P3 Permaculture





CHALLENGES OF UA

- Lack of available land
- Pollution
- Lack of access by community
- Lack of social support
- Lack of resources



OBJECTIVE

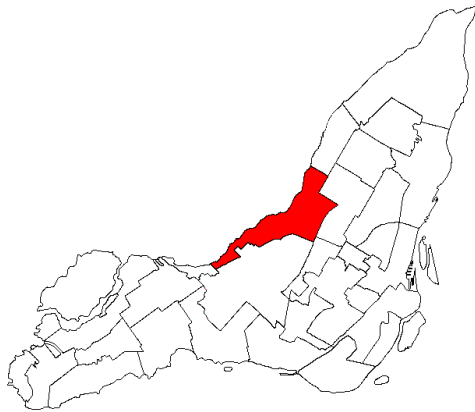
- Use GIS to find a suitable plot of land for a community garden in Montreal
- *Suitability* = Resilience to challenges
- Demonstrate potential of GIS
- Design a methodological approach

DATA

Shapefiles and Spreadsheets



- Land
 - Boroughs.shp, Parks.shp
- Pollution
 - Majorroads.shp, Landuse.shp, Gasoandoilfacilities.shp,
- Accessibility
 - Streets.shp, Bikeandped.shp
 - Schools.shp, Markets.shp,
- Social support
 - Census.shp
 - Workinglanguage.xlsx, Laborandoccupation.xlsx
- Resources
 - Waterinfrastructure.shp, Woodcanopy.shp, Buildings.shp



DATA

Urban Agriculture Survey 2013

Significant statistics

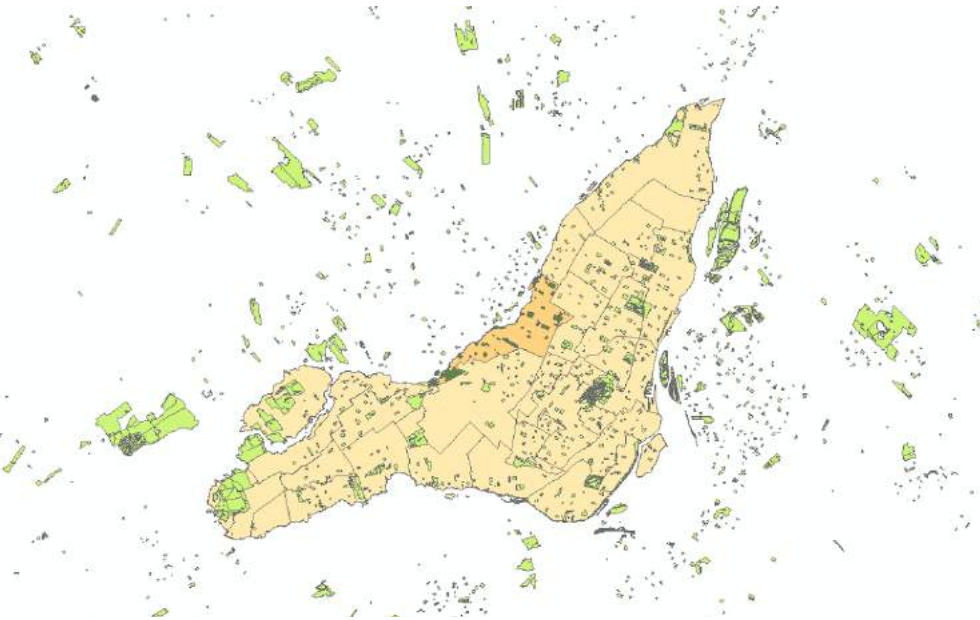
- 42% practice UA
- 10% of respondents (majority) from **Ahuntsic-Cartierville** borough
- Two profiles
 - Montreal-Center: **aged 20-50, employed, francophone**
 - Montreal-West: aged 50+, retired, English-speaking

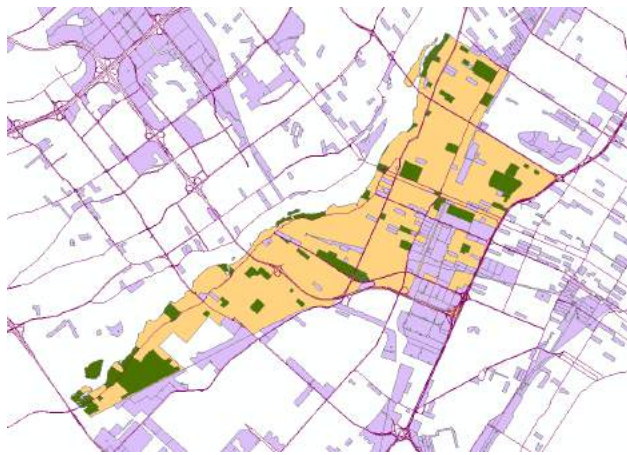


METHODOLOGY

1. Land Availability

- **Add:** Boroughs, Parks
- **Select by attribute:**
 - “Name” = ‘Ahuntsic’
- **Clip:** Parks in Ahuntsic
- **Select by attribute:**
 - “Area” > 150 m²
- **Export:** Potential plots (available)

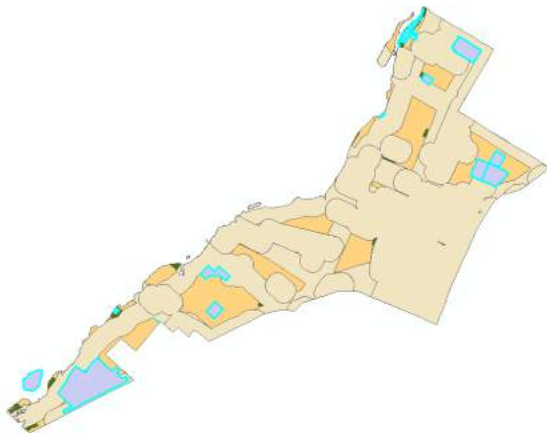




METHODOLOGY

2. Distance from Pollution

- **Add:** Major roads, Land uses
- **Select by attribute:**
 - Land use = “Resource and Industrial”
- **Buffers (200m):** Major roads, Industrial land uses
- **Merge:** Pollution
- **Select by location:** Potential plots not touching Pollution
- **Export:** Potential plots (available, clean)



METHODOLOGY

3. Access by Community

- **Add:** Markets, Schools, Streets, Bike paths and Sidewalks
- **Select by location:** Potential plots
 - Touching streets, bike paths, and sidewalks
 - Within 1000 meters of a school and market
- **Export:** Potential plots (available, clean, accessible)

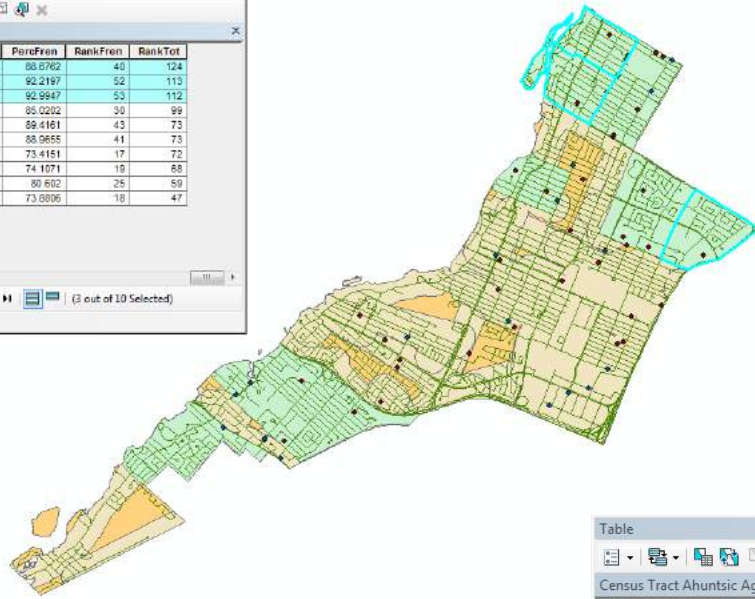


Table

CTs_Near_Plots

LangPop	French	PercFren	RankFren	RankTot
3135	2780	88.6762	40	124
2105	2015	92.2197	52	113
2055	2055	92.9947	53	112
2479	2100	85.0202	30	99
2740	2450	89.4161	43	73
2175	1935	88.9655	41	73
2445	1795	73.4151	17	72
2240	1680	74.1071	19	68
1495	1295	80.602	25	59
2680	1980	73.8806	18	47

CTs_Near_Plots (3 out of 10 Selected)



METHODOLOGY

4. Geodemographics

- **Add:** Census, Working language, Labor and Occupation
- **Total Index:**
 - % Target Age (20-50)
 - % Employment
 - % French-speaking
- **Export:** Best demographics

Table

Census Tract Ahuntsic Age

TargetAge	PercTargAg	RankTargAg	PercWork	RankWork	LangPop	French	PercFren	RankFren	RankTot
1710	56.4356	52	68.5	51	2075	1880	90.6024	47	150
1305	55.9366	51	64.4	49	1490	1360	91.2752	50	150
1585	48.6495	47	58.1	41	1790	1640	91.6201	51	139
1800	58.9005	53	70.1	52	2060	1760	85.4369	32	137
2550	55.5919	50	57.7	38	2645	2385	90.1701	46	134
2205	50.0909	48	64	48	2725	2380	87.3394	37	133
2005	44.8446	37	59.7	43	2500	2270	90.8	48	128
2270	45.2281	38	62.9	46	3135	2780	88.6762	40	124
2055	47.0359	43	60	44	2535	2195	86.5878	35	122
1520	42.7326	29	62.6	45	1795	1610	89.6936	45	119
1675	42.0537	26	57	35	2185	2015	92.2197	52	113
1330	40.9988	21	64.8	50	1980	1770	89.3939	42	113
1910	48.123	45	57.5	37	2135	1820	85.2459	31	113
2080	41.4673	23	57.3	36	2855	2655	92.9947	53	112
3170	48.5155	46	72.4	53	3975	2315	58.239	5	104
1390	45.3064	39	49.2	17	1575	1410	89.5238	44	100
3185	51.7213	49	54	25	3235	2615	80.8346	26	100
1660	44.2903	33	55.9	28	2090	1840	88.0383	39	100
1940	44.7211	35	56.9	34	2470	2100	85.0202	30	99
670	48.0631	44	54.9	27	810	650	80.2469	24	95
1740	41.7667	25	56.5	31	2255	1985	88.0266	38	94
1735	39.405	16	56.2	30	2020	1735	85.8911	34	80
1465	41.1286	22	52.5	21	1695	1450	85.5457	33	76
3580	46.9324	42	47.3	12	3145	2340	74.4038	20	74
1860	34.041	6	54	24	2740	2450	89.4161	43	73
1695	38.7075	14	49.7	18	2175	1935	88.9655	41	73
2380	44.7284	36	50	19	2445	1795	73.4151	17	72
750	39.6825	17	57.7	39	980	715	72.9592	16	72
1685	43.6077	31	46.6	10	1725	1425	82.6087	28	69
2685	44.5274	34	51.9	20	3075	2190	71.2195	14	68
1655	36.8269	9	57.8	40	2240	1660	74.1071	19	68
2950	41.4792	24	45.5	6	3035	2645	87.1499	36	66
1935	42.1293	27	46.4	8	2045	1700	83.1296	29	64

Census Tract Ahuntsic Age (0 out of 53 Selected)

Suitable Plots for Urban Agriculture in Ahuntsic-Cartierville

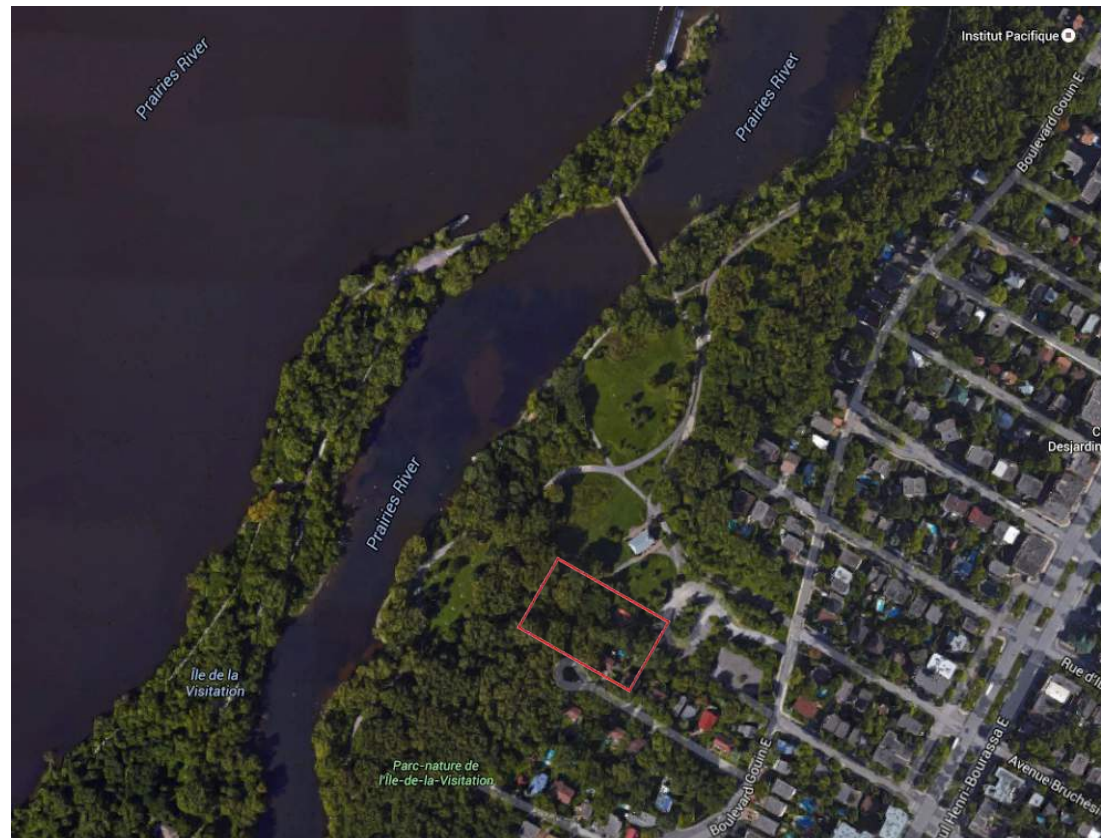
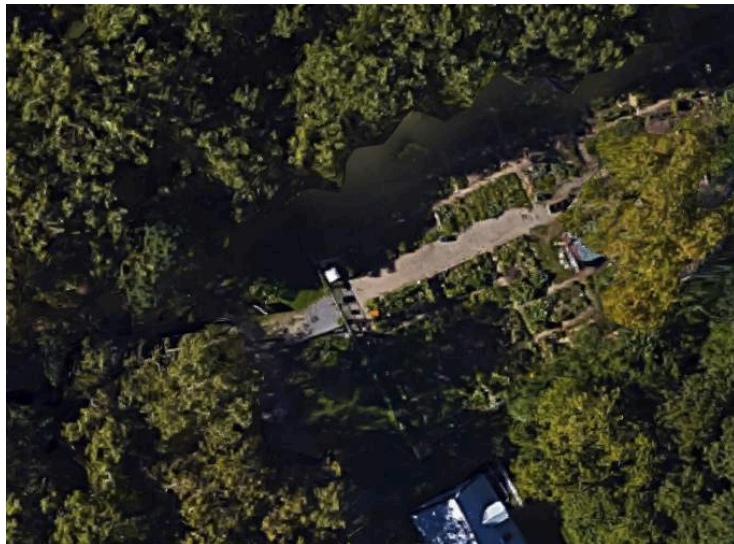
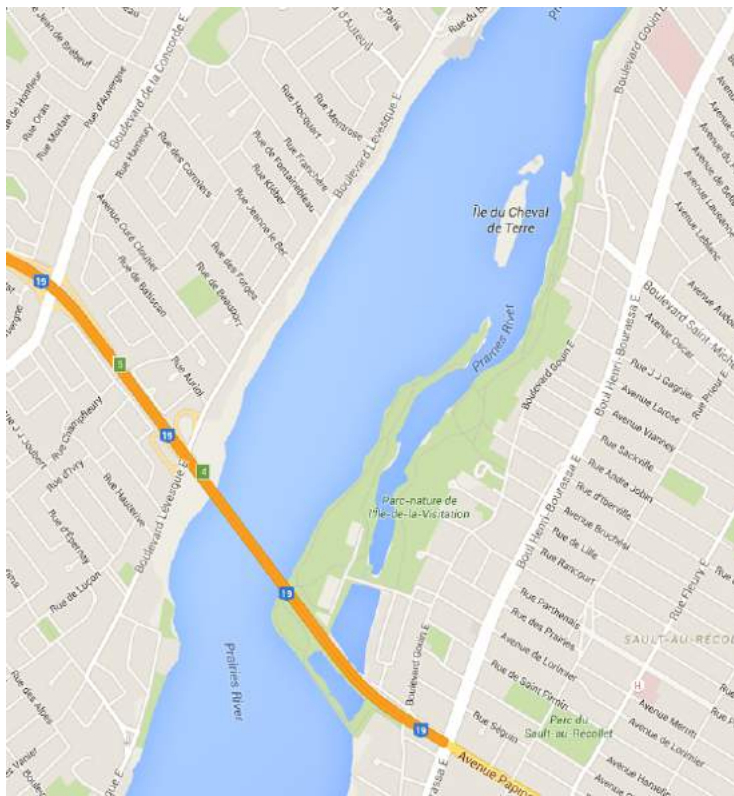
Legend

- Forest
- Suitable Plots for UA
- Schools
- Markets
- Major Roads
- Best Demographics
- Industrial Land Use
- Pollution Buffer
- Water Infrastructure
- Streets
- Bike Paths and Sidewalks
- Potential Plots
- Ahuntsic-Cartierville



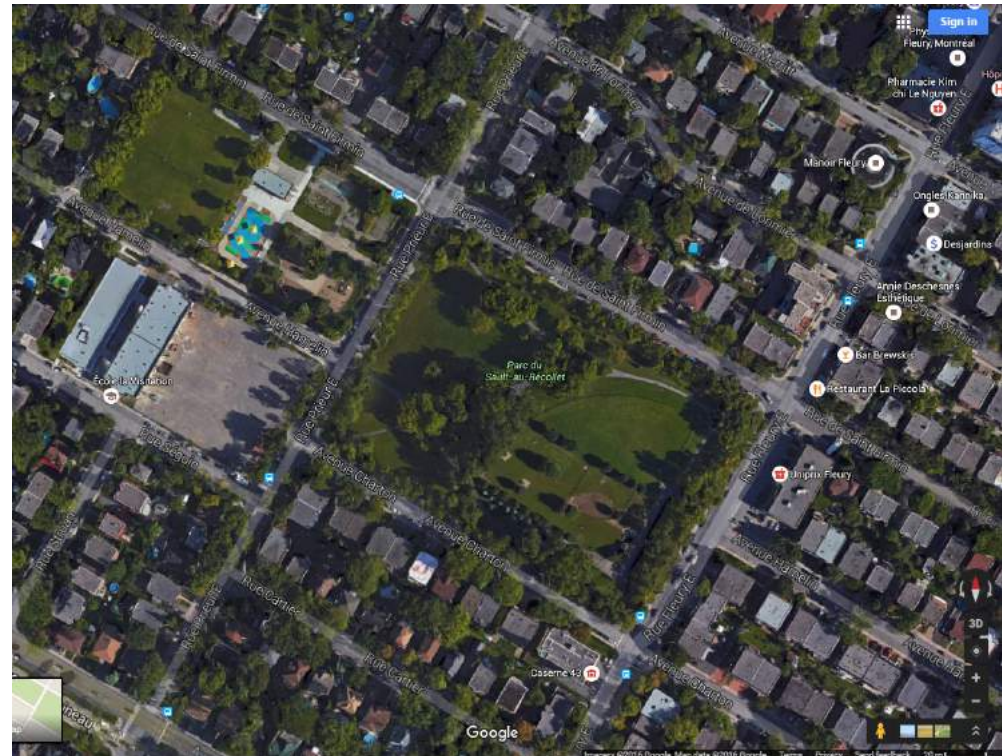
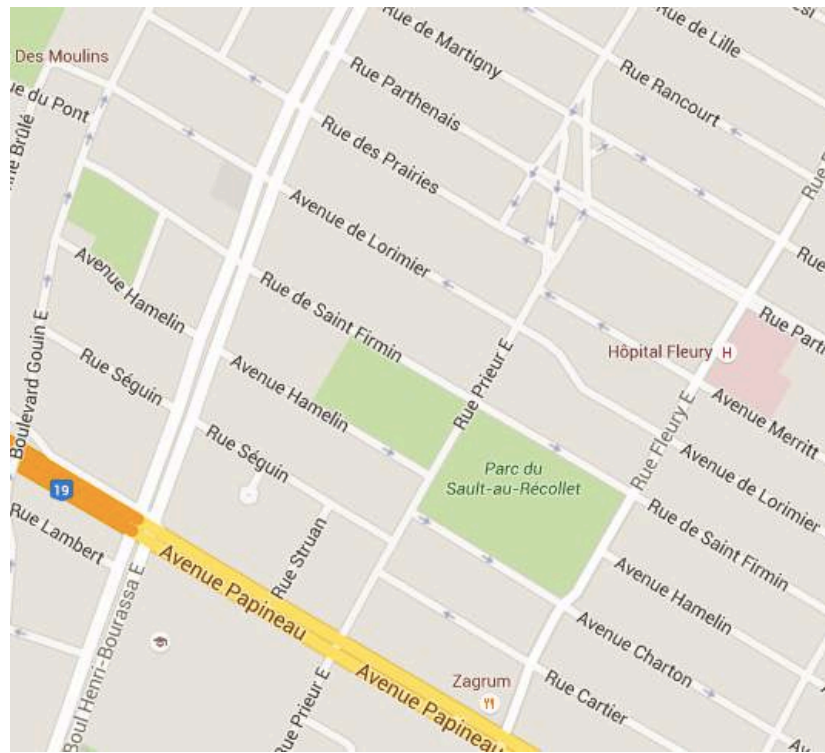
ANALYSIS

2. Parc de L'Ile-de-la-Visitation



ANALYSIS

3. Parc du Sault-au-Récollet



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