

Improving SynSys of Extreme Heat Events

*Summary of Community
Project in Ottawa, Ontario,
Canada*

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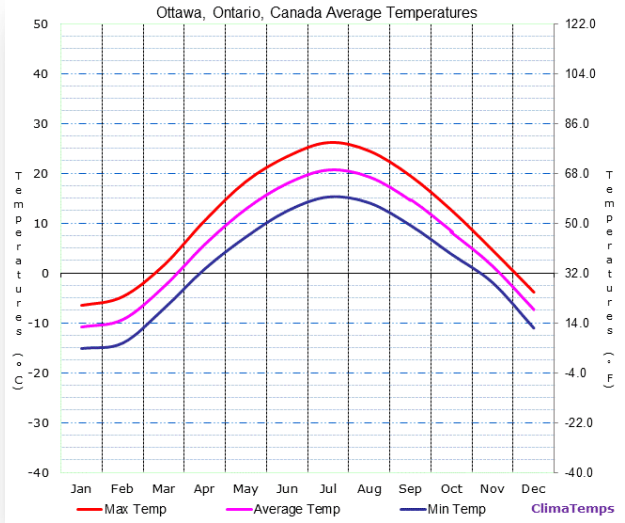
CEC 2018 Workshop Phoenix, Arizona

December 11, 2018





Ottawa



Goal:

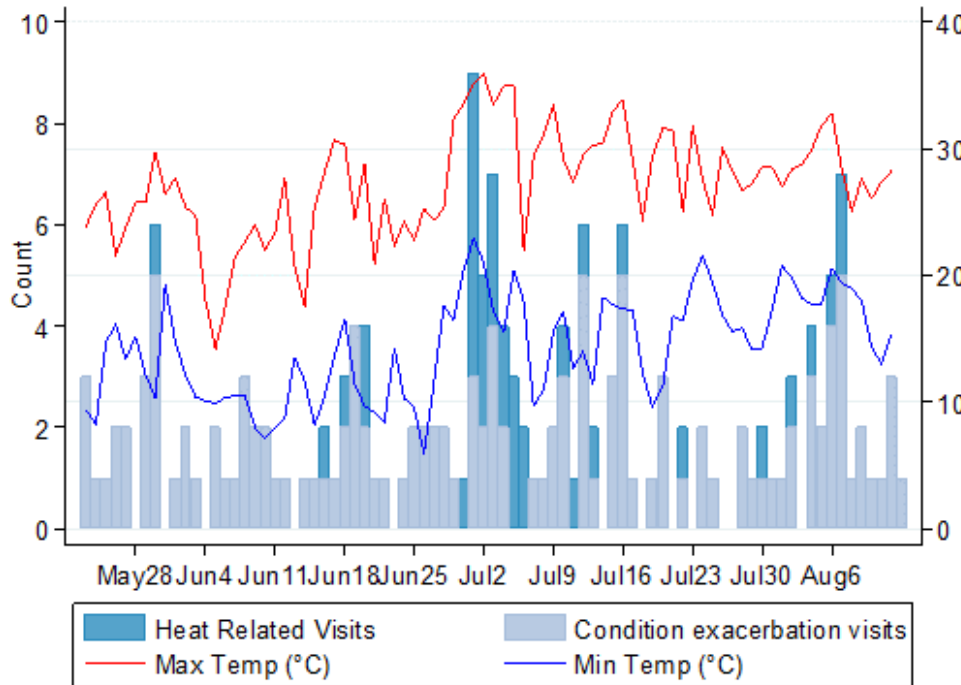
Improve reporting and data quality to encourage recorders to document words that can link health issues to the extreme heat event



Started off with Hospital Emergency Room Data Only

Room Data Only

Acute Care Triage Data



- information from 5 hospitals in existing database Acute Care Enhanced Surveillance (ACES)
- use existing syndrome definition for heat-related illnesses called **ENVIRO**

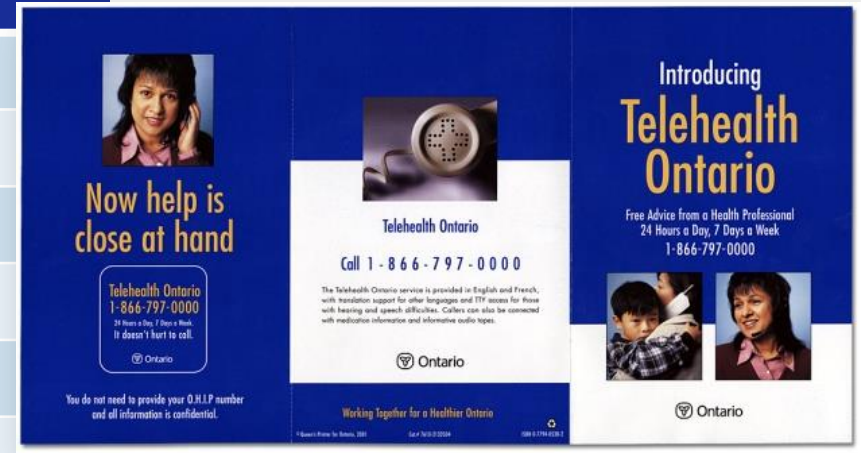
Overview of Tasks in the Ottawa Pilot Project 2016/7

1. Identify new data sources and prepare data share agreements.
2. Collect historical health, climate, geospatial and census data to build the database.
3. Statistical analysis of historic data and mapping vulnerabilities.
4. Deliver training sessions for health care providers.
5. Develop a protocol to collect and communicate real-time health and climate data.
6. Implement and test the pilot SyS.
7. Evaluate and validate the pilot SyS.
8. Analysis of data collected.

Identify New Data Sources, Collect and Analyze Historical Data

Data Sources

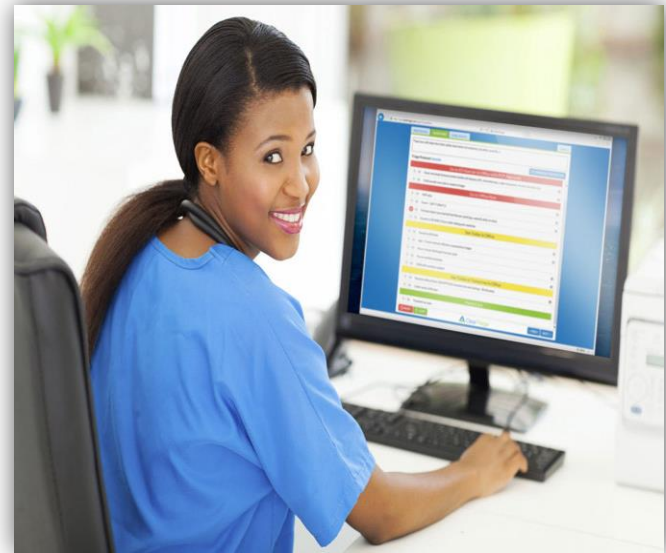
1. triage data from acute care
2. Telehealth Ontario
3. emergency medical services
4. meteorological data
5. AQHI
6. weather warnings
7. heat warnings
8. satellite imagery
9. fine-scale temperature model
10. demographic data
11. Ontario 211
12. news/social media



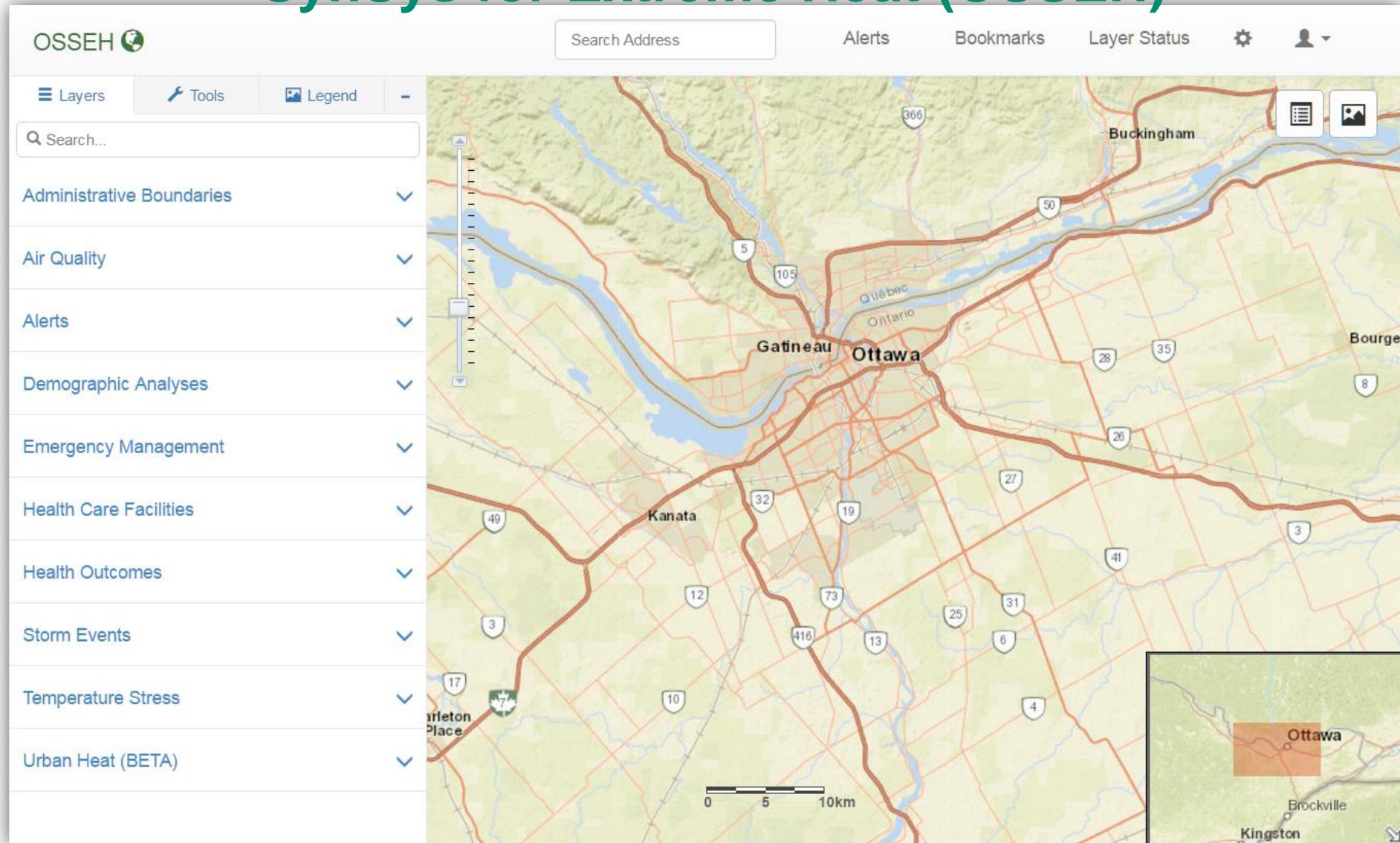
free, 24-hour confidential telephone services for health advice and information from a registered nurse

Education Sessions for Health Care Providers

- **Who:** Telehealth Ontario nurses, 211 intake staff, Paramedic EMS staff, and Triage staff in Ottawa hospitals
- **What:** Raise awareness about the increasing risk of heat illnesses in light of climate change, and our need to plan with good health signals so we can advocating for effective mitigation strategies.



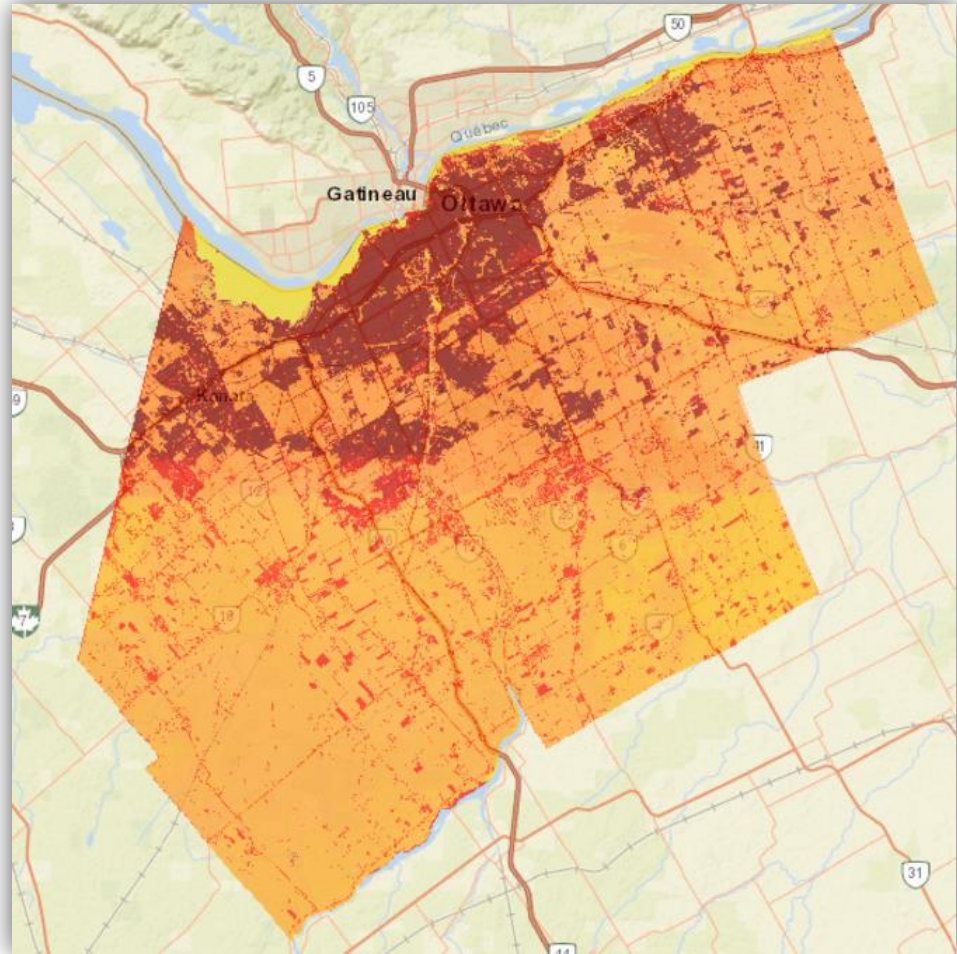
Developed a dashboard called the Ottawa SynSys for Extreme Heat (OSSEH)



Incorporated Climate Data Sources

Satellite Imagery

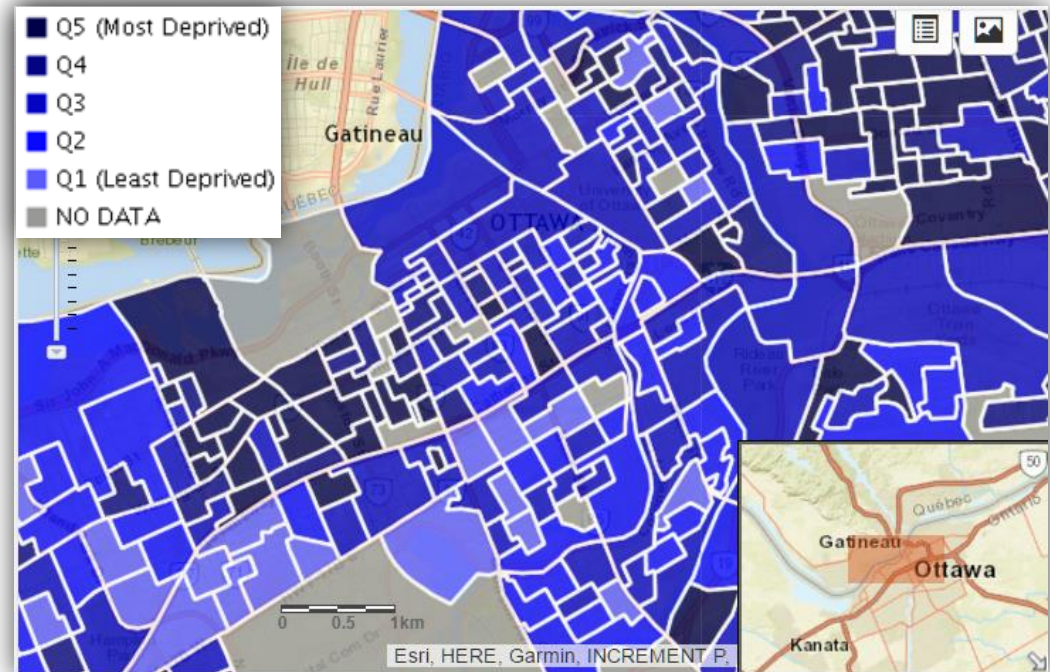
- open-source NASA satellite imagery to define areas of heat stress (e.g., urban heat island effect)



Demographic Data Sources

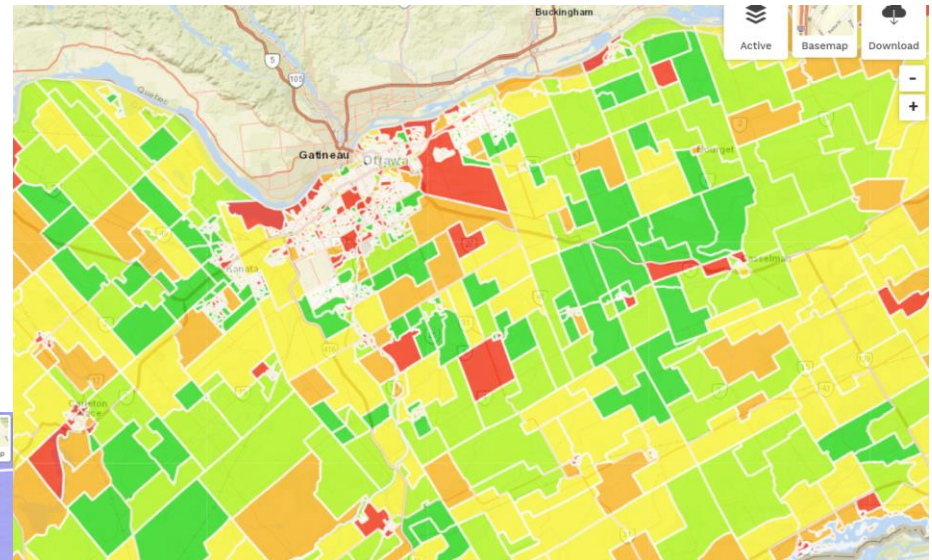
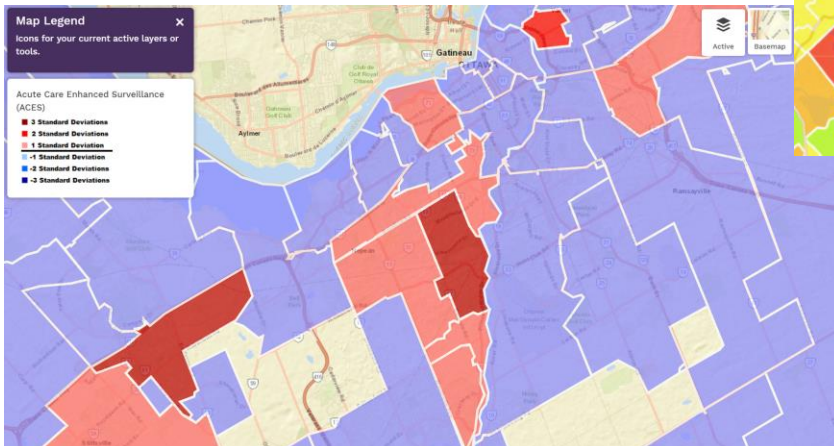
Vulnerability Indices

- source = Statistics Canada
- use census-derived variables to define each postal code area on relative social and material vulnerability scale
- data from 2006 census (updated as 2016 census data becomes available)



OSSEH and PHIMS dashboards

**Health Outcome Information on
from ACES or Telehealth**

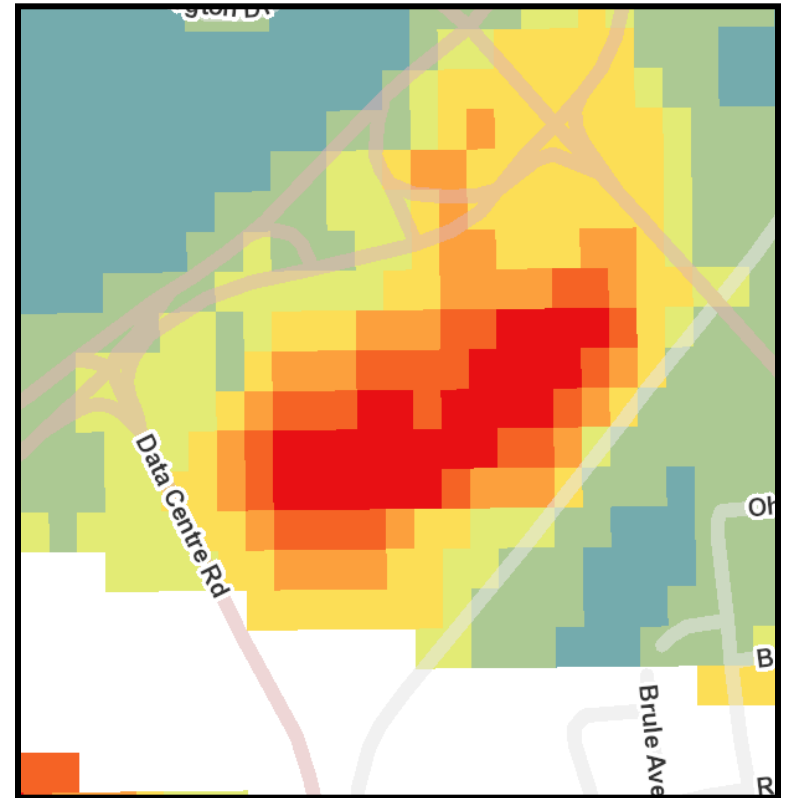


Percent of Population 65+

Permits situational awareness and identification of areas with vulnerable populations

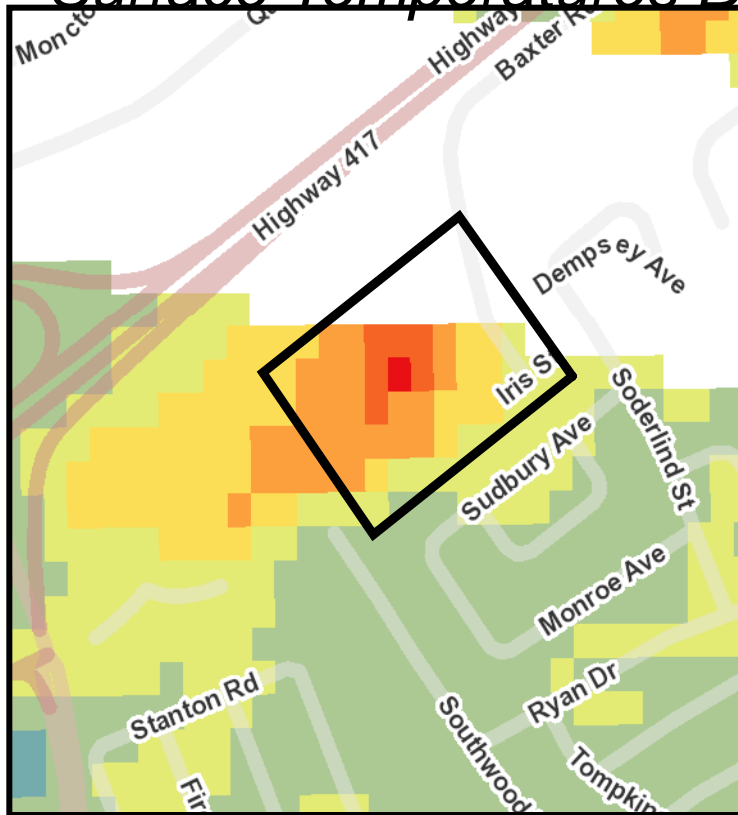
Enables planning activities for prevention strategies

OPH can now identify the areas of the City where residents are experiencing heat related illnesses. It will now be possible to plan interventions in neighborhoods who experience higher than average heat related illnesses or are identified as have urban heat islands.”

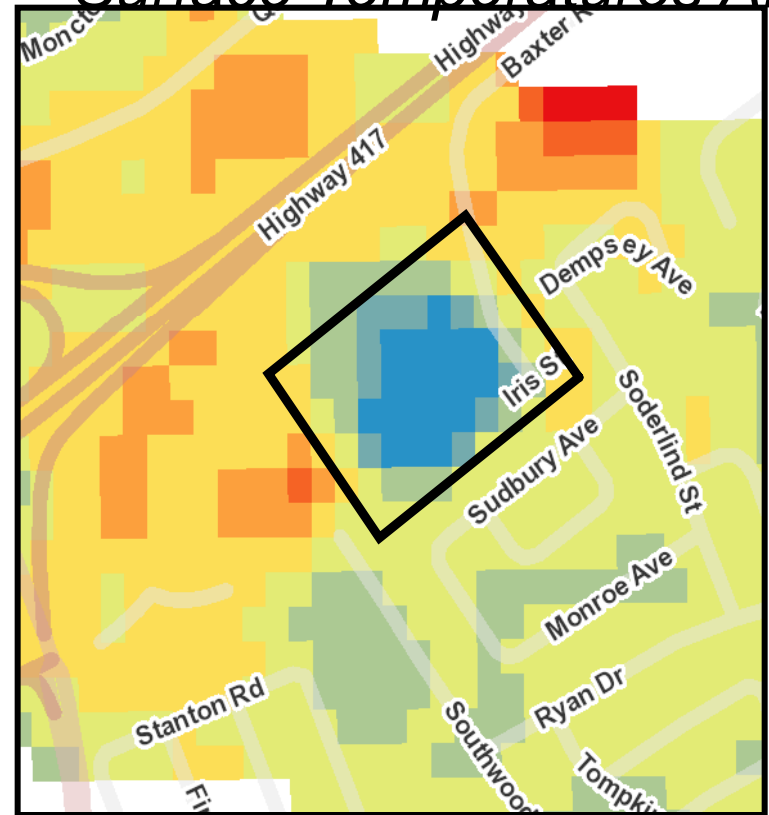


Buildings with cool roofs

Surface Temperatures Before



Surface Temperatures After



Before and after renovations with more underground parking and a reflective roof on a shopping centre